Aeronautical Engineering
1980 Cumulative Index

January 1981

National Aeronautics and Space Administration

SHUTTLE LAUNCH 1981
<table>
<thead>
<tr>
<th>Document</th>
<th>Page Range</th>
<th>Date</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA SP-7037(119)</td>
<td>1-45</td>
<td>February 1980</td>
<td>January 1980</td>
</tr>
<tr>
<td>NASA SP-7037(120)</td>
<td>47-86</td>
<td>March 1980</td>
<td>February 1980</td>
</tr>
<tr>
<td>NASA SP-7037(121)</td>
<td>87-145</td>
<td>April 1980</td>
<td>March 1980</td>
</tr>
<tr>
<td>NASA SP-7037(122)</td>
<td>147-187</td>
<td>May 1980</td>
<td>April 1980</td>
</tr>
<tr>
<td>NASA SP-7037(123)</td>
<td>189-258</td>
<td>June 1980</td>
<td>May 1980</td>
</tr>
<tr>
<td>NASA SP-7037(125)</td>
<td>319-372</td>
<td>August 1980</td>
<td>July 1980</td>
</tr>
<tr>
<td>NASA SP-7037(126)</td>
<td>373-441</td>
<td>September 1980</td>
<td>August 1980</td>
</tr>
<tr>
<td>NASA SP-7037(127)</td>
<td>443-503</td>
<td>October 1980</td>
<td>September 1980</td>
</tr>
<tr>
<td>NASA SP-7037(128)</td>
<td>505-561</td>
<td>November 1980</td>
<td>October 1980</td>
</tr>
<tr>
<td>NASA SP-7037(129)</td>
<td>563-613</td>
<td>December 1980</td>
<td>November 1980</td>
</tr>
<tr>
<td>NASA SP-7037(130)</td>
<td>615-655</td>
<td>January 1981</td>
<td>December 1980</td>
</tr>
</tbody>
</table>

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The abstract sections of the monthly supplements of *Aeronautical Engineering* can be bound separately. Individual abstracts can be located readily by means of the page numbers given at each entry, e.g., p0627 N80-32324. To assist the user in binding Supplements SP-7037 (119) through SP-7037 (130), a title page is included in the back of this Cumulative Index.
A CUMULATIVE INDEX
TO
AERONAUTICAL ENGINEERING
A Special Bibliography

This Cumulative Index supersedes the indexes contained in supplements SP-7037(119) through SP-7037(130).
This index is available as NTISUB/ 141/093 from the National Technical Information Service (NTIS). Springfield, Virginia 22161 at the price of $10.00 domestic; $20.00 foreign.
INTRODUCTION

WHAT THIS CUMULATIVE INDEX IS

This publication is a cumulative index to the abstracts contained in NASA SP-7037(119) through NASA SP-7037(130) of Aeronautical Engineering: A Continuing Bibliography. NASA SP-7037 and its supplements have been compiled through the cooperative efforts of the American Institute of Aeronautics and Astronautics (AIAA) and the National Aeronautics and Space Administration (NASA). Entries prepared by the two contributing organizations are identified as follows:

1. NASA entries by their STAR accession numbers (N80-10000 series).
2. AIAA entries by their IAA accession numbers (A80-10000 series).

HOW THIS CUMULATIVE INDEX IS ORGANIZED

This Cumulative Index includes a subject index, a personal author index, a corporate source index, a contract number index, and a report/accession number index.

HOW TO USE THE SUBJECT INDEX

Two types of cross-references appear in the subject index:

1. Use (U) references indicate that the subject term is not "postable," i.e., not a valid term, and the following term or terms are used instead. For example:

   AIRCRAFT PROTUBERANCES
   U PROTUBERANCES
   FLIGHT PERFORMANCE
   U FLIGHT CHARACTERISTICS

2. Narrower Term (NT) references refer the user to more specific headings in the same subject area, under which additional material on the subject may be found. For example:

   FLOW RESISTANCE
   NT AERODYNAMIC DRAG
   NT FRICTION DRAG
   NT SUPERSONIC DRAG

In addition, a searcher may use the title or title and title extension in the index to narrow further his quest for particular items. This is because subject terms readily include more than one class of document. For example:

   AIRLINE OPERATIONS
   All-weather operations, including pilot role, instrument landing systems and guidance aids.
   Airport congestion as constraint on air travel, considering runway capacity and adjusted demand.

illustrates a case where two references on different topics are listed under the same subject term.
HOW TO USE THE PERSONAL AUTHOR INDEX

All personal authors used in the abstract-section citations in the individual Supplements appear in the index. Differences in transliteration schemes may require multiple searching of the index for variants of an author's name. For example:

EMELIANOV, M. D.
and
YEMELYANOV, M. D.

HOW TO USE THE CORPORATE SOURCE INDEX

The corporate source index entries are abridged versions of the corporate sources used in the abstract-section citations in the individual Supplements. The corporate source supplementary (organizational component) does not appear in the index. For example:

BOEING CO., SEATTLE, WASH. MILITARY AIRCRAFT SYSTEMS DIV.  
(Source citation entry)
BOEING CO., SEATTLE, WASH.  
(Source index entry)

HOW TO USE THE CONTRACT NUMBER INDEX

All contract numbers that are identified in the abstract-section citations in the individual Supplements appear in this index. Changes by agencies in the style in which contract numbers are presented may require multiple searching for variants. For example:

AF 33(615)-71-C-1758
F33615-71-C-1758

HOW TO USE THE REPORT/ACCESSION NUMBER INDEX

All report numbers that have been assigned by the corporate source, monitoring agency or cataloging activity appear in this index. Variations in initial cataloging may result in different report number series. For example:

TP-924
ONERA-TP-924

IDENTIFICATION OF DESIRED SUPPLEMENT

The abstract and descriptive cataloging for any accession number selected from the indexes may be found in the appropriate Supplement. The page-number range of each Supplement appears on the inside front cover of this index. Once the range of page numbers containing the selected accession number is located in the second column, the desired Supplement number will be found in the first column. For example:

Page 331 will be found in Supplement 125.

AVAILABILITY OF DOCUMENTS

Information concerning the availability of documents announced in the Aeronautical Engineering supplements is found in the Introduction to the most currently issued monthly supplement.
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT INDEX ........................................... A-1</td>
</tr>
<tr>
<td>PERSONAL AUTHOR INDEX .................................. B-1</td>
</tr>
<tr>
<td>CORPORATE SOURCE INDEX .................................. C-1</td>
</tr>
<tr>
<td>CONTRACT NUMBER INDEX .................................... D-1</td>
</tr>
<tr>
<td>REPORT/ACCESSION NUMBER INDEX ......................... E-1</td>
</tr>
</tbody>
</table>
### SUBJECT INDEX

**AERONAUTICAL ENGINEERING / A Continuing Bibliography**

### JANUARY 1981

#### 1981 Cumulative Index

### Typical Subject Index Listing

<table>
<thead>
<tr>
<th>FIBRE RELEASE</th>
<th>SUBJECT HEADINGS</th>
<th>TITLE</th>
<th>REPORT NUMBER</th>
<th>PAGE NUMBER</th>
<th>NASA ACCESSION NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon/graphite composite material study — risk and hazards of fiber release</td>
<td>[D880-175235]</td>
<td>p0555 B80-29462</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The title is used to provide a description of the subject matter. When the title is insufficiently descriptive of the document content, a title extension is added, separated from the title by three hyphens. The title is used to provide a description of the subject matter. When the title is insufficiently descriptive of the document content, a title extension is added, separated from the title by three hyphens.

### A-6 AIRCRAFT

- Development of the A-6/circulation control wing flight demonstrator configuration
  - [AD-10817241] p0355 B80-22365
  - Circulation Control Wing (CCW) Flight Tests p0640 B80-33339

### A-7 AIRCRAFT

- The A-7 head-up display reliability program
  - p0251 B80-19539

### A-10 AIRCRAFT

- Practical method of fatigue crack growth analysis for damage tolerance assessment of aluminum structure in fighter type aircraft
  - [ATIA PAPE-80-0405] p0095 B80-19346

- Development and flight test of a two-place night/adverse weather A-10 for the close-air support and battlefield attack mission
  - [SAP PAPB 7551060] p019a B80-26632

- Night/adverse weather A-10 evaluator program
  - A-10/8, W. E. Shaver p0207 B80-27378

- Night/Adverse Weather A-10 at the cross-roads
  - A-10 carriage loads test [AD-10734O2] p0079 B80-13004

- Positional error analysis, A-10 aircraft on three-axis ground mount
  - [AD-1073600] p0083 B80-13336

- Evaluation of the aerodynamic characteristics of a 1/20-scale A-10 model at Mach numbers from 0.30 to 0.75
  - [AD-1074867] p0127 B80-15055

- The A-10 and design-to-cost: How well did it work?
  - [AD-1075437] p0178 B80-17065

  - [AD-1077380] p0261 B80-19105

- A statistical model for multipath reflection effects of antennas mounted on aircraft
  - [AD-1080369] p0311 B80-21649

- Night/adverse weather A-10 evaluator program (A-10B)
  - [AD-10803l0] p0594 B80-31907

### A-300 AIRCRAFT

- Electros beam and diffusion welding as an economic procedure for building Airbus-lap tracks
  - p0061 A80-16970

- Failure and damage tolerance — A concept applied to the A 300
  - p0407 A80-39580

### STATUS AND PROSPECTS OF THE AIRBUS FAMILY PROGRAM

- [DGLR PAPER 80-020] p0522 A80-46277

### PROTECTION AGAINST WIND ICING FOR AIRBUS 310 AND A310

- [DGLR PAPER 80-046] p0522 A80-46296

### IN-FLIGHT HANDLING QUALITIES INVESTIGATION OF AIRBUS A 310 DFC.

### CONFIGURATIONS ON LANDING APPROACH SIMULATION FOR AIRBUS A 310 DFC.

### DVLAR-EB 320 VARIABLE STABILITY AIRCRAFT

- [DVLAR-EB-79-16] p0349 B80-22319

### VALUE ANALYSIS FOR THE AIRCRAFT AIRBUS

- [SH5A-79-501-105] p0486 B80-27212

### AIRDUTY APPEARS

- Emergency flight egress opening for general aviation aircraft
  - [NASC-TR-00235] p0303 B80-21293

### ABRASION RESISTANCE

- Development of improved abradable compressor gas-path seal
  - [AD-1072171] p0046 B80-11477

### DEVELOPMENT OF IMPROVED HIGH PRESSURE TURBINE OUTER GAS PATH SEAL COMPONENTS — ABRADABILITY

### AND THERMAL CYCLING TEST RESULTS

- [AD-1072171] p0307 B80-21322

### APPLICATIONS OF SPRAYED COATINGS

- [D880-25507] p0438 B80-25507

### ABSORBERS (EQUIPMENT)

- Bifilar analysis study, volume 1
  - [ATIA-CR-15927] p0602 B80-31362

### ABSORBERS (MATERIALS)

- Suppression of self-oscillations in combustion chambers by means of resonance sound absorbers
  - p0356 B80-34400

### QCSE fan exhaust bulk absorber treatment evaluation
  - [ATIA PAPER 80-0987] p0337 A80-35952

### ABSORPTION COEFFICIENTS

- U ABSORPTIVITY

### ABSORPTIVITY INDEX

- U ABSORPTIVITY

### ABSORPTIVITY

- Moisture absorption of polyester-glass composites
  - p0381 A80-37711

### AC GENERATORS

- High power density superconducting generator
  - [A871 A80-4219]

### PROGRAM FOR THE DEVELOPMENT OF A SUPERCONDUCTING GENERATOR

### PHASE 2 AND 3
  - [AD-1072093] p0352 B80-10679

### DETAILED DESIGN, FABRICATION AND TESTING OF AN ENGINEERING prototype compensated pulsed alternator
  - [AD-1072171] p0556 B80-29595

### ACCELERATED LIFTEST

- Advanced composite serviceability program — Status review — inspection of aircraft structures
  - p0197 A80-26890

### A QUICK LOOK AT CURRENT RESULTS OF ACCELERATED MISSION TESTS FOR GAS TURBINE ENGINES

### [ATIA PAPER 80-1155] p0390 A80-38924

### GENERALIZED APPROACH TO AIRCRAFT GAS TURBINE ENGINE EQUIVALENT TEST REGIME DETERMINATION

- p0564 A80-47613

### ACCELERATION

- Statistical review of counting accelerometer data for Navy and Marine fleet aircraft
  - [AD-1090050] p0348 B80-22380

### ACCELERATION (PHYSICS)

- BT ANGULAR ACCELERATION

### BT LINEAR ACCELERATION

### BT IMPACT ACCELERATION

### BT SPIN REDUCTION

### PREDICTIVE GUIDANCE FOR INTERCEPTORS WITH TIME LAG IN ACCELERATION

- p0319 A80-32682
ACOUSTIC FATIGUE

The effects of motion and g-seat cues on pilot simulator performance of three piloting tasks
[NASA-TP-1601] p0129 880-15069
Azimuth observability enhancement during INS
in-flight alignment
[TAEX-362] p0630 880-32360
ACOUSTIC FATIGUE
A new approach to active control of rotorcraft vibration
[AIAA 80-1778] p0511 880-45556
ACOUSTIC FATIGUE TOLERANCE
Ejection seat for high G escape
[AD-A0729444] p0037 880-11054
ACOUSTIC FATIGUE
Methods for strap-down attitude estimation and navigation with accelerometers
The accelerometer method of obtaining aircraft performance from flight test data dynamic performance testing
[AD-A0755226] p0178 880-17066
Inertially augmented approach couplers
[AD-A060896] p0290 880-20248
ACOUSTIC FATIGUE
Field impact evaluation report on the Electronic Tabular Display Subsystem (ETADS)
[AD-A0769846] p0165 880-17357
ACOUSTIC FATIGUE
ACCUSABILITY
ACCIDENT INVESTIGATION
ACOUSTIC DUCT DESIGN
Impact of flight effects on multistage suppressor design
[AIAA PAPER 80-1029] p0339 880-35979
Rigorous solutions for sound radiation from circular ducts with hyperbolic horns or infinite plane baffle
p0390 880-37895
Noise suppression in jet inlets
[AD-A085403] p0551 880-29334
A feasibility study of a 3-D finite element solution scheme for aeroengine duct acoustics
p0655 880-34216
ACOUSTIC FRICTION
On the acoustic power emitted by helicopter rotor blades at low tip speeds
p0128 880-12375
A review of propeller discrete frequency noise prediction technology with emphasis on two current methods for time domain calculations
p0567 880-47656
Studies of the acoustic transmission characteristics of coaxial nozzles with inverted velocity profiles, volume 1 --- jet engine noise radiation through coaxial exhaust nozzles
[NASA-CR-159698] p0065 880-11870
Ultrasonic and acoustic emission detection of fatigue damage --- aluminum alloy 7075-T651
[AD-A0792777] p0310 880-21510
Experimental study of airfoil trailing edge noise: Instrumentation, methodology and initial results
ACOUSTIC REJECTION
A study of production and stimulated emission of sound by vortex flows
p0161 880-23903
The nonlinear impedance of perforated walls in the case of two-tone excitation
p0270 880-30810
A model for broadband jet noise amplification
[AIAA PAPER 80-1008] p0392 880-38635
Visualization of the acoustic excitation of a subsionic jet
p0620 880-52717
Damping problems in acoustic fatigue
p0253 880-19580
ACOUSTIC FATIGUE
Acoustic fatigue failure of inlet guide vanes due to intake flow distortions in an aircraft engine
p0899 880-16099
Sonic fatigue design data for bonded aluminum aircraft structures
[AIAA PAPER 80-0303] p0094 880-18304
Selected topics from the structural acoustic program for the B-1 aircraft
p0166 880-17299

### SUBJECT INDEX

**ACOUSTIC GENERATORS**
- Response of nonlinear panels to random loads p0639 A80-32766

**SOUND GENERATORS**

**ACOUSTIC IMPEDANCE**
- The nonlinear impedance of perforated walls in the case of two-tone excitation p0279 A80-30610

**ACOUSTIC MEASUREMENTS**
- Unsteady transonic flows in a two-dimensional diffuser (AER-068231) p0636 A80-32400

**MT-NOISE MEASUREMENTS**
- Acoustic measurements of three Prop-Fan models [AIAA PAPER 80-0995] p0337 A80-35958
- The development and operation of the NASA anechoic acoustic test facility [AIAA PAPER 80-0982] p0392 A80-38633
- Wing effect on jet noise propagation [AIAA PAPER 80-1077] p0398 A80-38646
- Noise measurement, noise assessment p0411 A80-40392

**Infrasonic emission of the NK 8-4 engine** p0567 A80-47780

**Ground effects on aircraft noise — near grazing incidence** [NASA-TM-80185] p0075 A80-12020

**Advanced turbo-prop airplane interior noise reduction design definition** [NASA-CR-159668] p0085 A80-13882

**Acousto-optic measurement techniques in or outside turbulent flows** p0125 A80-14976

### ACTIOMETERS

**Acousto-optic characteristics of the external upper surface blowing propulsive-lift configuration** [AIAA PAPER 80-1063] p0341 A80-36001

**An acoustic sensitivity study of general aviation** [AIAA PAPER 80-1071] p0580 A80-50191

**ACOUSTIC DIRECTION**
- Multiple pure tone elimination strut assembly [NASA-CASE-POC-11062-1] p0635 A80-32233

**ACOUSTIC SCATTERING**
- NY EREVERBERATION Experimental and numerical results of sound scattering by a body interaction of aerodynamic noise and fuselage p0125 A80-14873

**ACOUSTIC SIMULATION**
- Methods of sound simulation and applications in flight simulators [NASA-TR-75768] p0245 A80-19113

**ACOUSTIC STABILITY**
- A FREQUENCY STABILITY  

**ACOUSTIC STREAMING**
- Acoustic effects on the flow and the noise spectrum of supersonic jets p0326 A80-34002

**ACOUSTIC VELOCITY**
- Studies of the acoustic transmission characteristics of coaxial nozzles with inverted velocity profiles, volume 1 — jet engine noise radiation through coaxial exhaust nozzles [NASA-CR-159698] p0045 A80-11870
- Airfoils at sonic velocity --- Trescai equation p0486 A80-27278

**ACOUSTIC VIBRATIONS**
- U S WAVES ACOUSTICS  

**AEROCOUSTICS**
- MT ACOUSTICS

**BIOACOUTICS**
- MT PSYCHOCOUSTICS

**PSYCHOCOUSTICS**
- Pressures inside a room subjected to simulated sonic booms p0040 A80-32519

**Sonic boom spectrum analysis techniques for processing airplane flyover noise data** p0278 A80-31809

**Turbulent flow past a two-dimensional delta body** p0398 A80-30847

**Prediction of free-field noise levels from pole microphone measurements** [AIAA PAPER 80-1059] p0398 A80-30847

**Aero-acoustic tests of duct-burning turboprop engines** [NASA-CR-162254] p0028 A80-10204

**Flight effects on the aero/acoustic characteristics of inverted profile coaxial nozzles** [NASA-CR-162419] p0030 A80-10220


**Core noise investigation of the CP6-50 turboprop engine** [NASA-CR-159598] p0170 A80-16061

**Core noise investigation of the CP6-50 turboprop engine** [NASA-CR-159749] p0170 A80-16061


**AEROCOUSTICS**
- Acousto-optics devices for use in radio frequency target simulators p0508 A80-40517

**ACQUISITION**
- MT DATA ACQUISITION

**TARGET ACQUISITION**
- MT ACOUSTIC ACQUISITION

**TARGET DETECTORS**
- MT INFRARED DETECTORS

**RADAR DETECTORS**
- MT MICROWAVE RADAR DETECTORS

**RADAR DETECTORS**
- MT RADAR DETECTORS
ACTIVE CONTROL

Digital active controls for L-1011

Technical evaluation report on the Fluid Dynamics
Panel Symposium on Aerodynamic Characteristics
of Controls — active control and control
configured vehicle

[AD-A00-157] p0483 N04-26330

Analytical design and evaluation of an active
control system for helicopter vibration
reduction and gust response alleviation

[NASA-CR-152377] p0536 N04-29369

The logic of the electric flight control system
experiment on the Concorde

speed longitudinal stability by active control

p0612 N04-32137

Application of advanced technologies to small,
short-haul transport aircraft

[NASA-CR-152363] p0629 N04-32353

ACTUATORS

Nonelectronic aspects of avionic system reliability

--- actuation

p0257 N04-19525

Flight verification of direct digital drive for an
Advanced Flight Control Actuation System (AFCAS)
in the Y-25 aircraft

[AD-A087925] p0422 N04-24327

ACTUATOR

The Actuator — A new concept in actuation ---
for aerospace mechanisms

[AIAA 80-0815] p0335 N04-35096

Digital electro hydraulic control surface actuator,
positioned by means of quick-acting solenoid
valves

[DGLR PAPER 80-050] p0523 N04-46299

Electro mechanical flight control actuator


A hydraulic actuator mechanism to control aircraft
spoiler movements through dual input commands

[NASA-CASL-LR-12412-1] p0308 N04-11065

Quiet Clean Short-haul Experimental Engine (QCSEE),
Ball spline pitch change mechanism
design report

[NASA-CR-136873] p0133 N04-15101

Quiet Clean short-haul Experimental Engine (QCSEE)
whirl test of supersonic pitch change

[NASA-CR-135180] p0135 N04-15117

Electrical servo actuator bracket --- for jet
engine fuel control valves

[NASA-CASL-PFC-11084-1] p0206 N04-21327

Single-stage electro hydraulic servosystem for
actuating on airflow valve with frequencies to
500 hertz

[NASA-TP-1678] p0554 N04-29369

A proposal for aerodynamically actuated self
streamlining umbilical wind tunnel walls

[AFRL/AERO-00928-392] p0555 N04-29374

Electro mechanical actuation development

[AD-A085847] p0606 N04-31409

ADAPTATION

AT DARE ADAPTATION

ADAPTIVE CONTROL

AT LEARNING MACHINES

AT SELF ADAPTIVE CONTROL SYSTEMS

Identification and dual adaptive control of a
turbojet engine

p0001 N04-10033

Command- and stability systems for aircraft —
a new digital adaptive approach

p0052 N04-14024

Adaptive allocation of decisionmaking
responsibility between human and computer in
multitank situations

p0091 N04-18022

Synthesis of an adaptive flight control system
with an observer

p0155 N04-22570

Controlling adaptive antenna arrays with the
sample matrix inversion algorithms

p0159 N04-23283

The crew adaptive cockpit — Firefox, here we come
technology assessment of aircraft/aircraft
digital avionics systems in military aircraft

p0238 N04-32446

Development and flight evaluation of automatic
flare laws with improved touchdown dispersion

[AD-A00-1577] p0510 N04-45545

An adaptive controller synthesis with an observer

[AIAA 80-1632] p0520 N04-05920

Adaptive main-beam nulling for narrow-beam antenna
arrays

p0521 N04-46136

Reliability problems of adaptive automatic control
systems /Review/

p0572 N04-84699

Experiments for the reduction of wind tunnel wall
interference by adaptive-wall technology

[AIAA 80-04551] p0580 N0-17088

Adaptive estimation of information values in
continuous decision making and control of
advanced aircraft

[AD-A077917] p0290 N04-20281

Apparatus for damping operator induced
oscillations of a controlled system — using
adaptive filters to damp oscillations in a
flight control system

[NASA-CASL-PFC-11084-1] p0296 N04-20198

Investigation into adaptive control of a
nipple-cart, reaction bonded silicion-nitride
process via adaptive learning network modeling

[AD-A083730] p0502 N04-20091

Design of an adaptive control system for the
SNF/GTO aircraft with provisions for eigenvalue
and eigenvector selection

p0605 N04-31405

ADAPTIVE CONTROL SYSTEMS

U ADAPTIVE CONTROL

ADAPTIVE FILTERS

Experience with an adaptive stick-gain algorithm to
reduce pilot-induced-oscillation tendencies

[AIAA 80-1571] p0516 N04-46780

A new weighting coefficient for adaptive state
estimation

p0083 N04-13347

Apparatus for damping operator induced
oscillations of a controlled system — using
adaptive filters to damp oscillations in a
flight control system

[NASA-CASL-PFC-11084-1] p0296 N04-20198

Design of a nonlinear adaptive filter for
suppression of shuttle pilot-induced oscillation
tendencies

[NASA-TP-81349] p0309 N04-21355

Adaptive linear filtering in the presence of an
evolution noise of poorly known variance

p0315 N04-22225

ADDITIONS

BY ADDITIONS

BY ADAPTIVE ADDITIONS

BY ARTIFICIAL ADDITIONS

BY ARTIFICIAL ADDITIVES

BY ARTIFICIAL ADDITIVES

Akyr derivatives of resorcinol used as
antioxidants in jet fuels

p0320 N04-35801

Mannich base used as an antioxidant in jet fuels

p0336 N04-35082

Aircraft fuel system simulator tests with
antiicing kerosene (jet a fuel with F9-9
additive) — flammability tests

[AD-A073327] p0123 N04-14256

Flight test results of the use of RBm-9
Monomethyl Ether (EGME) as an anti-carburetor
icing fuel additive

p0539 N04-20539

Antiicing kerosene --- reduced flammability
during aircraft accident circumstances

p0589 N04-29319

Service test of two fuel conductivity additives

[AD-A088046] p0638 N04-32540

ADDITIONAL ADAPTIVE CONTROL TESTS
Fatigue life prediction of a bonded splice joint
[AIAA PAPER 80-0365]
Technological improves of adhesive bonding of aircraft parts
/2nd revised and enlarged edition/ --- Russian book
p0157 80-23066

Honeycomb sandwich joints for primary structure
--- of aircraft
[AIAA 80-0780]
p0333 80-35070

A long European experience - The adhesion bonding of metals
[AIAA PAPER WT 79-27]
p0379 80-36662

30 years experience with primary adhesive bonded structures
p0569 80-48077

Primary Adhesively Bonded Structure Technology (PABST). General material property data --- bonding airframes
[AD-A077891]
p0248 80-19268

Primary Adhesively Bonded Structure Technology (PABST). Design handbook for adhesive bonding
[AD-A082076]
p0418 80-24299

The significance of peel stresses in cyclic debonding
p0248 80-24293

Primary Adhesive Bonded Structure Technology (PABST). Phase 3: Tooling, fabrication and quality assurance
[AD-A083228]
p0099 80-27486

The diffusion of water vapour in humid air into the adhesive layer of bonded metal joints
[HAP-LIB-TRANS-2038]
p0539 80-28497

A design study in crack patching
[AFRL/STOC-REP-376]
p065A 80-33798

ADHESIVES

The fabrication and testing of prototype WH-1 aircraft windshields manufactured with a sheet interlayer
[AD-A077711]
p0238 80-19060

Primary Adhesively Bonded Structure Technology (PABST). General material property data --- bonding airframes
[AD-A077891]
p0240 80-19268

Primary Adhesively Bonded Structure Technology (PABST). Phase 3: Tooling, fabrication and quality assurance
[AD-A083228]
p0099 80-27486

Chemical characterization and quality control for an adhesive
[AD-A087739]
p0607 80-31558

ADMINISTRATION

U MANAGEMENT

ADVANCED AIRCRAFT COMMAND POST
U X-4A AIRCRAFT

ADVANCED TECHNOLOGY LIGHT LIFTCRAFT

U X-4A AIRCRAFT

ADVANCED TECHNOLOGY LIGHT LIFTCRAFT

U X-4A AIRCRAFT

AERIAL EXPLORATIONS

Airblast vulnerability envelopes for supersonic aerospace vehicles
p0028 B0-10201

AERIAL RECOGNITION

U.S. Navy studies of surveillance aircrafts
p0466 80-39316

Concept of a research aircraft for remote sensing, using an integrated sensor/data system
[DGLR PAPER 80-051]
p0523 80-46300

AERIAL BORDERS

Instantaneous air forces on wings with an oscillating rudder
[DGLR PAPER 80-021]
p0522 80-46263

Flap design with ACT in the presence of strakes
p0147 B0-15161

AERORECOCNOISTICS

On the acoustic power emitted by helicopter rotor
p0012 B0-12375

Experiments of helicopter flight conditions and noise
p0049 B0-13699

Base pressure fluctuations --- aircraft acoustic loads
p0505 B0-14510

Parameter selection for aerodynamic design of propellers
p0053 B0-15083

Estimation of noise source strengths in a gas turbine combustor
[AIAA PAPER 80-0034]
p0092 B0-18205

Assessment at full scale of exhaust nozzle-to-wing size on STOL-OTW acoustic characteristics
p0107 B0-20952

Acoustic considerations of flight effects on jet noise suppression systems
[AIAA PAPER 80-0164]
p0108 B0-20965

Near-wake structure and unsteady pressures at trailing edges of airfoils --- an aeroacoustic sound generator
p0161 B0-23900

A ray-theory approach for high-frequency engine-intake noise
p0161 B0-23916

Effect of temperature on surface noise
p0216 B0-28419

The problem of aeroacoustic interactions /Review/
[AIAA PAPER 80-29070]
p0260 B0-29070

p0273 B0-30066

Aeroacoustics --- Russian book
p0326 B0-34386

Determining the optimal fan silencer design of aircraft engines
p0326 B0-34396

Acoustic effects on the flow and the noise spectrum of supersonic jets
p0326 B0-34402

Acoustic characteristics of jets issuing from ring-and-needle nozzles
p0327 B0-34404

Helicopter rotor thickness noise
p0337 B0-35790

Model rotor low frequency broadband noise at moderate tip speeds
[AIAA PAPER 80-1013]
p0339 B0-35791

Impact of flight effects on multistage suppressor design
[AIAA PAPER 80-1029]
p0339 B0-35792

Acoustic characteristics of the external upper surface blowing propulsive-lift configuration
[AIAA PAPER 80-1063]
p0341 B0-36001

Upper surface blowing noise of the NASA-Ames quiet short-haul research aircraft
[AIAA PAPER 80-1064]
p0341 B0-36002

An overview of NASA's propeller and rotor noise research
p0341 B0-36225

Reflection of sound by aircraft wing tip vortices
[AIAA PAPER 80-0975]
p0392 B0-36361

The development and operation of the BBC anechoic acoustic test facility
[AIAA PAPER 80-0962]
p0392 B0-36363

A model for broadband jet noise amplification
[AIAA PAPER 80-1004]
p0392 B0-36365

Nonlinear due to tip vortex formation on lifting rotors
[AIAA PAPER 80-1010]
p0393 B0-36366

Nonlinear propagation of broadband jet noise
[AIAA PAPER 80-1039]
p0394 B0-36405

Fan noise source location from field measurements
[AIAA PAPER 80-1054]
p0396 B0-36464

Ground reflection effects on aircraft flyover noise
[AIAA PAPER 80-1059]
p0396 B0-36500

On the unsteady, wake induced lift on a slotted airfoil
p0516 B0-45890

Aerodynamic characterization of free jets
p0666 B0-12025

Experimental and numerical results on a shear layer excited by a sound pulse
[AIAA PAPER 80-0962]
p0075 B0-12821

Experimental study of acoustic loads on an upper-surface-blowing STOL airframe configuration - Langley full-scale wind tunnel tests
[AIAA-TP-1077]
p0085 B0-13897

Assessment at full scale of exhaust nozzle to wing noise on STOL-OTW acoustic characteristics
[AIAA-TP-1077]
p0085 B0-13898

Acoustically swept rotor --- helicopter noise reduction
[AIAA-CASP-ARC-11106-1]
p0118 B0-14107

Applications of diffraction theory to aeracoustics --- aircraft noise
p0125 B0-14870

Experimental and numerical results of sound scattering by a body --- interaction of aerodynamic noise and fuselage
p0125 B0-14873
AERODYNAMIC AXIS

Aeroacoustic measuring techniques in or outside turbulent flows
p0125 880-10876

Publications in acoustic and noise control
Nasa Langley Research Center during 1940-1979
--- bibliographies
[NASA-TH-84214]
p0231 880-18884

Aeroacoustic wind-tunnel tests of a light
twin-boom general-aviation airplane with free or
shrouded-pusher propellers --- in the Langley
full-scale tunnel
[NASA-TH-80203]
p0232 880-19023

Propeller driven light aircraft noise
p0315 880-22237

Noise generated aerodynamically
p0316 880-22238

High-speed-propeller wind-tunnel aeroacoustic
results
p0352 880-22344

Propeller aeroacoustic methodologies
p0353 880-22345

Noise generation by jet-engine exhaust deflection
p0358 880-23104

On the sound field generated by a fan in a
hard-walled baffled duct with uniform flow
[BLE-TH-78026a]
p0358 880-23105

On disturbance fields of moving singularities in
aerodynamics and aeroacoustics
[NASA-TH-570]
p0360 880-23269

Quiet Clean Short-haul Experimental Engine (QCSHE)
Under-The-Wing (OTW) composite Nacelle test
report.
Volume 2: Acoustic performance from
[NASA-CH-159472]
p0546 880-29297

Acoustic performance of a 50.8-cm (20-inch)
diameter variable-pitch fan and inlet.
Volume 2: Acoustic data
[NASA-CH-135118]
p0547 880-29299

Exploratory studies on the design of acoustic
splitters for wind tunnels
[NASA-TH-160-1829]
p0607 880-31117

Viscous theory of surface noise Interaction
phenomena
[NASA-CS-3331]
p0639 880-33176

Evaluation of Aero Commander sidewall vibration
and interior acoustic data: Static operations
[NASA-CH-159290]
p0695 880-33392

A feasibility study of a 3-D finite element
solution scheme for aeroengine duct acoustics
[NASA-CH-159359]
p0655 880-34216

Airframe noise prediction program validation
[NASA-CH-159333]
p0655 880-34219

AERODYNAMIC AXIS

AERODYNAMIC BALANCE

Total aircraft flight-control system - balanced
open- and closed-loop control with dynamic trim
maps
p0263 880-32948

A comprehensive analytical model of rotorcraft
aerodynamics and dynamics. Part 2: Gear's manual
[NASA-TH-81183]
p0529 880-28297

Rotary balance data for a typical single-engine
general aviation design for an angle of attack
range of ±8 deg to 90 deg. 1: Low wing model C
wind tunnel tests
[NASA-CS-3290]
p0642 880-33355

AERODYNAMIC BEAKS

MT LEADING EDGE SLATS
MT TRAILING-EDGE FLAPS
MT WING FLAPS

Aerobraking and aerocapture for planetary missions
p0148 880-21228

AERODYNAMIC BOX

U FLUTTER

AERODYNAMIC CENTER

U AERODYNAMIC BALANCE

AERODYNAMIC CHARACTERISTICS

MT AERODYNAMIC BALANCE
MT AERODYNAMIC DRAG
MT AERODYNAMIC STABILITY
MT INTERFERENCE DRAG
MT JET LIFT
MT LIFT
MT ROTOR LIFT
MT STATIC AERODYNAMIC CHARACTERISTICS
MT SUPERSCISS DRAG

Wing profile design of the world championship
airplane SB 11

SUBJECT INDEX

p0087 880-13181

Effect of the surface state of gas turbine blading
on the blading's aerodynamic characteristics
when operating on products of combustion of high-sulphur oil
p0048 880-13369

On behavior of axial compressor blades with
variable geometry when using blade acoustic
measurement data --- German thesis
p0048 880-13455

Transition in the infinite swept attachament line
boundary layer
p0048 880-13573

Data and analysis procedures for improved aerial
applications mission performance ---
aricultural aircraft wing geometry
p0055 880-15220

Certain types of separated flow over slotted wings
p0056 880-15475

An experimental method for investigating the
mutual aerodynamic interference of aircraft
components at supersonic velocities
p0056 880-15476

Aerodynamics and dynamics of turbojet aircraft.
/3rd revised and enlarged edition/ --- Russian
book
p0060 880-16462

Nederlands= Vereeniging voor Luchtvaarttechniek,
Yearbook 1978
p0063 880-17334

Concerning the information efficiency of
aerodynamic experiments
p0088 880-17671

Analytical investigation of aerodynamic
characteristics of highly swept wings with
separated flow
p0088 880-17697

Effects of the aerodynamic cross-coupling
correlation and lateral acceleration derivatives on airplane
dynamic characteristics
p0089 880-17699

Engine aerodynamic installation by numerical
simulation
p0093 880-18271

Experimental determination of pure rotary
stability derivatives using curved and rolling
flow wind tunnel
[NASA PAPER 80-0309]
p0094 880-18308

Studies of leading-edge thrust phenomena
p0094 880-18315

Effects of non-planar strake-wing on the vortex
dynamics of a twin-jet fighter
configuration
p0095 880-18318

Correlation of predicted longitudinal aerodynamic
characteristics with full-scale wind tunnel data
on the ATJIT airplane
[NASA PAPER 80-0186]
p0096 880-18356

Hybrid vortex method for lifting surfaces with
free-vortex oil
[NASA PAPER 80-0070]
p1000 880-19307

Assessment of analytic methods for the prediction
of aerodynamic characteristics of arbitrary
bodies at supersonic speeds
[NASA PAPER 80-0071]
p1001 880-19308

Designing light airplanes --- Russian book
p1001 880-19414

Scale model performance test investigation of
exhaust system mixers for an Energy Efficient
Engine /83/ propulsion system
[NASA PAPER 80-0229]
p1008 880-20968

Calculation of the aerodynamic characteristics of an
aircraft at supersonic speeds
p1015 880-21255

Calculation of the flow past a body of arbitrary
configuration, moving in an ideal fluid above a
flat surface
p1015 880-21283

Determination of the aerodynamic characteristics
of a flight vehicle from onboard measurement data
p1015 880-21293

Selecting the optimal geometrical twist of an
aircraft wing
p1015 880-21301

Delta wing of optimal configuration in supersonic
flow
p1015 880-21341

Calculation of the supersonic flow past a winged
bielliptical body
p1015 880-21342

A-6
Determination of an oblique wing aircraft's aerodynamic characteristics
[ATIA 80-1630] p0520 A80-45918
Calculation of the supersonic flow past a slender delta wing at angles of attack and side-slip
[ATIA 80-46026]
Contribution to the theory of supersonic flow past three-dimensional wings
[ATIA 80-46029]
Aerodynamic characteristics of configurations
[ATIA 80-46053]
Influence of nonequilibrium on the aerodynamic characteristics of some wing profiles
[ATIA 80-46055]
Cement on 'Calculation of rotor impedance for articulated-rotor helicopters in forward flight'
[ATIA 80-47325]
Aerodynamic investigations of a bypass turbofan stage
[ATIA 80-47371]
Experimental and theoretical investigations of the lifting properties of a wing of deformable profile
[ATIA 80-47393]
Approximate determination of helicopter vertical rate of climb
[ATIA 80-47404]
Analytic design of turbine blade airfoil
[ATIA 80-47429]
The canard configuration and the conventional airplane --- aerodynamic characteristics of wings
[ATIA 80-48122]
The aerodynamic interaction between a close-coupled canard and a nacelle wing in transonic flow
[ONERA TP NO. 1980-31]
Aero-acoustic development of the engine nacelle combination for the Boeing 767 airplane
[SAN PAPER 80073]
High-alpha aerodynamic model identification of the T-2C aircraft using the BBN system identification method
[ATIA PAPER 80-0172]
Shockless airfoils for wings, compressors, and turbines
[ATIA 80-50195]
Method for calculating surface velocity of arbitrary wing in ideal fluid
[ATIA 80-50311]
Shock-free wing design
[ATIA PAPER 79-1557]
Quick and easy flow-field surveys
[ATIA 80-51416]
Experimental and theoretical studies on helicopter blade tips at ONERA
[ONERA TP NO. 1980-96]
A study of compressor blade stall flutter in a straight cascade wind-tunnel
[ONERA TP NO. 1979-97]
Measurement and prediction of the aerodynamic damping of compressor blades
[ONERA TP NO. 1980-99]
Experimental and theoretical determination of the transfer function of a compressor
[ONERA TP NO. 1980-100]
Advanced missile technology. A review of technology improvement areas for cruise missiles
including missile design, missile of the configurations, and aerodynamic characteristics
[NASA CR-3187] p0022 B80-10103
Recent developments in ejection technology in the Air Force: An overview
[ATIA 80-5108]
Low-speed wind-tunnel tests of a 1/10-scale model of an advanced arrow-wing supersonic cruise configuration designed for cruise at Mach 2.2
[NASA TE-60152] p0020 B80-10135
Prediction of aerodynamic characteristics of fighter wings at high lift
[ATIA 80-72626]
Aero-acoustic tests of duct-burning turbofan exhaust nozzles
[NASA CR-19241] p0015 B80-10206
Flight effects on the aerodynamic characteristics of inverted profile conical nozzles
[NASA CR-16219] p0030 B80-10220

AERO DYNAMIC CHARACTERISTICS CONTINUED

Variable camber airfoils
[ATIA 80-41780]
Theoretical investigations of the release and trajectories of aircraft stores
[ONERA PAPER 79-093]
Release experiments in DYEH wind tunnels --- external store separation
[ONERA PAPER 79-097]
An aerodynamic method for control and range improvement of rotary compressors
[ONERA PAPER 80-46-31]
Aerodynamic loss in a gas turbine stage with film cooling
[SAN PAPER 80-CT-38]
The aerodynamic significance of fillet geometry in turbocompressor blade rows
[ONERA PAPER 80-04-11]
Calculation of wind tunnel characteristics of turbojet engines
[ATIA 80-42165]
Applied aerodynamics of helicopters --- Russian book
[ATIA 80-42576]
Analysis of the influence of the design parameters on the characteristics of an aircraft in spinning nose dive
[ATIA 80-42799]
Experimental investigation of helicopter aerodynamics /2nd revised and enlarged edition/
--- Russian book
[ATIA 80-42937]
A vortex-lattice method for the calculation of the supersonic flow over delta wings
[ATIA PAPER 80-1903]
An experimental investigation of a wing with controlled mid-span flow separation
[ATIA PAPER 80-1904]
Full-scale wind-tunnel investigation of the effects of wing leading-edge modifications on the high angle-of-attack aerodynamic characteristics of a low-wing general aviation airplane
[ATIA PAPER 80-1984]
Aerodynamic design optimization of a fuel efficient high-performance, single-engine, business airplane
[ATIA PAPER 80-1986]
An analysis of thrust-induced effects on the longitudinal aerodynamics of STOL fighter configurations
[ATIA PAPER 80-1979]
Lift improvement of an aerofoil by periodic deformations
[ATIA 80-43320]
A streamlined concept for lift - with reference to the maximum size and configuration of aerial spray emissions
[ATIA 80-43379]
Flow studies of slender wing vortices
[ATIA PAPER 80-1423]
The aerodynamic characteristics of oscillating airfoils
[ATIA PAPER 80-1979]
Atmospheric Design of double-circular arc blades
[ATIA PAPER 80-7579]
Stall/spin flight results for the remotely piloted spin research vehicle
[ATIA 80-1563]
Spin prediction techniques
[ATIA 80-1569]
A dynamic analysis of the motion of a low-wing general aviation aircraft about its calculated equilibrium flat spin mode
[ATIA 80-1565]
Stability of symmetric equilibria flight states
[ATIA 80-1567]
A variational technique for smoothing flight-test and accident data
[ATIA 80-1601]
A determination of instrumentation errors from measured data using maximum likelihood method
[ATIA 80-1602]
Quantification of V/STOL equivalent system characteristics through analysis and ground-based simulation
[ATIA 80-1629]
Lift, drag and pitching moment measurements on a missile body having various boattails at subsonic and transonic velocities — in a transonic wind tunnel test (PFLR-PB-79-15) p0360 N80-23265

Pressure distribution measurements on wedge at subsonic and transonic velocities — in a transonic wind tunnel (NASA-TP-5555) p0360 N80-23267

Aerodynamic drag and base pressure measurements on a body of revolution at angles of incidence up to $\alpha = 25$ deg at subsonic and transonic Mach numbers — transonic wind tunnel (NASA-TP-5689) p0360 N80-23268

Summary of data required for the AGARD SID on active standard aerelastic configurations — two-dimensional configurations (NLF-TP-79015-U) p0361 N80-23273

Wind tunnel tests on a twin-engined light aircraft (NO-241) p0361 N80-23277

The aerodynamics of axial flow wind power turbines (C6ER-WR-1619) p0371 N80-23871

Effect of conventional and square stores on the longitudinal aerodynamic characteristics of a fighter aircraft model at supersonic speeds — in the langley unitary plan wind tunnel (NASA-TR-67169) p0413 N80-28266

Investigation of axisymmetric and nonaxisymmetric nozzles installed on a 0.10 scale F-18 prototype airplane model — wind tunnel tests (NASA-TP-16381) p0414 N80-28267

Wind-tunnel tests of the XV-15 tilt rotor aircraft (NASA-TR-81177) p0417 N80-28294

Comparison of theoretically predicted lateral-directional aerodynamic characteristics with full-scale wind tunnel data on the ATLIT airplane (NASA-CR-163189) p0417 N80-28295

Aircraft wake vortices. Citations from the RTIS database (P80-805666) p0431 N80-25303

A computer program for calculating aerodynamic characteristics of low aspect-ratio wings with partial leading-edge separation (NASA-CR-145362) p0477 N80-26268


CF6 jet engine performance improvement program: High pressure turbine aerodynamic performance improvement (NASA-CR-159932) p0480 N80-26302

Technical evaluation report on the Fluid Dynamics Panel Symposium on Aerodynamic Characteristics of Controls — active control and control configured vehicle (AGARD-AB-157) p0483 N80-26330

Exploratory studies of the cruise performance of upper surface blow configurations — wind tunnel tests (NASA-CR-3193) p0487 N80-27201


Time-variant aerodynamics for torsional motion of large-turning airfoils (AG-0A83766) p0487 N80-27209

Nature of inlet turbulence and strut flow disturbances and their effect on turbomachinery noise (AG-0A84155) p0497 N80-27369

High-temperature radial turbine demonstration (AG-0A84120) p0497 N80-27370

Aerodynamic study of a combustion chamber with a view to its semi-empirical modelling (AD-0A84355) p0497 N80-27395

Towards complete configurations using an embedded grid approach (NASA-CR-3030) p0541 N80-29249


Analysis of T-2C high angle of attack flight test data with nonlinear system identification methodology (AD-A086327) p0589 N80-30298

Wind tunnel measurement of lateral aerodynamic derivatives using a new oscillatory rig, with results and comparisons for the Gnat aircraft (ARC-E-M-3847) p0600 N80-31366

Aerodynamic characteristics of three helicopter rotor airfoil sections at Reynolds number from model scale to full scale at Mach numbers from 0.35 to 0.90 — conducted in Langley 6 by 20 inch transonic tunnel (NASA-TP-1701) p0620 N80-32333

Low-speed aerodynamic characteristics of light swept arrow wing configuration with several deflected leading edge concepts (NASA-TP-80180) p0641 N80-33347
The annular jet technique for nozzle/afterbody

The influence of ballistic damage on the

Transonic data memorandum: The lift achievable by

The miniDUB induced drag of aerofoils

Dynamic behavior of a bean drag-force anemometer

Transonic data memorandum: A framework relating

Prediction of drag coefficients of a supersonic

Class of shockfree airfoils producing the same

The potential for development of high performance

Ondercarriage drag prediction methods

Effect of several airframe/nozzle modifications on

The determination of aerodynamic coefficients of a

Reduction of aerodynamic drag of external spray

Recom mendations for obtaining nozzle/afterbody

The annular jet technique for nozzle/afterbody

Optimization of the relaxation drag of slender

Effect of propeller slipstream on the drag and

Some aspects of airframe/engine interference for

Advisory committee drag prediction methods

The mini-induced drag of aerofoils

Unload carriage drag prediction methods

Transonic data memorandum: A framework relating the
drag-rise characteristics of a finite wing/body combination to those of its basic aerofoil

Computational models for the viscous/inviscid
analysis of jet aircraft exhaust plumes --- predicting afterbody drag

Dynamic behavior of a bean drag-force anemometer

The influence of ballistic damage on the

Feasibility study of applying laminar flow control
to an LTA vehicle

AERODYNAMIC FORCES

 Subject Index

WT LIFT

WT ROTOR LIFT

WT SUPERSONIC DRAG

WT WING LOADING

Evaluation of the kernel of an integral equation
for a wing performing harmonic oscillations in
subsonic flow

Centrifugal forces on a thin wing in hypersonic
flight at large angles of attack

Development of a metric half-span model for
interference free testing

Numerical investigation of unstable interaction of
a supersonic jet with a plane barrier

Experimental investigations on the vibration of
blades due to a rotating stall

Preliminary measurements of aerodynamic damping of a
transonic compressor rotor

Calculation of unsteady transonic aerodynamic
forces on a three-dimensional wing

Wing-body yawing moment and sideforce derivatives
due to sideslip: Nw and Yv

A survey of aerelastic problems

Normal force derivative and center of pressure
movement due to Mach number on wing-body
combinations with triangular wings of the same
span and different aspect ratios at supersonic speeds

The aerodynamic forces on airship haws

Elements of the wing section theory and of the wing theory

General theory of aerodynamic instability and the
mechanics of flutter

Exploratory studies of the cruise performance
of upper surface blown configuration: Experimental
program, high-speed force tests

Exploratory studies of the cruise performance
of upper surface blown configurations: Program
analysis and conclusions

FFDOL experiment in active control technology

Problems of unsteady aerodynamics raised by the
use of control surfaces as active controls

An investigation of F-16 nozzle-afterbody forces
at transonic Mach numbers with emphasis on
support system interference

Development of aerodynamic disturbance test

Alleviation of the side force and the yawing
moment acting on a slender cone-cylinder body at
high angles of attack, using small jet injection
at subsonic and transonic speeds

Direct forces from flight testing

Projectile/sabot discard aerodynamics

Effect of a freely mounted store on the flutter
speed of a wing

High-speed T-38A landing gear extension
loads

Measurement of external forces and torques on a
large pointing system

Validity of small scale tests for turret/fairing
loads and cavity effects

A-12
A study of nonadiabatic boundary-layer aero-optics overview — laser applications

A proposal for aerodynamically actuated wind tunnel walls

A simple method for predicting frequency-domain aerodynamics to the time domain

Special Course on Unsteady Aerodynamics

Unsteady aerodynamics in turbo machinery

Role of unsteady aerodynamics in aircraft response

Non-stationary random response of structural systems to aerodynamic wind forces

Thermal boundary-layer stabilization time in a cryogenic tunnel for typical wing and fuselage models

Heat transfer to a plane wall from a heated, ventilated plane jet — in lift devices for V/STOL aircraft

Investigation of numerical techniques for predicting aerodynamic heating to flight vehicles

Numerical flow field program for aerodynamic heating analysis. Volume 1: Equations and results


Some aerodynamic considerations related to wind tunnel model surface definition

An experimental method for investigating the mutual aerodynamic interference of aircraft components at supersonic velocities

Numerical simulation of the wind tunnel environment by a panel method

The simulation and modeling of jet plumes in wind tunnel facilities

Development of a metric half-span model for interference free testing

Expected improvements from wind tunnel model testing at high angle of attack

A theoretical method for the simulation of the separation behavior of external stores from a carrier — fighter aircraft

Calculation of the interaction between an exhaust jet and a high-lift wing

Two-dimensional aerodynamic interference effects on oscillating airfoils with flaps in ventilated subsonic wind tunnels — computational fluid dynamics

A perturbation theory of two-dimensional transonic wind tunnel wall interference

The reduction of dynamic interference by sound-absorbing walls in the NASA T3 wind tunnel

Calculation of the interference effects between the engine nacelle and the base wing of a civil and military aircraft by the vortex lattice method

Mutual interference of multiple bodies in the flow field of the F-4C aircraft in the transonic speed range — wind tunnel tests

Jet interference on supercritical wings. Part 1: Experiments on a two-dimensional wing. Part 2: Experiments on a swept wing — wind tunnel tests

A study of nonadiabatic boundary-layer stabilization time in a cryogenic tunnel for typical wing and fuselage models

Recent developments in aerothermodynamic test systems to aerodynamic wind forces

Influence of burnishing on the structure and durability of elements operating under variable loads

Propeller slipstream/wing interaction in the transonic regime

A potential velocity panel method for the prediction of unsteady loads on oscillating wings and bodies

Development of a structural overload warning system for modern high performance aircraft

Multicyclic control of a helicopter rotor considering the influence of vibration, loads, and control action

Unsteady airloads on a harmonically pitching wing with external store

Unsteady aerodynamics of conventional and supercritical airfoils

Noise from a vibrating propeller

The effects of inhomogeneities in atmospheric turbulence on the dynamic response of an aircraft

Instantary air forces on wings with an oscillating rudder

Determination of loads applied to modern high-performance gliders

Effect of time dependent flight loads on JSTOL-7 performance deterioration

Improved methods for predicting spectra loading effects, phase 1 report. Volume 2: Test data

Improved methods for predicting spectra loading effects, phase 1 report. Volume 1: Results and discussion

Prediction of lateral aerodynamic loads on fighter aircraft at high angles of attack

Aerelasticity from the viewpoint of the designer

Experimental study of acoustic loads on an upper-surface-blow STOL airplane configuration — Langley full-scale wind tunnel tests
The modeling of the noise emitted by a profile in a turbulent flow by means of unsteady aerodynamic theories

• Some unique characteristics of supersonic cruise vehicles and their effect on airport community noise

• Excess noise from supersonic underexpanded jets in flight

• Minimizing axial flow fan noise

• Noise radiation from the side edges of flaps

• Acoustics-Aerodynamics Conference, 6th, Brno

The modeling of the noise emitted by a profile in a turbulent flow by means of unsteady aerodynamic theories

The theoretical analysis of the transient response of a lifting-surface computer program

On interfacing structural information and loading data in aerelastic analysis —- using computer techniques

Hypersonic interference flow flight experiment design —- investigating aerodynamic heating and loads

Transonic unsteady loads on an energy efficient transport wing with oscillating control surfaces

Aerodynamic characteristics and store loads of the 1/20-scale F-111 aircraft model with several external store loadings

The prediction of mass loaded natural frequencies and forced response of complex, rib-stiffened structures

Some calculated effects of non-uniform inflow on the radiated noise of a large wind turbine

Unsteady pressure measurements on oscillating models in European wind tunnels

A comprehensive analytical model of rotorcraft aerodynamics and dynamics. Part 3: Program manual

The development and application of a subsonic triangular vortex panel

Comparison of wind tunnel and flight test measurements of static aerodynamic loading of a captive store

A flight investigation of performance and loads for a helicopter with 10-61C main rotor blade sections

Application of identical aerodynamic functions

Loads calibrations of strain gage bridges on the DASA project Aeronautical Research Engine (ABE-1)

Fatigue testing of vampire wings

One of the acoustic power emitted by helicopter rotor blades at low tip speeds

The effect of intermittent aircraft noise on sleep. III

Sound generation in a flow near a compliant wall

Noise generation by a lifting wing/flap combination at Reynolds numbers to 2.8 x 10 to the 6th

Investigation of trailing-edge noise

Modelling low Mach number noise

A study of production and stimulated emission of sound by vortex flows
national transonic facility [NASA-CR-159146] p0033 N60-10476
Aero-servo-elastic stability analysis [AaP-78/179] p0353 N60-12348
Aeroelastic Problems in Aircraft Design [Vrije Universiteit, Amsterdam] p0045 N60-12000
A survey of aeroelastic problems [N60-12001]
Aerodynamic from the viewpoint of the designer [N60-12002]
Modal analysis of aircraft structures [N60-12003]
Lifting surface divergence and control effectiveness [N60-12004]
Remarks on the transonic flow past oscillating airfoils [N60-12009]
Aircraft flutter and dynamic response [N60-12010]
Wind tunnel flutter investigations [N60-12011]
Flight flutter testing [N60-12012]
Development of stability methods for application to nonlinear aeroelastic optimization [N60-12014]
Aeroelastic response analysis of two dimensional, single and two degree of freedom airfoils in low-frequency, small-disturbance unsteady transonic flow [N60-12015] p0069 N60-12073
Some measurements of buffeting on an aeroelastic model of a slender wing aircraft [AIAA-78-1148] p0081 N60-13055
An empirical approach for checking flutter stability of gliders and light aircraft [N60-13056] p0139 N60-15144
Parameter identification of flexible flight vehicles assuming a low-reduced-frequency aerodynamic representation [N60-15146] p0169 N60-16054
Synthesis of unsteady aerodynamic problems concerning helicopters [AaAP-78/19] p0175 N60-17025
On interfacing structural information and loading data in aeroelastic analysis --- using computer techniques [AIAA-78-3833] p0187 N60-17521
Wing/store flutter with nonlinear pylon stiffness [NASA-TR-91769] p0254 N60-20280
Development of stability methods for applications to nonlinear aeroelastic optimization [AaP-78/179] p0294 N60-20282
Structural optimization with static and aeroelastic constraints [N60-20283] p0300 N60-21266
Symmetric variational formulation of harmonic vibrations problem by coupling primal and dual principles. Application to fluid-structure coupled systems [N60-21269] p0316 N60-22285
Propeller dynamic and aeroelastic effects [N60-22287] p0353 N60-22348
Unsteady aerodynamic forces on a subsonic rectilinear cascade of blades [PNR-90007] p0360 N60-22366
An aeroelastic analysis of the SHARP wing [N60-234] p0361 N60-23274
Investigation into compressor aeroelastic instabilities in a wind tunnel for a rectilinear cascade of blades [PB-90011] p0368 N60-23337
Status of NASA full-scale engine aeroelasticity research [NASA-TP-81500] p0370 N60-23678
Wind-tunnel tests of the YV-15 tilt rotor aircraft [NASA-TR-81177] p0401 N60-24294
An analytical study of effects on aeroelasticity on control effectiveness [NASA-CR-163197] p0421 N60-24322
Applications of NASTRAN in gust response analysis at Northrop [N60-24323]
The influence of ballistic damage on the aerodynamic characteristics of lifting surfaces --- fighter aircraft [AD-4082536] p0433 N60-25322
Unsteady pressure measurements on oscillating models in European wind tunnels [AD-A083248] p0478 N60-26277
Coupled bending-torsion flutter in cascades with applications to fan and compressor blades [NASA-CR-81500] p0498 N60-27396
An assessment of the current roles of the National Transonic Facility and the Langley Transonic Dynamics Tunnel in aeroelastic and unsteady aerodynamic testing [NASA-TR-81839] p0537 N60-28377
Wind-tunnel experiments on divergence of forward-swept wings [NASA-TP-1685] p0554 N60-29287
Mathematical modeling of linear and non-linear aircraft structures [AGARD-R-687] p0595 N60-31326
Calculation of the transient motion of elastic airfoils forced by control surface motion and gusts [NASA-TR-81351] p0627 N60-32329
Analysis and calculation of test data from an advanced technology rotor system --- helicopter performance prediction [NASA-CR-152366] p0642 N60-33351
LoadcalibrationsofstraingagebridgesontheDSTprojectAerelasticResearchWing(ARW-1) [NASA-CR-81889] p0645 N60-33393
AERONAUTICAL FLUTTER
AERONAUTICAL ENGINEERING: Nederlandse Vereniging voor Luchtvaarttechniek, Yearbook 1978 p0663 A60-17334
AIRPFF - Message and data switching systems for aeronautical operations [A60-19579] p0610 A60-19579
The process of chemical milling in aircraft structures [A60-21676] p0652 A60-21676
History of Soviet aircraft design to 1938: Botes toward a history of aircraft production /2nd revised and enlarged edition/ --- Russian book [A60-22839]
Major areas of research in aeronautics and air traffic at the German Aerospace Research Establishment /DFVLR/ [A60-28491] p0216 A60-28491
ENFV aeronautical and support system Supporting Technology Programs [A60-29670] p0267 A60-29670
Overview of new engineering and development initiatives - Technology choices [AIAA PAPEB 80-0923] p0380 A60-37001
Results of new initiatives process --- FAA's ATC R&D policy evaluations [A60-37692] p0387 A60-37692
Project Helicostat AZ 100 - Aerostatic performances of the keel-gas bag system and technological solutions retained [A60-39296] p0409 A60-39296
Airfoil design and analysis using an information systems approach [AIAA PAPEB 80-1444] p0453 A60-41626
Design engineering [AIAA PAPEB 80-1088] p0473 A60-43323
NASA overview [A60-43323] p0473 A60-43323
Small transport aircraft technology. A report for the committee on commerce, science, and transportation, United States Senate [NASA-TP-80013] p0495 A60-11953
Aeronautical Research Laboratories [NAS-160107] p0125 A60-15026
Fiscal year 1979 scientific and technical reports, articles, papers and presentations of the committee on commerce, science, and transportation, United States Senate [NASA-TR-81839] p0170 A60-17010
Aeronautics authorization, 1981, program review, volume 2 [GPO-56-220] p0257 A60-19988
Experimental evaluation of catalytic flow stabilization for aircraft afterburners

Analysis of experiments on the effects of jet engines on pressure distribution at different angles of attack

Characteristics of afterburning bypass turbojet engines with oxygen injection into the afterburner chamber

Study of fuel injection into thrust chambers for thrust augmentation

In the joint Air Force/Bavy alternate engine program workable? GAO thinks not, as presently structured

Real life aging properties of composites

Time-temperature-stress capabilities of composite materials for advanced supersonic technology

Agricultural aircraft

Corrosion protection in agricultural aircraft technology — Russian book

Data and analysis procedures for improved aerial applications mission performance — agricultural aircraft wing geometry

Development of test methods for scale model simulation of aerial applications in the NASA Langley Vortex Facility

New mathematical formulas for the cropduster operational cycle

Wake vortex trajectories of low flying spray aircraft

Reduction of aerodynamic drag of external spray booms and nozzles used on DC-6 aircraft

Economics — The performance parameter for large airplanes

Design synthesis of an advanced technology agricultural aircraft for the 1979 AIAA/Bendix design competition

The agricultural aircraft PZL-109A and its testing at the agricultural aviation factory of INTERFLUG

Full scale visualization of the wing tip vortices generated by a typical agricultural airplane

Exploratory pilot simulator study of the effects of winglets on handling qualities of a representative agricultural airplane

Computation of spanwise distribution of circulation and lift coefficient for flapped wings of arbitrary planform

Experimental evaluation of a circulation simulation of aerial applications in the HASA Langley Vortex Research Facility — agricultural aircraft

A flight investigation of performance and loads for a helicopter with 10-64N main rotor blade sections

Wind tunnel force and pressure tests of a 21X-diameter model representing a typical agricultural aircraft

Full scale visualization of the wing tip vortices generated by a typical agricultural airplane

A flight investigation of performance and loads for a helicopter with 10-64N main rotor blade sections

Active flap control in transonic conditions

Wind tunnel force and pressure tests of a 21% thick general aviation airfoil with 25% slotted flap and 10% slot-lip spoiler

Advanced composite airfoil for L-1011 transport aircraft

Experimental investigation of a circulation control airfoil

Description of an experimental (hydropneumatic) rocket system and its use in measuring airfoils and rudder effectiveness of a light airplane

Economical processing of fiber-reinforced composite materials with thermal expansion soldering

Simulator results of an F-10A airplane utilizing an ailerons—rudder interconnect during carrier approaches and landings
AIB COOLING

Center calculation of stationary temperature fields in air-cooled turbine rotor blades
Computer calculation of stationary temperature fields in cooled turbine discs

Applied technology in turbofan engines

Air cushion landing systems

Jeff (A) mixed-flow model fan performance optimization

New remotely piloted vehicle launch and recovery concepts: Computer program listings

New remotely piloted vehicle launch and recovery concepts. Volume 1: Analysis, preliminary design and performance/cost trade studies

Analysis of trunk flutter in an air cushion landing system

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AIB COOLING

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New remotely piloted vehicle launch and recovery concepts: Computer program listings

New remotely piloted vehicle launch and recovery concepts. Volume 1: Analysis, preliminary design and performance/cost trade studies

Analysis of trunk flutter in an air cushion landing system

Easy ACLS dynamic analysis, volume 2. Part 2: Component computer programs
Peripheral jet air cushion landing system
spanloader aircraft, volume 1
[AD-A085200] p0533 B80-28344
Peripheral jet air cushion landing system
spanloader aircraft, volume 2
[AD-A085179] p0533 B80-28345
AER CUSHION VEHICLES
U GROUND EFFECT MACHINES
AIR DEFENSE
The Tornado Two takes off — BBC aircraft development program in Britain
[p0005 B80-10099
Radar recting — command and control center system for military air operations
[AD-A0006 B80-11164
Technological trends in electronic warfare — use of radar equipment for aircraft detection and weapons control accuracy in air defense
[AD-A0007 B80-11172
Required radar ranges for AW aircraft
[AD-A0110 B80-11649
Systems analysis for planning of air fleets and maintenance facilities
[p0153 B80-21935
Fighter options for tactical air defense
[SPE PAPER 791108] p0196 B80-26550
Military aerospace to 2000
[AD-A0005 B80-32510
Air Defense Ground environment — A case for automation
[p0322 B80-34154
IFP for air defense aircraft — Identification
[p0322 B80-34157
Laser Target Marker /Designator/ and Ranger
[p0324 B80-34187
Design considerations for an active laser seeker
[p0324 B80-34189
The F-16 Wild Weasel: A feasibility study
[AD-A077150] p0327 B80-19071
The impact of global positioning system on guidance and controls systems design of military aircraft. Volume 2: Specific application study no. 1, close air support
[AGARD-AD-197-VOL-2A] p0363 B80-23303
The capabilities and operational roles of Royal Air Force Tornadoes
[p0560 B80-30022
Production oriented maintenance organization: A critical analysis of sortie-generation capability and maintenance quality
[p0595 B80-31323
AER DROP OPERATIONS
Feasibility tests of use of the tri turbo-3 aircraft for arctic ABYIs drops
[AD-A073159] p0339 B80-11074
Guidance subsystems with position measurement for gliding airdrop systems
[AD-A080730] p0414 B80-24274
AER DUCTS
Experimental investigation of the characteristics of pneumatic transfer lines
[p0099 B80-19052
Compact diffusers for centrifugal compressors
[AD-A098 PAPER 80-1077] p0296 B80-38096
Measurement of the Reynolds stress tensor using a single rotating flat-plate
[p0523 B80-46366
Aerodynamic efficiency of gas turbine intakes
— for gas turbine power plants
[p0200 B80-10077
The analysis of sound propagation in jet engine ducts using the finite difference method
[AD-A074233] p0125 B80-19453
AIR FILTERS
The transfer of carbon fibers through a commercial aircraft water separator and air cleaner
[NASA-CR-159183] p0124 B80-19459
Dissemination, resuspension, and filtration of carbon fibers — aircraft fires
[p0247 B80-19196
AER Flat
FT VERTICAL AIR CURRENTS
Calculation of windshifting characteristics of jet engine
[AIAA PAPER 80-06-50] p0458 B80-42162
Study of the mutual influence of combined powerplant air passage inlet channels
[p0416 B80-51900
SUBJECT INDEX
Airflow effects on fires, part 2
[AD-A073846] p0009 B80-13196
Turbojet-thrust-nozzle secondary-airflow piping as an exit control of an inlet-stability-bypass system for a Mach 2.5 axi-symmetric mixed-compression inlet — Lewis 10- by 10-feet, supersonic wind tunnel test
[HASC-TP-1532] p0120 B80-13726
Effects of design parameters on cooling air requirement in a gas turbine combustor
[LOG-C3797] p0179 B80-17072
Airflow effects on rising measurements by a wing tip-mounted ice detector on the NC130 research airplane
[AD-A077019] p0289 B80-20244
Numerical optimization of circulation control airfoils
[AD-A088129] p0808 B80-27293
Single-stage electrohydraulic servosystem for actuating on airflow valve with frequencies to 500 hertz
[HASC-TP-1678] p0554 B80-29369
Unsteady swirling flows in gas turbines
[AD-A006765] p0593 B80-30697
Measurement of turbine engine transient airflow in ground test facilities
[AD-A088706] p0648 B80-33014
AER WEATHER
U AER CARGO
AER ILETS
U AER IMPACTS
AER INTAKES
UT ENGINE INTAKES
UT SUPERSONIC ILETS
Numerical method for calculating supersonic flow past a plane air intake with detached shock wave
[AD-A085218] B80-27148
Experimental investigation of the flow past a wing of finite width
[p0262 B80-29222
Candynamic analysis of gas-turbine combustion chambers with graduated air admission
[p0322 B80-33025
Influence of external conditions on the generation and intensity of vortices at air-intakes
[p0325 B80-34238
Influence of S-shaped air intake intake section allipticism on outlet flow uniformity — for aircraft engines
[p0376 B80-36778
Experimental study of transonic flows in an air intake at high angle of attack
[AIAA PAPER 80-1077] p0377 B80-36688
Experimental and numerical study of the flow in an air intake at high incidence
[AIAA PAPER 80-10-19] p0378 B80-36850
Fundamentals of design. VIII — Efficiacious air intakes
[p0409 B80-40250
Calculation of the flow in a supersonic air intake with allowance for the boundary layer on the fairings
[p0525 B80-46947
Study of the mutual influence of combined powerplant air passage inlet channels
[p0616 B80-51900
Aerodynamic efficiency of gas turbine intake ducts — for gas turbine power plants
[p0520 B80-10077
Experimental investigation of a 0.15 scale model of a conformal variable-ramp inlet for the F-16 airplane
[NASA-CR-159504] p0613 B80-24263
Pllena response to simulated disturbances of the model and fan inlet guide vanes in a transonic tunnel
[NASA-TR-81669] p0649 B80-33810
AIR JETS
Study of mass exchange between primary zone and secondary air jets in a gas turbine engine combustion chambers
[p0004 B80-10619
Evaluation of airjet distortion generation designed to produce steady-state, total-pressure distortion at the inlet of a General Electric P101-G2-100 turbofan engine
[AD-A072743] p0081 B80-13049
AIR LAUNCHING
Control and data acquisition aircraft for MICE

AIR QUALITY

[ASHE PAPER 80-GT-71] p0460 A80-42201
Gas turbine engine emissions measurement technology - an overview
[ASHE PAPER 80-GT-86] p0460 A80-42212
Meteorological and air pollution modelling for an urban airport

Emission reduction p0466 A80-42659
Quiet Clean Short-haul Experimental Engine (QCSEE) clean combustor test report
[RASA-CR-134916] p0133 H80-15104
Air pollution from aircraft
[RASA-TR-159712] p0170 H80-16060
Measurements of jet dispersions simulated in an aeronautical wind tunnel
[AD-A076578] p0185 H80-17401
Atmospheric dispersion of high velocity jets
[AD-A081612] p0365 H80-23321
Potential environmental effects of aircraft emissions

[SCIL-52861] p0492 H80-26987
Pollution by aircraft traffic. Pollution forecast model in the vicinity of airports. Application to various airports: Orly and Noyes-en-France p0560 H80-28952
Determination of pollutant emissions characteristics of General Electric CJ6-6 and CJ6-50 model engines
[AD-A089927] p0648 H80-33412
AIR QUALITY

Pollutant emission characteristics of future aviation jet fuels p0860 A80-16826
Summary of aircraft results for 1978 southeastern Virginia urban plane measurement study of ozone, nitrogen oxide, and methane
[RASA-TH-80146] p0170 H80-16575
Evaluation of HC (hydrocarbon) control strategies for general aviation piston engines
[PB80-155393] p0846 H80-26971
AIR SAMPLING

Ozone measurements in cabin air of Concord p0443 A80-40707
Project filter holder. Tests on 25 sm dust filter holders
[IG-TWO-Y-1638] p0371 H80-23887
AIR SHA INTERACTIONS

U AIR WATER INTERACTIONS

AIR TO AIR MISSILES

The Tornado Two takes off --- BAC aircraft development program in Britain p0006 A80-10899

AIR TO AIR ROCKETS

U AIR TO AIR MISSILES

AIR TO SURFACE MISSILES

Control integration technology impact --- as a basis for improving the combat effectiveness of all tactical aircraft p0141 H80-15162

AIR TRAFFIC

The future development of air traffic as seen by airline companies p0216 A80-28087
Influence of air traffic on the concept of air traffic control p0216 A80-28088
Major areas of research in aeronautics and air traffic at the German Aerospace Research Establishment /DFVLR/
Allocating and accommodating small aircraft operations in the Baltimore-Washington Bi-region [SAK PAPER 800761] p0576 A80-49706
A methodology for long range predictions of air transportation [SAK PAPER 800768] p0577 A80-49712
IPH aircraft handled forecast by air route traffic control center, fiscal years 1979-1990
[AD-A070786] p0026 H80-10153
An assessment of terminal air traffic control system performance with and without basic metering and spacing automation
[AD-A073548] p0037 H80-11057
The Aircraft Reply and Interference Environment Simulator (ARIES). Volume 3: Programmer's manual
[AD-A074426] p0077 H80-13017
Air traffic density and distribution measurements
[AD-A073229] p0115 H80-14064
Airport activity statistics of certificated route air carriers
[AD-A074149] p0181 H80-17089
Air traffic in NATO Europe: Its characteristics and its needs
[AD-A074149] p0491 H80-27325
Determination of the safety in a North Atlantic organized track system with reduced lateral separation --- statistical tests
[AD-A072332] p0492 H80-27332
Air traffic congestion and capacity. Citations from the RTCA data base
[P80-B110522] p0588 H80-30294
Perception of aircraft separation with pilot-preferred symbology on a cockpit display of traffic information
[RASA-TM-81172] p0604 H80-31397
Implications of requiring new production of older aircraft types (less than 75,000 pounds) to meet amended noise standards
[AD-A086577] p0654 H80-33967
AIR TRAFFIC CONTROL

FT RADAR APPROACH CONTROL

Definition of a system concept study for future air traffic control
[p0010 A80-11652]
Requirements for short instrument runways
[p0010 A80-11653]
The collision avoidance problem requires a mix of partial solutions
[p0015 A80-12930]
Radio and optical flight support systems and communications in civil aviation --- Russian book
[p0049 A80-14050]
Application of automated system to air traffic control --- Russian book
[p0500 A80-14370]
A simulation model for aircraft sequencing in the near terminal area
[p0052 A80-14839]
Airport ground traffic services in the West German Republic and the EUS open-air policy - Critical remarks concerning Article 9 of the supplementary agreement of Nov. 1, 1978 to the Germany-American Air Traffic Agreement of 1955
[p0652 A80-17289]
Automation and air traffic control
[p0098 A80-18722]
The economics of air traffic control
[p0098 A80-18723]
ATC and the airborne traffic-situation display
[p0098 A80-18724]
A survey of the stochastic filtering techniques for processing in air-traffic control and surveillance systems
[p0106 A80-20667]
A multiple transfer function model for air traffic control systems
[p0153 A80-21887]
Air traffic control - Italian prospects
[p0154 A80-21966]
The evolution of air traffic control systems - The present situation and future tendencies
[p0154 A80-21967]
Aircraft collisions
[p0163 A80-24027]
Optimal design of airport control tower cases
[p0189 A80-24746]
A collision avoidance system using Navstar/GPS and AYCBS
[p0090 A80-25157]
Present-day problems of air traffic control in ground-to-air communications
[p0192 A80-26221]
Theoretical limitations on collision avoidance systems
[p0197 A80-26811]
The use of computer systems in air traffic control
[p0204 A80-27223]
Airport radio navigation systems --- Russian book
[p0209 A80-27716]
The role of research applied to the air traffic control system
[p0216 A80-28050]
Capacity payoffs at large hub airports from ATC initiatives
[p0215 A80-28080]
Primary radar in ATC
[p0215 A80-28381]
The introduction of new systems in international civil aviation...

Problems related to the design and construction of a radar network p0115 880-14066

Methodology for the evaluation of a radar site p0115 880-14067

Performance evaluation methods of a secondary radar network p0115 880-14068

Organization of an integrated global maintenance service — Radar Networks p0115 880-14069

Automation of flight on-line strategic control: The case of speed control on pre-established routes p0115 880-14070

Radar data utilization in automating the sequencing of aircrafts in terminal areas p0116 880-14071

Tactical analysis of conflicts in an air traffic control system: Design and implementation of a provisional model p0116 880-14072

Tracking algorithms for mono and multiradar systems. A distributed processing system for radar data presentation p0116 880-14074

Filtering of synthetic radar data p0116 880-14076

Implementation of air traffic control radar receivers with fast Fourier transform processors p0116 880-14086

An air traffic channel simulation by means of ray-tracing techniques p0117 880-14088

L-band measurements in the air traffic control channel to characterize secondary radar systems p0117 880-14092

Artificial escape tactics for detecting false tracks in air traffic surveillance with secondary radar p0117 880-14100

Onboard collision avoidance systems: Environmental influence on the tracking algorithm requirements p0117 880-14105

Preliminary test results of a flight management algorithm for fuel conservative descents in a time based metered traffic environment p0117 880-14105

Fuel tents of an algorithm to minimize fuel consumption of aircraft based on flight time [NASA-TM-80194] p0118 880-14114

Air traffic control/fall beacons collision avoidance systems, Knoxville simulation [AD-A074555] p0168 880-16043


The Aircraft Reply and Interference Environment Simulator (AERIES). Volume 2: Appendices to the principles of operation [AD-A074402] p0168 880-16045

Evaluation of the potential of reduced longitudinal spacing on final approach [AD-A076434] p0169 880-16049


Dedemographics: High-resolution projection display development for air traffic control purposes [AD-A070823] p0177 880-17051

Airborne evaluation of the production AH-ABK-133 Long-C navigator — HH-3 and HH-52 aircraft flights p0177 880-17057

Field impact evaluation report on the Electronic Tabular Display Subsystem (ETDS) [AD-A079898] p0185 880-17357

Report on the task force on aircraft separation assurance, appendices — system analysis of collision avoidance systems integration in the air traffic control airspace utilization system [AD-A077713] p0222 880-18017

Early flight test experience with Cockpit Displayed Traffic Information (CDTI) [NASA-TM-80221] p0229 880-18037

The effect of viewing time, time to encounter, and practice on perception of aircraft separation on a cockpit display of traffic information [NASA-TM-81173] p0229 880-18038


Structures in aerodynamical phraseology: From English to Spanish p0257 880-19978

Nowcast and short-range (0-2 hour) forecasts of thunderstorms and severe convective weather for use in air traffic control [AD-A080426] p0290 880-20247

Standard engineering installation package AB/TSQ-117, aircraft control central [AD-A079776] p0290 880-20254

Optimal flow control of air traffic [FPAO] p0291 880-20258

Opportunities analysis of potential advanced vortex systems separation standards [AD-A0801879] p0361 880-23201

Software impact of selected route ATC computer replacement strategies [AD-A0801878] p0362 880-23206

Procedural feasibility of reduced spacing under WPAS operation with applications to Atlanta and O'Hare [AD-A0801480] p0362 880-23207

A flight investigation of system accuracies and operational capabilities of a general aviation/air transport area navigation system (NAV) [AD-A0801666] p0362 880-23208

Engineering and development program plan: En Route control, Program 12 [AD-A080271] p0416 880-24287

Preliminary computer sizing estimates for Automated En Route ATC (ERA) [AD-A0802628] p0416 880-24288

Precision navigation for air traffic management [NERE-ME-3220] p0417 880-24292

Spectrum resource assessment in the 2.7-2.9 GHz band phase 2: Radar signal processing [FPAO] p0425 880-24547


ATLAS/ATC simulation tests with site adaptation logic in the Philadelphia terminal area [AD-A080310] p0489 880-27308

Feasibility of offset carrier systems for air traffic control [AD-A080301] p0489 880-27309


Potential use of high frequency data transmission for oceanic air traffic control improvement [AD-A075810] p0490 880-27313

Analysis of expandability and notifiability of computer configuration concepts for ATM. Volume 1: Distributed concept [AD-A080065] p0490 880-27314

Precision navigation for air traffic management [AD-A0803947] p0490 880-27317

Enhanced Terminal Information Service (ETIS) utilizing the discrete Address Beacon System (DABS) data link—concept description [AD-A073205] p0490 880-27319

Air Traffic Management: Civil/Military Systems and Technologies — conference [AD-A0803720] p0491 880-27320

Helicopter air traffic management systems with civil/military interoperability [AD-A0803720] p0491 880-27326

A study for development of methods for air traffic management A-26
Aircraft accident report: CONAIR, Inc., Piper PA-31-310, Navajo, #6642, Greater Cincinnati Airport, Covington, Kentucky, 8 October 1979

[NTSB-AAR-80-8] p0070 880-26267

Human factors in high-speed low-level accidents:
A 15 year review
p0559 880-30013

Light twin-engine aircraft accidents following engine failures
p0586 880-30207

Medical and toxicological factors in aircraft accidents
[AD-A087690] p0601 880-31373

Evaluation of safety programs with respect to the causes of general aviation accidents: Volume 1: Technical report
[AD-A087685] p0629 880-32355

Civil helicopter wire strike assessment study.
Volume 1: Findings and recommendations
[NTSB-AAR-83-389] p0648 880-33381

AIRCRAFT ACCIDENTS
BY BIRD-AIRCRAFT COLLISIONS
Fire on board transport aircraft and passenger safety
Safety in aviation: achievements and targets
p0099 880-11054

Human factors in aircraft accidents
p0158 880-21970

Post-crash fuel fire hazard measurements in a wide body aircraft cabin
p0259 880-29025

Aircraft collision avoidance - Perspectives on the utilization of an onboard system of detection and resolution of air-air conflicts
[SEE PAPER 79 1174] p0259 880-29039

Rescue at sea of aircrew personnel
p0268 880-29775

Emergency landings on a carpet of foam
p0322 880-33292

On determining the probabilities of the consequences of airplane system failures in evaluating the level of flight safety
p0376 880-36794

Never users of older aircraft
p0458 880-41790

Hypoxia-induced fatal aircraft accident revealed by voice analysis
p0585 880-41889

A variational technique for smoothing flight-test and accident data
[ATA 80-1601] p0518 880-40594

[NTSB-AAR-79-7] p0036 880-11051

General aviation airplane structural crashworthiness user's manual. Volume 2: Input-output, techniques and applications
[AD-A075949] p0176 880-17042

Accident data system study requirements analysis for a FAA accident data system
[AD-A075611] p0176 880-17043

Aircraft emergency decisions: Cognitive and situational variables
[AD-A077413] p0234 880-19051

Assessment of Carbon Fiber Electrical Effects
[NTSB-CR-2119] p0286 880-19193

Approach to the assessment of the hazard --- fire released carbon fiber electrical effects
p0287 880-19194

Release of carbon fibers from burning composites
p0287 880-19194

Dissemination, resuspension, and filtration of carbon fibers --- aircraft fires
p0287 880-19196

Large-scale fiber release and equipment exposure experiments --- aircraft fires
p0287 880-19196

Surveys of facilities for the potential effects from the fallout of airborne graphite fibers
p0287 880-19199

Assessment of the risk due to release of carbon fiber in civil aircraft accidents, phase 2
p0287 880-19200

Aircraft accident report: Thurman L. Benson, Cessna Citation 501, N15NY, near Canton, Ohio, August 2, 1979
[NTSB-AAR-80-2] p0415 880-24279

AIRCRAFT ACCIDENTS
BY AIRCRAFT ACTION ANALYSIS
Using limited flight and radar data
Investigation can prevent aircraft accidents
Evidence in aircraft accident investigation and its evaluation
Technology requirements as derived from accident rate analysis
Selective methods of determining the range of engine operation in aircraft crash investigations.
Selected methods for defining engine operating ranges in the investigation of aircraft accidents.
3W approach to the investigation, analysis, and prevention of human-error aircraft accidents
A systematic technique for the identification of crash hazards in U.S. Army aircraft
Inadequate harnesses as a cause of death in two light aircraft accidents
Safety priorities for new transport aircraft
The inspectable aeroplane
Structural integrity - the accident investigator's view
Human factors in incident investigation
Human factors in accident investigation
[NTSB-AAR-79-7] p0036 880-11051
Aircraft accident investigation
A glider accident in France in the last ten years
Aircraft motion analysis using limited flight and radar data
Investigation of an aircraft accident on board the SSEC-2 operating system design requirements specification
An automatic fault identification system (AFIS) in the Mirage F1.
Aerospace computer systems: Avionics applications. Citations from the NTSB data base
Advanced design concepts and practices in the P-16 mission computer software
Main computer software for the NACA TURBADO
Aircraft Construction

Subject Index

Aeroelastic tailoring of forward swept composite wings
[AIAA 80-0795] p0334 a80-35077
A wind tunnel demonstration of the principle of aeroelastic tailoring applied to forward swept wings
[AIAA 80-0796] p0334 a80-35078
Composite in future transports. I - Slow-tacticities
[AIAA PAPER 80-19-22 1] p0378 a80-36856
Evolution of aerospace materials and technologies. I
[AIAA PAPER 80-19-22 II] p0378 a80-36857
Evolution of aerospace materials and technologies. II - Examples
[AIAA PAPER 80-19-22 II] p0378 a80-36858
New problems in materials and structures in aircraft engine technology
[AIAA PAPER 80-23 23] p0378 a80-36858
New materials and helicopter certification
[AIAA PAPER 80-26 26] p0379 a80-36861
Optical design studies on composite wings with static and dynamic constraints
[AIAA PAPER 80-29 29] p0379 a80-36863
Impact of modern materials on the development of rotorcraft
[AIAA PAPER 80-63] p0380 a80-36875
First flight test results on the Mirage 2000 and Mirage 4000
[AIAA PAPER 80-64] p0380 a80-36876
Determining stress intensity factors in composite structural elements
p0382 a80-37289
CPR technology at Dornier
p0385 a80-37505
Elastic ribbons based on thermally stable low-modulus fibers for the autoclaveless forming of glass-plastic aircraft components
p0395 a80-37859
The economic impact of materials technology on supersonic transport selection
[AIAA PAPER 80-1862] p0470 a80-43300
Noise reduction characteristics of general aviation type dual-pane windows
[AIAA PAPER 80-1876] p0472 a80-43317
Technology of graphite-epoxy composite materials and their applications in the aeronautical industry
p0509 a80-65150
Scatter of fatigue-life data for elements of full-scale light-aircraft wings under steady loads
p0525 a80-66689
Fatigue strength of some materials used in airframe structures
p0567 a80-47680
Engineering application of fracture mechanics to flight simulation fatigue crack propagation
p0623 a80-53439
Protective coatings for aircraft composites in nuclear environments
[AD-A074889] p0123 h80-16199
Composite structural materials
[NASA-CR-162578] p0130 h80-15076
Climatic chamber testing of aircraft engines, armament and avionics: Test operations procedure —— environmental test chambers and facility for testing aircraft construction materials and engines
[AD-A074049] p0164 h80-15181
Composite materials under impact load and effects of defects on the loading capacity —— Alpha Jet tail assembly
[NASA-TM-75351] p0172 h80-16104
Investigation of rapidly deployable plastic foam systems. Volume I: System development
[AD-A076332] p0183 h80-17222
The potential for damage from the accidental release of conductive carbon fibers from burning composites
[NASA-TM-60213] p0227 h80-16108
Advanced composite materials
[AD-A077197] p0227 h80-16161
Development of advanced aluminum alloys from rapidly solidified powders for aerospace structural applications
[AD-A077900] p0227 h80-16162
A review of Australian investigations on aeronautical fatigue during the period April 1977 to March 1979 —— structural strain and fatigue life studies on aircraft structures and construction materials
p034a h80-35076

Subject Index

AIRCRAFT CONSTRUCTION

Design and operation of multi-specimen fully reversed fatigue systems for advanced composite materials
Series EB welding of high-loaded titanium structures
Contributions on resistance spot welding of aluminum alloys in airframe manufacturing
Determination of the stress intensity factor of composite structural members
Advanced materials and the Canadair Challenger
Design and engineering of carbon brakes
Variations in crack growth rate behavior
Thermostructural analyses of structural concepts for high-speed cruise vehicles
The cautious course to introducing new SDM technology into production systems —— Structures, Dynamics and Materials
Induced effects of lightning on an all composite aircraft
Hybrid composites that retain graphite fibers on burning
Composite center fuselage - Phase I
Release-rate calorimetry of multilayered materials for aircraft seats
NDI policy and techniques for advanced composites —— nondestructive inspection
Airworthiness certification of composite components for civil aircraft - the role of nondestructive evaluation
Large-scale and small-scale flammability tests for airplane cabin materials
Costs of graphite composite fabrication and repair —— of aircraft structures
Current and projected use of carbon composites in United States aircraft
Built-up low-cost advanced titanium structures
Advanced composite structure repair guides
Repair of advanced composite structures —— in damaged aircraft
Damage tolerant design and test considerations in the engine structural integrity program —— for aircraft turbines
Aeroelastic tailoring of a forward swept wing and comparison with three equivalent swept wings
A-34
SUBJECT INDEX

[AD-0071681] p0230 AS0-18449

Nurs/blast tests of miscellaneous graphite composite parts
[NASA CP-163310] p0424 AS0-24371

Evaluation of existing flammability test methods by comparison of the flammability characteristics of interior materials
[AD-0603137] p0347 AS0-25393

Evolution of materials and associated technologies in aerospace material structures
[SNIAS-792-551-106] p0479 AS0-26294

Transparent materials for civil aircraft
[SNIAS-792-111-108] p0533 AS0-28346

Impact of modern materials on the development of helicopters
[SNIAS-792-210-123] p0533 AS0-28347

Design and analysis of a stiffened composite fuselage panel
[NASA CP-159302] p0611 AS0-31620

AIRCRAFT CONTROL

At helicopter control

A singular perturbation analysis of optimal aerodynamic and thrust magnitude control
[AD-0081137] p0008 AS0-11379

Autostatic control systems for flight vehicles — Russian book

Variable-sweep optimization — for hodograph-vector-control concept in maneuvering flight
[p0049 AS0-14100

Application of stochastic optimal reduced state feedback gain computation procedures to the design of aircraft gust alleviation controllers
[p0051 AS0-14809

A new procedure for linear optimal flight control
[p0052 AS0-14822

Command- and stability systems for aircraft - A new digital adaptive approach
[p0052 AS0-14823

Fuzzy controls for maintenance scheduling in transportation systems — aircraft flight trajectory regulation
[p0052 AS0-14824

Comment on 'Handling quality criteria for heading control'
[p0052 AS0-14830

Estimation of the accuracy of dynamic flight-determined coefficients
[IAIA PAPER 80-0171] p0089 AS0-17700

Controlers for aircraft motion simulators
[IAIA PAPER 0050] p0089 AS0-18252

A statistical method applied to pilot behavior analysis in multiloop systems
[p0097 AS0-18537

Constrained optimum trajectories with specified range
[p0097 AS0-18538

Aircraft aerodynamics - Dynamics of longitudinal and lateral motion
[p0101 AS0-19374

Recent developments in flight simulation techniques
[p0107 AS0-20907

Improvement of control system dynamics of means of additional hydraulic load feedback
[p0169 AS0-21260

Synthesis of an adaptive flight control system
[p0169 AS0-21260

Optimal design of a linear sampled data control system using round robin output feedback
[p0165 AS0-24267

Aircraft instruments and automatic systems /3rd revised and enlarged edition/ — Russian book
[p0193 AS0-26350

Control system techniques for improved departure/spin resistance for fighter aircraft
[SAE PAPER 791083] p0194 AS0-26639

Control and data transmission aircraft for ILCN flight tests — Air Launched Cruise Missile
[IAIA AS0-0446] p0200 AS0-26950

Singularities of the numerical solution of the algebraic Riccati equation in matrix form by a modification of the Lax-Phillips method — For automatic aircraft control
[p0202 AS0-27134

Implicit model following and parameter identification of unstable aircraft
[p0214 AS0-28019

Factorial interpolational method of analyzing the accuracy of nonlinear automatic control systems in the presence of random effects
[p0262 AS0-29215

Mini-RPV research
[p0266 AS0-29660

Development, flight test and application of RPV control law concepts for microprocessor based computers

Use of a simulator in the development of a RPV system
[p0267 AS0-29668

Micorprocessors in a RPV system
[p0267 AS0-29673

Design of perfect model following systems by geometric approach — application of optimal control to improve aircraft flight control
[p0267 AS0-29688

The aircraft, the pilot, and flight safety — Russian book
[p0272 AS0-30438

The effect of the law of control on the dynamics of the longitudinal motion of an aeroplane with a variable-geometry wing
[p037 AS0-30504

Design of control laws to implement ACT benefits — Active Control Technology in aircraft design
[p0273 AS0-30679

Application of a ground based minicomputer system for real time, closed loop control of remotely piloted aircraft models used in stall/spin research
[p0276 AS0-31018

An overview of the Sperry flight management computer system for the Boeing 757/767 airplanes
[p0282 AS0-32469

Digital Flight Control System /DPCS/ — multirole development
[p0319 AS0-32693

Flight control systems. VII
[p0319 AS0-32759

Minimum sensitivity controllers with application to VTOL aircraft
[p0321 AS0-33177

Investigation of internal control laws for wing/store flutter suppression
[IAIA AS0-0764] p0322 AS0-35061

Design for active flutter suppression and gust alleviation using state-space aeroelastic modeling
[p0322 AS0-35056

F-16 flutter suppression system investigation
[IAIA AS0-0768] p0333 AS0-35060

Recent development of the YF-17 active flutter suppression system
[IAIA AS0-0769] p0333 AS0-35061

Wind tunnel investigation of active controls technology applied to a DC-10 derivative
[IAIA AS0-0771] p0333 AS0-35062

On the stability of the longitudinal motion of an airplane with lift force control system
[p0376 AS0-36796

Objective control of pilotage accuracy — Russian book
[p0381 AS0-37110

Aircraft landing digital control system
[p0384 AS0-37464

Perforamnability evaluation of the SIIII computer — Software-Implemented Fault Tolerance computer onboard commercial aircraft during transoceanic flight
[p0390 AS0-38093

Frost office for the new technology transport - 1990 — pilot-all electric aircraft systems
[p0410 AS0-40339

Theoretical-experimental synthesis of a multicriterial organic control system
[p0465 AS0-62348

A-35
Analytical study of interior noise control by Integrated thermal-structural finite element...© A80-31005
Evolution of modern air transport wings [AIAA 80-3036] p0275 A80-31005
Evolution of transport wings from C-130, C-141, C-5 to C-II [AIAA 80-3037] p0276 A80-31006
Evolution of the F-86 [AIAA 80-3039] p0276 A80-31008
Sone observations on supersonic wing design [AIAA 80-3040] p0276 A80-31009
Seven Wings the F-4 has flown [AIAA 80-3042] p0276 A80-31010
Variable sweep wing design [AIAA 80-3043] p0276 A80-31011
The F-15 wing development program [AIAA 80-3044] p0276 A80-31012
Evolution of the hybrid wing - YF-17/F-18 type [AIAA 80-3045] p0276 A80-31013
Aerodynamically tailored wing design [AIAA 80-3046] p0276 A80-31014
Forward swept wing design [AIAA 80-3047] p0276 A80-31015
Advanced fighter technology F-16 Composite-center fuselage - Phase I p0277 A80-31246
The energy problem - Its effect on aircraft design. II - The effects of fuel cost [AIAA 80-3049] p0279 A80-31201
Flight recording in the UK. II - Equipment [AIAA 80-3050] p0279 A80-32202
Combined design of Q-fan superchargers and multiblade propellers [AIAA 80-3051] p0279 A80-32223
Long range very large aircraft supply system for civil/military application with special emphasis on water-based aircraft [AIAA PAPER 80-0903] p0320 A80-32882
Technology requirements and readiness for very large aircraft [AIAA PAPER 80-0935] p0320 A80-32887
Advanced high speed commercial aircraft - 2000 [AIAA PAPER 80-0937] p0320 A80-32898
CLST's wing-in-ground effect vehicles - amphibious aircraft design [AIAA PAPER 80-0949] p0320 A80-33105
Investigation of internal control laws for wing/store flutter suppression [AIAA PAPER 80-0764] p0332 A80-35056
Design for active flutter suppression and gust alleviation using state-space aeroelastic modeling [AIAA PAPER 80-0766] p0332 A80-35058
Aerodynamic tailoring of a forward swept wing and comparison with three equivalent aft swept wings [AIAA PAPER 80-0794] p0333 A80-35076
Aerodynamic tailoring of forward swept composite wings [AIAA PAPER 80-0795] p0333 A80-35077
Structural design loads for future airplanes [AIAA PAPER 80-0813] p0335 A80-35094
Integrated thermal-structural finite element analysis - for applications to hypersonic transport design [AIAA PAPER 80-0717] p0335 A80-35098
Analytical study of interior noise control by fuselage design techniques on high-speed propeller-driven aircraft [AIAA PAPER 80-1001] p0338 A80-35094
AIRCRAFT DESIGN CONTD

The Forward Swept Wing - A unique design challenge
[AIAA PAPER 80-1685] p0519 A80-45751

Departure and uncoordinated roll reversal
boundaries for fighter configurations
[AIAA 80-1566-5] A80-45867

Impact of longitudinal flying qualities upon the
design of a transport with active controls
[AIAA 80-1558] A80-45869

The linear and non-linear aerodynamics of
three-surface aircraft concept
[AIAA 80-1551] A80-45870

Optimization of tactical aircraft maneuvers
utilizing high angles of attack
[AIAA 80-1596] A80-45878

Bifurcation analysis of aircraft high
angle-of-attack flight dynamics
[AIAA 80-1599] A80-45899

Validation of a wing loading edge stall prediction
technique
[AIAA 80-1620] A80-45908

Effects of wing and tail location on the
aerodynamic characteristics of an airplane for
such numbers from 0.25 to 4.63
[AIAA 80-1623] A80-45911

An adaptive controller synthesis with an observer
p0528 A80-45920

The Alpha-Jet at introduction
[DOLR PAPER 80-022] p0522 A80-46278

Influence of the design on the cost, the
airbus and the Airliner booster as examples
[DOLR PAPER 80-037] p0522 A80-46280

The linking of development problems with the
example of thrust reversal and landing gear loads
[DOLR PAPER 80-045] p0523 A80-46295

The weight minimization problem for a
forward-swept wing with constraints on the rate
of wing divergence
[p0525 A80-46870

Investigation of the influence of the parameters
of a wing/engine combination on the critical
flutter speed
[p0525 A80-46871

Experience in correcting dynamic designs on the
basis of resonance test data --- aircraft
structures
[p0526 A80-46672

Optimal designing of shells and plates with
discrete stiffeners
[p0526 A80-47188

Determination of aircraft take-off weight in the
preliminary design stage
[p0527 A80-47186

Future fighter technologies
[p0527 A80-47323

Determination of requirements placed on airframe
components from a dimensional analysis of the
standard design relations
[p0563 A80-47387

Study of clamshell reverser operation downstream
of nozzle
[p0566 A80-47043

The agricultural aircraft Pfol-106A and its testing
at the agricultural aviation factory of INTERPLUG
[p0568 A80-47785

Power system design for an all electric airplane
[p0570 A80-48217

Mirage 2000 - Export fighter for the 'eighties ---
France's new fighter aircraft technical study
[p0572 A80-48497

A new fighter for Europe --- aircraft research and
development
[p0572 A80-48498

Applying computer aided design /CAD/ to the 767
p0572 A80-48800

Aerodynamic development of the engine nacelle
combination for the Boeing 767 airplane
[SAE PAPER 800731] p0574 A80-49683

Modern controls and the hybrid computer revisited
--- simulation systems for aircraft development
and design
[p0578 A80-49831

Structural integration as a means of cost reduction

Selecting rational high-aspect-ratio wing
structural stiffening scheme
[p0582 A80-50482

Designing for life-long aircraft structures
[p0582 A80-50585

SUBJECT INDEX
AIRCRAFT DESIGN

Rotary balance data for a typical single-engine general aviation design for an angle-of-attack range of 0 deg to 90 deg. 1: Low-wing model A — Fluid flow and vortexes data for general aviation aircraft to determine aerodynamic characteristics for various designs. [NASA-CS-1981] p0232 N0-19030

The F-16 Wild Weasel: A feasibility study [AD-A077050] p0237 N0-19071

Thrust vectoring to eliminate the vertical stabilizer — to provide directional stability for F-111 aircraft while decreasing radar detectability. [AD-A079862] p0237 N0-19077


Technology requirements and readiness for very large aircraft [NASA-TR-81783] p0287 N0-20223


The use of computers as a design tool [AARD-CF-280] p0296 N0-21243

The use of computer-aided design methods in airborne systems evaluation. p0298 N0-21244

Criteria for technology — computer aided design techniques applied to aircraft design cost benefit assessment. p0298 N0-21245

An acceptable role for computers in the aircraft design process p0298 N0-21246

The use of computer based optimization methods in aircraft studies p0298 N0-21247

Some fundamental aspects of transport aircraft design optimization p0299 N0-21248

The use of the computer in the design of aerodynamic configurations p0299 N0-21250

The role of computational aerodynamics in airplane configuration development p0299 N0-21260

Computational aerodynamic design tools and techniques used at fighter development. p0299 N0-21261

Use of computers in the aerodynamic design of the BIMAR fighter p0300 N0-21262

Numerical methods for design and analysis as an aerodynamic design tool for modern aircraft p0300 N0-21263

Supersonic cruise aircraft research: An annotated bibliography [NASA-TR-81781] p0305 N0-21316


B-1 ride control system development and test p0308 N0-21347

Transonic wing DFTLA-74 as European test model [NASA-TR-7552] p0308 N0-22260


Parastatic study of oscillator aircraft systems costs and weights [NASA-CR-152315] p0347 N0-22305

Aerodynamics of the new generation of combat aircraft with delta wings [NASA-CS-1982] p0348 N0-22306

Civil component program wing section. p0348 N0-22306

Aerodynamic design and analysis of the AIRCRAFT research CQAT engine, airplane, and nacelle design features. p0350 N0-22329

CQAT aircraft/engine design for reduced noise and emissions. p0351 N0-22330

Minimum mass sizing of a large low-aspect ratio airframe for flutter-free performance. p0351 N0-22331

Airworthiness of long-life jet transport structures [AIRPAPER-75-10] p0582 A0-50546

Shock-free wing design [AIRPAPER-75-10] p0615 A0-51416

Determination of loads applied to modern high-performance gliders p0618 A0-52194

High efficiency hydraulic power transfer units for multisystem aircraft p0619 A0-52558

Illustration of airfoil shape effects on forward-swept wing divergence p0619 A0-52648

Effect of asymmetric drag polar characteristics on missile trimmed drag p0619 A0-52649

The advanced flight deck p0624 A0-53556

Dornier planning new STOL flying boat p0625 A0-53824

Wind-tunnel investigation of the validity of a nose-on-boom minimization concept — Langley Delft Plan Wind Tunnel tests for supersonic transport design [NASA-TP-1821] p0622 N0-10102

The significance of wing and configuration in airfoil design for civil aviation aircraft [NASA-TR-7511] p0622 N0-10104

Interface concerns of ejector integration in V/STOL aircraft p0624 N0-10129

Design and test of a prototype scale ejector wing p0624 N0-10131

The IFY-12A Thrust-Augmented Wing (TAW) prototype aircraft p0624 N0-10133

Selecting the passenger airplane fuselage p0634 N0-11024

Aeroelastic Problems in Aircraft Design [VI-K-LEC-SER-1979-0] p0655 N0-12000

Aeroelasticity from the viewpoint of the designer. p0655 N0-12002

Aircraft flutter and dynamic response p0655 N0-12010

The development of the DAST 1 remotely piloted research vehicle for flight testing an active flutter suppression control system p0670 N0-12033

The performance of a conceptual vertical attitude takeoff and landing fighter aircraft [AD-A073100] p0670 N0-12086

Inertia calculation procedure for preliminary design [AD-A076769] p0670 N0-12087

Effects of fuselage forebody geometry on low-speed lateral-directional characteristics of twin-tail fighter model with high angles of attack [NASA-TP-1592] p0676 N0-13002

Some recent trends in aircraft flutter research — analysis methods for aircraft design and use of oblique wings in aircraft configurations p0683 N0-13007

Quiet short-haul research aircraft familiarization document — STOL [NASA-CS-81149] p0118 N0-14108

Exploratory studies of the cruise performance of upper surface blown configurations: Program analysis and conclusions [NASA-CS-15936] p0129 N0-15072

JA-64 circulation control wing contractor flight demonstration [AD-A078066] p0130 N0-15080

Technological forecasting-aircraft design: Citations from the International Aerospace Abstracts data base [RTIS/PS-79-1018/7] p0170 N0-16057

The analysis of measured surface loads as a basis for the derivation of acceptable load limits for military aircraft components [BBVG-PBW-79-9] p0175 N0-17038

Aerodynamic investigation of C-181 leading edge modification for cruise drag reduction, volume 1. [AD-A076610] p0178 N0-17063

Collection and analysis of in-service flight history of the initiation of fatigue damage [BBVG-PBW-79-10] p0186 N0-17518

The serial relay system: An energy-efficient solution to the airport congestion problem [NASA-TM-80208] p0221 N0-18011
Enhancing dynamic model fidelity for improved prediction of turbofan engine transient performance [AIAA PAPER 80-1083] p0397 A80-38900

Improved gas turbine engine maintenance through management and analysis of engine performance data [AIAA PAPER 80-1085] p0397 A80-38901

Advanced component technologies for energy-efficient turbofan engines [AIAA PAPER 80-1090] p0397 A80-38902

An experimental investigation of endwall profiling in a turbine blade cascade [AIAA PAPER 80-1112] p0397 A80-38904

High pressure turbine blade life sensitivity [AIAA PAPER 80-1117] p0398 A80-38920

An experimental investigation of pressure oscillations in a side duct ramjet combustor [AIAA PAPER 80-1117] p0398 A80-38922

Aircraft engine combustor casing life simulation evaluation [AIAA PAPER 80-1157] p0399 A80-38943

Development of improved-durability plasma sprayed ceramic coatings for gas turbine engines [AIAA PAPER 80-1193] p0400 A80-38963

Turbopropulsion combustion - Trends and challenges [AIAA PAPER 80-1199] p0400 A80-38964

An assessment of gas turbine engine augmentor technology and needs for the 80's [AIAA PAPER 80-1200] p0400 A80-38965

Dynamic modeling of augmentor fuel systems [AIAA PAPER 80-1202] p0400 A80-38967

Multifuel rotary aircraft engine [AIAA PAPER 80-1237] p0400 A80-38982

Lightweight diesel aircraft engines for general aviation [AIAA PAPER 80-1238] p0400 A80-38983

Study of cooling air inlet and exit geometries for horizontally opposed piston aircraft engines [AIAA PAPER 80-1242] p0401 A80-38984


Life cycle cost as a tool in the detail design of advanced propulsion systems [AIAA PAPER 80-1252] p0401 A80-38989

Optimization of gas turbine combustor stoichiometry and expanded operating regime [AIAA PAPER 80-1286] p0401 A80-39004

The effect of local parameters on gas turbine emissions [AIAA PAPER 80-1290] p0401 A80-39006

TFE 1042 technical description [AIAA PAPER 80-1298] p0407 A80-39570

European turbines [AIAA PAPER 80-1301] p0411 A80-40009

Aircraft turbine oil - Problems and future aspects [AIAA PAPER 80-1307] p0412 A80-40072

Planning technology development to achieve consistent component technology and flexibility of application --- for military airbreathing propulsion systems [AIAA PAPER 80-1081] p0447 A80-41176

Life and utilization criteria in design for balanced life and performance --- of aircraft gas turbine engine [AIAA PAPER 80-1082] p0447 A80-41177

Performance variations in high aspect ratio subsonic diffusers due to geometric constraints in supersonic aircraft engine inlet installations [AIAA PAPER 80-1106] p0447 A80-41180

Effect of aircraft power plant usage on turbine engine relative durability/life [AIAA PAPER 80-1115] p0448 A80-41183

Flight test of all-electronic propulsion control system [AIAA PAPER 80-1147] p0448 A80-41188


Stability analysis of the TF301 engine in the XFY-12A aircraft [AIAA PAPER 80-1160] p0449 A80-41202

Navy operational and support cost model --- of aircraft engines [AIAA PAPER 80-1259] p0449 A80-41205

Gas turbine combustor design challenges for the 1980's [AIAA PAPER 80-1285] p0449 A80-41213
AIRCRAFT EQUIPMENT

General Aviation Propulsion
[AD-A079440] p0351 880-22337
An overview of NASA research on positive displacement general-aviation engines
[AD-A082410] p0351 880-22336
The spark-ignition aircraft piston engine of the future
p0351 880-22337
Lightweight diesel aircraft engines for general aviation
p0352 880-22338
Advanced rotary engine studies
p0352 880-22339
Positive displacement type general-aviation engines: Summary and concluding remarks
p0352 880-22340
Preliminary study of advanced turboprop and turboshaft engines for light aircraft — cost effectiveness
[AD-A068410] p0353 880-22350
Investigation of lubricant concepts applicable to future Navy aircraft propulsion systems
[AD-A079440] p0353 880-22351
Development of improved-durability plasma sprayed ceramic coatings for gas turbine engines
[AD-A0582230] p0365 880-23313
Thoroughly tested ceramic combustion technology assessment
[AD-A0660740] p0366 880-23323
Advanced component technologies for energy-efficient turboprop engines
[AD-A0601507] p0420 880-24316
An approach to the life-cycle analysis of aircraft turbine engines
[AD-A0090930] p0420 880-24318
Particle-size analysis of engine oils: A supplement to spectrometric analysis
[AD-A082230] p0424 880-24540
Potential environmental effects of aircraft emissions
[AD-CR-152661] p0427 880-24887
Engine component improvement: Performance improvement, J990-7 3.6 AR fan
[AD-A0008606] p0434 880-25332
Cold-air investigation of a 9/1/2 stage turbine with stage-loading factor of 4.66 and high specific work output. 2: Stage group performance
[AD-A0008608] p0435 880-25338
Performance deterioration based on in-service engine data: J990 jet engine diagnostic program
[AD-A0008605] p0435 880-25340
Technical evaluation report on the 54th(A) Propulsion and Energetics Panel Meeting on Advanced Control Systems for Aircraft Powerplants
[AD-A0008601] p0436 880-25347
CF6 jet engine performance improvement program: High pressure turbine aerodynamic performance improvement
[AD-A0008603] p0480 880-26302
The secondary power system control unit, and electronic subsystem in the PARAVIA T-37A
[AD-A0008602] p0481 880-26309
Transducers for engine control systems
p0481 880-26312
The application of microprocessors to the regulation of military aircraft engines: The design of electronic regulators
p0481 880-26314
Remote control: A flexible control concept for military aircraft engines
p0482 880-26319
Redundancy concepts in full authority electronic engine control, particularly dual redundancy
p0482 880-26320
Control of the engines for the new Airbus family
p0482 880-26321
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability
[AD-A0008608] p0485 880-26599
Evaluation of HC (hydrocarbon) control strategies for general aviation piston engines
[AD-A0008609] p0496 880-26971
Performance, emissions, and physical characteristics of a rotating combustion aircraft engine, supplement 2
[AD-A0008607] p0496 880-27361
Is the Joint Air Force/Navy alternate engine program workable? SDI thinks not, as presently structured

SUBJECT INDEX

[AD-A0847709] p0534 880-28354
Computer simulation of auxiliary power systems
[AD-A0848581] p0535 880-28358
Exhaust emissions characteristics for a general aviation light-aircraft Avco Lycoming 0-320/0-320-DIA piston engine
[AD-A0849333] . p0535 880-28364
Fuel/engine/airframe tradeoff study, phase 4
p0546 880-29307
Combustion technology overview — the use of broadened property aircraft fuels
p0549 880-29310
Experimental combustor study program
p0548 880-29311
Air Force fuel mainburner/Turbine effects programs
p0548 880-29314
Investigation of performance deterioration of the CF6/TF20, high-bypass ratio turbofan engines
[AD-A079440] p0551 880-29332
Ceramics for turbine engine applications
[AD-A082230] p0552 880-29342
Ceramics for small airborne engine applications
p0552 880-29344
Technologies for use of ceramics in turbomachines
p0552 880-29346
Some advantages of methane in an aircraft gas turbine
p0556 880-29502
The operational roles of the F-16
p0559 880-30020
Analytical investigation of fan tone noise due to ingested atmospheric turbulence
[AD-A0008603] p0560 880-30155
Unsteady swirling flows in gas turbine combustors
[AD-A0008604] p0593 880-30697
The application of design to cost and life cycle cost to aircraft engines
[AD-A0008601] p0597 880-31342
An approach to the life cycle analysis of aircraft turbine engines
p0598 880-31343
Design to life cycle costs interaction of engine and aircraft -- combat aircraft
p0598 880-31344
Progress on the US Air Force approach for the practical management of engine life cycle costs -- gas turbine engines
p0598 880-31345
Military engine programs with cost objectives
p0598 880-31346
Logistics forecasting for achieving low life cycle cost -- aircraft maintenance
p0598 880-31347
Reverse thrust performance of the CSSEE variable pitch turbofan engine
[AD-A0008604] p0604 880-31399
An experimental evaluation of the performance deficit of an aircraft engine starter turbine
[AD-A0008605] p0608 880-31400
Airframe engine nozzle
[AD-A0008601] p0635 880-32392
A feasibility study of a 3-D finite element solution scheme for aeroengine duct acoustics
[AD-A0008603] p0655 880-36216
AIRCRAFT EQUIPMENT

BT AIRCRAFT HYDRAULIC SYSTEMS

BT AIRCRAFT THERM

BT ELECTRICAL SYSTEMS

BT THERMOS

BT THERMOS

Construction of black boxes and mechanical elaboration of electronic units in aviation
p0092 880-10236
The ‘Viggen’ multimode radar
p0097 880-11171
Generating Innovation for Navy's F-18
p0120 880-12312
Development and characterization of an evaporative cold plate for thermal control of avionic equipment
[AD-PH-29-ERAS-4] p0055 880-15229
Chilled recirculation ECS for aircraft
[AD-PH-29-ERAS-5] p0055 880-15230
Aircraft humidity control system development
[AD-PH-29-ERAS-8] p0055 880-15233
An overvoltage safety system for direct current aircraft generators
p0098 880-19051

A-46
### SUBJECT INDEX

**Aircraft torque sotors**  ---  Russian book  
[AD-A087999] 80-19199

**Air supply system approach for the Boeing Model 767**  
[AD-A087999] 80-19199

**Flight recording in the UK. I. Evolution**  
[p0194] 80-26631

**Discriminant analysis of purchasers of general aviation aircraft avionics**  
[p0271] 80-30365

**Pneumatic components of regulators**  ---  Russian book  
[p0279] 80-32175

**Aircraft radio equipment adjustment and maintenance technology**  ---  Russian book  
[p0319] 80-32845

**Release-rate calceimetry of multilayered materials for aircraft seats**  
[p0325] 80-34223

**Effects of electric fluctuations in electric power systems of flight vehicles**  
[p0336] 80-35185

**Reliability pays off --- reliability progress case study**  
[p0409] 80-39922

**Heat pipe avionic thermal control**  
[AI/A PAPER 80-1511] 80-14747

**Certification of avionics systems on the commercial airplanes of the 1980's**  
[p0474] 80-83683

**Influence of aircraft architecture on onboard systems**  
[p0509] 80-45149

**Selection of tube diameters for aircraft deicing systems**  
[p0527] 80-47190

**Improving the suction capability of vane pumps --- for aircraft fuel tank**  
[p0566] 80-47430

[p0569] 80-48135

**Tactical air navigation**  
[p0570] 80-48143

**Integrated control techniques for advanced aircraft electrical power systems**  
[p0570] 80-48216

**Application of a microprocessor for aircraft electrical generator control and protection**  
[p0571] 80-48218

**Mechanical power system for aircraft: intermittent utility functions --- systems engineering of using flywheels for aircraft control equipment**  
[p0579] 80-13030

**A high accuracy flight profile determining system --- system analysis of inertial navigation system for aircraft position determination**  
[p0113] 80-14048

**Aircraft anti-icing/dé-icing**  
[AD-A074128] 80-14048

**Development of lightweight transformers for airborne high power supplies**  
[AD-A076215] 80-15078

**Air speed and altitude probe**  
[NASA-CSP/PRC-11009-1] 80-17366

**Specification for the installation of electrical resistance strain gauges on strain pairs counter aircraft --- to monitor fatigue damage**  
[AD-A071363] 80-18369

**Airborne radar approach system flight test experiment**  
[AD-A077900] 80-19054

**The F-16 Wild Weasel: A feasibility study**  
[AD-A077050] 80-19071

**An analytical and experimental study of aircraft hydraulic lines including the effect of mean flow**  
[AD-A079746] 80-19079

**Dynamic Environmental Qualification Techniques**  
[AGARD-B-602] 80-19090

**Dynamic environments and test simulation for qualification of aircraft equipment and external stores**  
[p0240] 80-19092

**Civil aircraft equipment environment qualification techniques**  
[p0240] 80-19093

### AIRCRAFT FUELS

**Comparison of specifications for Head-Up Displays in the Navy A-4B, A-7B, AF-8A, and P-3A aircraft**  
[AD-A080047] 80-19106

**Flight path displays**  
[AD-A077181] 80-19107

**Power system control study. Phase 1: Integrated control techniques**  
[p0244] 80-19125

**Simulation for integration with dynamic tests of the logical elements of principal onboard computers**  
[p0256] 80-19182

**Development of a color alphanumeric liquid crystal display --- suitable for aircraft command and control**  
[AD-A079289] 80-20266

**Broadband electromagnetic sensors for aircraft lighting research --- electromagnetic effects of lighting on aircraft digital equipment**  
[p0312] 80-21930

**Standard avionics packaging, mounting, and cooling baseline study**  
[AD-A082166] 80-24312

**Evaluation of nondestructive inspection methods for aircraft tires**  
[p0441] 80-25681

**Aerospace computer systems: Avionics applications. Citations from the BTIS data base**  
[p0546] 80-29065

**Qualitative assurance assessment**  
[p0597] 80-31338

**Electro-magnetic compatibility --- the effect of interference on aircraft systems**  
[p0597] 80-31335

**Advanced technology components for the Boeing 757-200 aircraft auxiliary power system**  
[AD-A087938] 80-31343

**Capacitors for aircraft high power systems**  
[AD-A087927] 80-31343

**OH-58C helicopter mast mounted sight/designator safety statement**  
[p0635] 80-32390

**Installation of C-6533(X-2)/ARC-ICS in UH-1H helicopter**  
[p0652] 80-33650

### AIRCRAFT FUEL SYSTEMS

**Hydrazine or airfield fuelers**  
[p0488] 80-13405

**Durability of foam insulation for LH2 fuel tanks of future subsonic transports**  
[p1555] 80-22687

**Analysis and design of insulation systems for LH2-fueled aircraft**  
[p0578] 80-49816

**Development of a full authority digital electronic control for a gas turbine engine using a hybrid computer system as a design aid**  
[p0579] 80-49839

**Aircraft fuel system simulator tests with anti-icing kerosene (jet A fuel with F-9 additive) --- flammability tests**  
[AD-A073237] 80-14256

**A new fuel supply control system for small turbomachines**  
[p0481] 80-26311

**Advanced fuel system technology for utilizing broomend property aircraft fuels**  
[NASA-TM-81538] 80-27510

**Fuel system technology overview**  
[p0550] 80-29328

**High-freezing-point fuel studies**  
[p0550] 80-29329

**General aviation accidents: Postcrash fires and how to prevent or control them**  
[NTSB-AAR-80-2] 80-32354

**Integral aircraft fuel tank leak classification**  
[AD-A088168] 80-32388

**Dynaic evaluation of experimental integral fuel-tank sealants, part 1**  
[AD-A088570] 80-33573

### AIRCRAFT FUELS

**An engine fuel chemistry solution to the problem of jet fuel supplies**  
[p0002] 80-10199

**The chemical stability of hydro-treated fuels and their stabilization by antioxidants**  
[p0002] 80-10200
AIRCRAFT FUELS CONT'D

Burning sprays of jet A fuel-water emulsions.

The role of aluminum segregation in the wear of aluminum/titanium interfaces under conditions of boundary lubrication - in aircraft fuel systems.

The role of technology as air transportation faces the fuel situation.

Looking ahead in aircraft design.

A plan for active development of LH2 for use in aircraft.

A mass flowmeter with compensation for thermal density variations of the fluid.

The energy problem: Its effect on aircraft design. I - Supply and demand.

Dehydration of aircraft fuels and lubricants - Russian book.

The energy problem - Its effect on aircraft design. II - The effects of fuel cost.

The impact of fuels on aircraft technology through the year 2001.

Diagnostics of aircraft fuel and hydraulic units - Russian book.


Characteristics of liquid hydrogen-fueled aircraft.

Safety of liquid hydrogen in air transportation.

Preliminary studies of a turbofan engine and fuel system for use with liquid hydrogen.

Liquid hydrogen engines.

Design concept for LH2 airport facilities.

A proposed liquid hydrogen development program for aircraft.

Hydrogen liquefaction, storage and transfer on an airport site.

Gaseous fuels for airship propulsion.

Fuel economy in the airlines.

Analytical and experimental evaluations of the effect of broad property fuels on combustors for commercial aircraft gas turbine engines.

Fuel property effects on life characteristics of aircraft turbine engine combustors.

Temperature and flow measurements on near-freezing aviation fuels in a wing-tank model.


Fuel character effects on JT9 and F101 engine combustor emissions.

The thermal impact of external pool fires on aircraft fuselages.

Analysis of moisture exchange in aircraft-fuel tanks.

Comparative analysis of the basic combustion characteristics of some heavy hydrocarbon fuels in application to aircraft gas turbine engines.

SUBJECT INDEX

Modeling of water-fuel emulsions under laboratory conditions - aircraft fuel storage.

Energy conservation in terminal airspace through fuel consumption modeling.

Estimation of fuel consumption of commercial jet aircraft from path profile data.

Prospects for hydrogen aircraft.

Comparison of alternate aviation fuels.

A methodology for long-range prediction of air transportation fuel consumption.

Future aviation fuels - The petroleum industry responds to the challenge.

The on-route alternate and a rational basis for contingency fuel.

Alternative jet aircraft fuels.

Hydrogen as a fuel. Citations from the International Aerospace Abstracts database.

Initial characterization of an Experimental Reference Broadened-Specification (EBBS) aviation turbine fuel.

The role of technology as air transportation faces the fuel situation.

Research on diamantane and other high density hydrocarbon fuels.

Advanced fuel system technology for utilizing broadened property aircraft fuels.

Aircraft Research and Technology for Future Fuels.

Future aviation fuels overview.

Outlook for alternative energy sources - aviation fuels.

Current jet fuel trends.

Aviation fuels outlook.

A methodology for long-range prediction of air transportation fuel consumption.

Effect of refining variables on the properties and composition of JP-5.

Fuel/engines/airframe tradeoff study, phase 1.

Military jet fuel from shale oil.

Fuels characterization studies - jet fuels.

Combustion technology overview - the use of broadened property aircraft fuels.

Experimental combustor study program.

Air Force fuel ainburner/turbine effects programs.

The broadened-spectrum fuels combustion technology program at Pratt & Whitney Aircraft.

A-48
AIBCB1PT IHSTBDHEHTS
AIBCB1FT I3DDSTBT • • •
AZHCHAFT IHDUSTBY
HT SPEED IHDICATOBS
HT BADIO DIBECTIOH FIHDEBS
HT HOT-BIBE AHEHOBETEBS
HT 6TBO BOBIZOHS
HT 1UTOH1TIC PILOTS
HT ATTITODE IHDICATOBS
BT APPROACH IHDICATOBS ...
HT POSITIOH IBDICiTOBS
HT GTBOCOHP1SSES
HT FLIGHT BECOBDEBS
HT AHEHOHETEES
HT 1LTIHETEBS
Airborne semiconductor radiometers

Error analysis of an algorithm for magnetic

Some practical aspects of the calibration of air
data systems

Experimental investigation of the characteristics of

p0099 A80-19052

p0102 A80-19990

p0191 A80-25214

p0274 A80-30817

p0283 A80-32444

p0336 A80-35004

p0374 A80-36764

p0396 A80-38857

p0466 A80-42831

p0512 A80-45706

p0618 A80-52195

p0618 A80-52205

p0799 A80-50987

p076 A80-49702

p0509 A80-45150

p0008 A80-11352

p0011 A80-11869

p0011 A80-11875

p0014 A80-12640

p0014 A80-12647

p009 A80-14996

p0053 A80-14944

p0098 A80-18865

A 98/183 G2S aircraft radarometer system for

p0308 A80-37102

p0468 A80-43178

p0619 A80-52558

p0038 A80-11065

p0159 A80-23304

p0016 A80-25488

p0204 A80-27202

p0280 A80-32408

p0320 A80-32887

p0411 A80-40489

p0576 A80-49702

p057 A80-27301

p0594 A80-31313

p0008 A80-11352

p0845 A80-26638

p0534 A80-28351

p0592 A80-30318

p0593 A80-30665

p0604 A80-31396

p0607 A80-31482

p0007 A80-11175

A-50
Subject Index

A pulse compression, precision DME system
FLIGHT THROUGH THUNDERSTORMS OUTFLOWS
INSTRUMENT FLIGHT RULES APPROACH
FOLLOW-UP AND FINAL-VALUE CONTROL OF A SPECIAL
OPTIMAL WASHOUT FOR CONTROL OF A MOVING BASE
PRESENTATION OF THE STRADA TRAJECTORY SYSTEM
OPTIMIZATION OF AIRCRAFT UNDERCARRIAGE
PRELIMINARY ANALYSIS OF MINIMUM TIME AND MINIMUM
CONSISTENT TAKEOFF AND LANDING CRITERIA FOR NAVAL
AUTOMATION OF AIRCRAFT CONTROL UNDER UNSTEADY
OPTIMAL WASHOUT FOR CONTROL OF A MOVING BASE
FOLLOW-UP AND FINAL-VALUE CONTROL OF A SPECIAL
AUTOMATIC LANDING - HOW A MATTER OF COURSE
THE GROUND PROXIMITY WARNING SYSTEM
THE LOADS AT LANDING IMPACT - FOR AIRCRAFT
WHAT BRINGS US DOWN TOMORROW - LANDING GUIDANCE
FOR THE SYSTEMS FOR THE 1980S
APPROXIMATE ESTIMATION OF THE LEAST NUMBER AND
OPTIMAL DISTRIBUTION OF LANDING AIRPORTS FOR MANEUVERING HYPERSONIC VEHICLES
DESIGN OF AN ELECTRONIC MODEL OF A MICROWAVE
AIRPORT RADIO NAVIGATION SYSTEMS
EVOLUTION IN THE VERTICAL LANDING PLACE - OF TRANSPORT AIRCRAFT
INVESTIGATION OF THE PERMISSIBLE H X V PHASE SPACE - OF SAFE LANDING MANEUVERS
BVY RECOVERY SYSTEMS
EMERGENCY LANDINGS ON A CARPET OF FOAM
NEW CONSIDERATIONS OF DOPPLER MICROWAVE LANDING SYSTEMS
SYSTEM FOR MEASUREMENT OF CATEGORY II ILS
THE GROUND PROXIMITY WARNING SYSTEMS
ICAO DEVELOPS NEW PAVEMENT STRENGTH REPORTING SYSTEM
AIRCRAFT LANDING DIGITAL CONTROL SYSTEM
ALL-WEATHER LANDING - OF AIRCRAFT
AIR SAFETY - NAVIGATION SYSTEM RELIABILITY
AUTOMATIC LANDING - NOW A MATTER OF COURSE
NLS - USER COMMITMENT IS NEEDED NOW
AUTOMATION OF AIRCRAFT CONTROL UNDER FLIGHT CONDITIONS - RUSSIAN BOOK
CONSISTENT TAKEOFF AND LANDING CRITERIA FOR NAVAL AIRCRAFT OF VARIOUS HORIZON CONCEPTS
AIAA PAPER 80-1013
PRELIMINARY ANALYSIS OF MINIMUM TIME AND MINIMUM NOISE LANDING APPROACH TRAJECTORIES
AIAA 80-1059
AN EXPERIMENTAL INVESTIGATION OF VTOOL FLYING QUALITIES REQUIREMENTS - IS SHIPBOARD LANDING
AIAA 80-1625
A SUMMER OF AN IN-FLIGHT EVALUATION OF CONTROL SYSTEMS FOR TIME DELAYS DURING LANDING USING THE F-8 DFW AIRPLANE
AIAA 80-1625
SIMULATED VORTEX ENCOUNTERS BY A TWIN-ENGINE COMMERCIAL AIRCRAFT DURING FINAL APPROACH
AIAA PAPER 800775
STUDY OF ADMISSIBLE SAFE PRELANDING MANEUVER H-X PHASE SPACE
AIAA PAPER 80-1626
SOME CHARACTERISTICS OF THE OPERATION OF TWIN WITH REVERSE DURING AIRPLANE LANDING - TURBOJET ENGINE
A-51
Development and evaluation of a tower alert visual range system
[AD-A0623368] p0428 890-2953

Proximity results of simulated vortex encounters by a twin-engine, commercial aircraft during final landing approach
[STANFORD-TM-81782] p0478 890-26285

Nondestructive evaluation of airport pavements.
Volume 3: Operation manual for NGLPAY program
[AD-A0795911] p0483 890-26331

Chicago monostatic acoustic vortex sensing system.
Volume 1: Data collection and reduction
[AD-A0769290] p0988 890-27306

An investigation of laser lighting systems to assist aircraft landing
[AD-A0777223] p0496 890-27315

SSILS initial evaluation report. Davis-Mothan
AFB, Arizona, 16-20 November 1979
[AD-A0886351] p0496 890-27320

The development and test of a tactical self-contained landing system -- landing helicopter systems when the safe corridor is unknown
[AD-A0922733] p0496 890-27333

SINTAC-C TMA: Application of SINTAC-C in the terminal area, during landing and ground taxing -- integrated navigation, traffic control, collision avoidance and communication system
[STANFORD-TM-80338] p0493 890-27338

Study of optical techniques for indirect generation of runway approach lights
[AD-A0804368] p0494 890-27399

Certification test procedures for aircraft approach control, AN/SAM-84, revision
[AD-A0843847] p0551 890-28332

Peripheral jet air cushion landing system for special aircraft, volume 1
[AD-A0852023] p0553 890-28344

Peripheral jet air cushion landing system for special aircraft, volume 2
[AD-A0855117] p0553 890-28345

The allocation of runway slots by auction. Volume 1: Executive summary
[AD-A0855738] p0554 890-29261

The allocation of runway slots by auction. Volume 2: The airline management game and slot auction testing
[AD-A0859383] p0554 890-29270

The allocation of runway slots by auction. Volume 3: Theory and technical issues for implementation
[AD-A0859553] p0553 890-29271

A method for administrative assignment of runway slots
[AD-A0861118] p0554 890-29285

A head-up display format for application to transport aircraft approach and landing
[NASA-TM-81199] p0546 890-29259

Simulator results of an F-11A airplane utilizing an aileron-rudder interconnect during carrier approaches and landings
[NASA-TM-81833] p0554 890-29260

Haves Bounce
[AD-A0922733] p0554 890-31311

A simulation investigation on the feasibility of curved approaches under Microwave Landing System (MLS) guidance
[AD-A0922733] p0601 890-31380

Helicopter ship qualification testing
[AD-A0922733] p0601 890-31380

A comparison of flight and simulation data for three automatic landing system control laws for the Augeantas wing jet STL research airplane
[NASA-CR-3309] p0612 880-32025

An analysis of the structural response of the Boeing 767 for increased cruise range and fuel flexibility
[AD-A0922733] p0628 880-32338

A conceptual point design study of a new CTOL STOL CAS aircraft for 1995 IOC
[AD-A0922733] p0646 880-33090

AIRCRAFT LAUNCHING DEVICES
CTOL/STOL comparison - a view from the deck
[STANFORD-TM-81782] p0469 880-43269

AIRCRAFT REPAIR/MAINTENANCE
Operation of airborne equipment and flight safety
--- Russian book
[AD-A0922733] p0011 880-11875

A FLIR detection of aircraft components in operation
--- Russian book
[AD-A0922733] p0011 880-11875

Corrosion protection in agricultural aircraft technology --- Russian book
[AD-A0922733] p0011 880-11879

Maintenance of aircraft, helicopters, and aircraft engines /2nd revised and enlarged edition/ --- Russian book
[AD-A0922733] p0049 880-13900

Situation of welding in engine maintenance
[AD-A0922733] p0049 880-16385

Handling problems through component deterioration
--- in-flight stalling
[AD-A0922733] p0053 880-17340

System analysis for planning of air fleets and maintenance facilities
[AD-A0922733] p0053 880-21935

The practical aircraft hydraulic test stand
[AD-A0922733] p0053 880-26636

Opportunity maintenance policies for economic replacement of internal life-limited components in modular aircraft engines
[AD-A0922733] p0053 880-26647

On-condition maintenance - Review of military engines
[AD-A0922733] p0053 880-26647

A comparison of advanced composite structure - in aircraft
[AD-A0922733] p0053 880-26885

Save Bounce --- validation of computer simulations of F-4 dynamic response to multiple runway repairs
[AD-A0922733] p0208 880-27382

F/A-18 automatic test equipment
[AD-A0922733] p0270 880-30028

F-16 avionics intermediate shop /AIS/ user involvement during development --- technicians/user evaluation of automated test equipment
[AD-A0922733] p0270 880-30029

ATS system acquisition for F-3A avionics /AWACS/
[AD-A0922733] p0271 880-30033

Design considerations for the automated maintenance of computerized avionics systems
[AD-A0922733] p0282 880-32440

Aircraft radio equipment adjustment and maintenance technology --- Russian book
[AD-A0922733] p0319 880-32485

Costs of graphite composite fabrication and repair --- of aircraft structures
[AD-A0922733] p0329 880-38410

Advanced composite structure repair guide
[AD-A0922733] p0333 880-35065

Repair of advanced composite structures --- in damaged aircraft
[AD-A0922733] p0333 880-35066

Composites in future transports. I - Non-metallic
[AD-A0922733] p0374 880-36547

Technical diagnosis and operation of engines according to technical condition
[AD-A0922733] p0374 880-36763

Technologies of aircraft maintenance. I
[AD-A0922733] p0375 880-36771

Titanium welding in aircraft maintenance
[AD-A0922733] p0375 880-36773

Application of fracture mechanics to USAF aircraft structural integrity requirements
[AD-A0922733] p0378 880-36660

Diagnostic of aircraft fuel and hydraulic units
--- Russian book
[AD-A0922733] p0380 880-37102

Improved gas turbine engine maintenance through management and analysis of engine performance data
[AD-A0922733] p0397 880-39801

Aircraft maintenance
[AD-A0922733] p0407 880-39581

A method for monitoring maintenance - The audit
--- for aircraft
[AD-A0922733] p0407 880-39582

The maintenance of transport aircraft at Air France
[AD-A0922733] p0407 880-39583

Analysis of fault isolation criteria/techniques
[AD-A0922733] p0407 880-39583

An analysis of MIL-STD-471 test methods
[AD-A0922733] p0409 880-40305

New Technology Transport for fuel critical economy
[AD-A0922733] p0410 880-40342

Navy operational and support cost model --- of aircraft engines
[AD-A0922733] p0410 880-40342
SUBJECT INDEX

[AAIA PAPER 80-1249] p0449 A80-81205
Time between overhaul vs premature removal rates
as turbine design considerations
[AAIA PAPER 80-GT-35] p0457 A80-62168
JT8D-7L /597 jet engine performance deterioration trends
p0507 A80-84230
Product performance enhancement in the United States Air Force
[AAIA PAPER 80-1816] p0512 A80-45738
Modern maintenance of transport aircraft
[DGEL PAPER 80-057] p0523 A80-68103
Controlling the technical servicing at an air technical base
p0564 A80-87389
Aircraft maintenance technologies. II
p0568 A80-7782
Significance of the factors in a method for calculating the direct operating costs for commercial aircraft
p0568 A80-87786
Stage maintenance considered in relation to the conditions of Interlog
p0568 A80-87789
p0582 A80-50580
Living with the ageing structure -- inspection and maintenance
p0582 A80-50581
Airline view of long life structures
p0582 A80-50582
Routine maintenance of high life structures
p0582 A80-50583
The development of maintenance schedules for aircraft structures
p0583 A80-50588
The inspectable aeroplane
p0583 A80-50590
Internationalizing aircraft maintenance practices
p0617 A80-52012
Study of turboprop system reliability and maintenance costs
[NASA CR-135192] p0120 B80-14129
Fleet hardness variation -- to determine aircraft survivability due to blast loads
[AD-1075849] p0126 B80-15029
Ground run-up noise control facilities for civil aircraft: A survey
[AD-1075382] p0171 B80-16067
Compilation of data covering aircraft servicing facilities aboard aviation and amphibious aviation ships
[AD-1076483] p0175 B80-17022
Aircraft fatigue failure and logistical cost analysis; supplemental study
[AD-1075550] p0223 B80-18093
Proceedings of the 7th Ann. Tri-Service Meeting for Aircraft Engine Monitoring and Diagnostics --- conferences
[AD-1076126] p0225 B80-18095
Estimating the time required to transition aircraft fleets to new scheduled maintenance intervals
[AD-1076066] p0232 B80-19027
The redundancy of scheduled and unscheduled maintenance
[AD-1076962] p0298 B80-21242
Analysis of helicopter maintenance fault isolation criteria/techniques
[AD-1086059] p0345 B80-22257
Survey of forced and precautionary landing costs
[AD-1080100] p0347 B80-22294
The STADS flight data processing system
p0430 A80-25285
The use of AIDS data at KLM
p0430 A80-25286
On-line real-time management information systems and their impact upon user personnel and organizational structure in aviation maintenance activities
[AD-1085111] p0540 B80-29204
Flight operation component repair program analysis, volume 1
[AD-1086061] p0541 B80-29216
Designing on-condition tasks for naval aircraft
--- preventive maintenance
[AD-1085650] p0545 B80-29289

AIRCRAFT MAINTENANCE

The capabilities and operational roles of Royal Air Force Tornadoes
p0560 N80-30022
Production oriented maintenance organization: A critical analysis of sortie-generation capability and maintenance quality
[AD-1087095] p0595 B80-31323
Maintainability index model development
[AD-1087844] p0595 B80-31324
Aircraft Maintenance Effectiveness Simulation (AMES) model
[AD-1087516] p0595 B80-31325
Development of an effectiveness planning and evaluation model for Air Force Maintenance Organizations
[AD-1088061] p0627 B80-32326
AIRCRAFT MAINTENANCE
Method for calculating wing loading during maneuvering flight along a three-dimensional curved path
p0009 A80-11647
Instrumentation for the determination of aircraft performance from dynamic maneuvers
p0018 A80-12647
Investigation of the permissible H x V phase space of safe landing maneuvers
p0262 A80-29205
Development, flight test and application of HFY control law concepts for microprocessor based computers
p0266 A80-29651
Output feedback non-linear decoupled control synthesis and observer design for maneuvering aircraft
p0376 A80-36645
The EBD optoelectronic projection indicator systems. I
p0466 A80-42798
Analysis of the influence of the design parameters on the characteristics of an aircraft in spinning nose dive. I
p0466 A80-42799
Analysis of the influence of the design parameters on the characteristics of an aircraft in spinning nose dive. II
p0517 A80-45898
Pseudosteady state analysis of nonlinear aircraft maneuvers
[AD-1080-1600] p0518 A80-45893
Flying-qualities criteria for wings-level-turn maneuvering during an air-to-ground weapon delivery task
[AD-1080-1628] p0520 A80-45916
Overview of stall/spin technology
[AAIA PAPER 80-1580] p0579 A80-50099
Study of admissible safe prelanding maneuver H-V phase space
p0581 A80-50860
Simulator for air-to-air combat motion system investigation
[AD-1072612] p0632 N80-10237
AB-1G lateral flight performance test
[AD-1072688] p0670 N80-12088
An exploratory investigation of the STOL landing maneuver
[NASA CR-3191] p0706 N80-12996
Beaver aircraft parameter identification: Technical preparations and preliminary results
[DFVLR-BITT-78-01] p0800 N80-13039
Sonic-boom wave-front shapes and curvatures associated with maneuvering flight
[NASA TP-1611] p0813 N80-14045
The accelerometer methods of obtaining aircraft performance from flight test data dynamic performance testing
[AD-1075226] p0778 N80-17066

A-53
AIRCRAFT NOISE PREDICTION

A study of partial coherence for identifying interior noise sources and paths on general aviation aircraft
[NASA-TR-800197] p0185 880-15874
Research plan for establishing the effects of type varying noise exposures on community annoyance and acceptability
[NASA-CE-159177] p0174 880-16577
Selected topics from the structural acoustics program for the B-1 aircraft
1014 880-17299
Methods of sound simulation and applications in flight simulators
Development and evaluation of a general aviation real world noise simulator
[NASA-CE-159177] p0298 880-21100
An analytical investigation of the effect of varying rotor tip speed to reduce helicopter automatic pitch --- Advanced Scout Helicopters
[AD-NO76961] p0305 880-21319
Aircraft noise monitoring at Naval Training Center North Island, San Diego, California, in 1978 and 1979
[AD-A080826] p0319 880-22069
Propeller driven light aircraft noise
10315 880-22237
Theoretical prediction of nonlinear propagation effects on noise signatures generated by subsonic or supersonic propeller or rotor-blade tips
[NASA-TP-1660] p0345 880-22265
General Aviation Propulsion
[NASA-CP-2126] p0350 880-22327
Evaluating and minimizing noise impact due to aircraft flyover
[NASA-CE-153187] p0371 880-23874
Spectral analysis of non-stationary random processes. Application to noise of flyover type
[ONERA-AT-1979-1] p0371 880-23874
 QuieterVTUW engine powered-lift acoustic performance
[NASA-BS-8100] p0420 880-23315
Analysis of vibratory excitation of gear systems as a contributor to aircraft interior noise --- Helicopter noise
[NASA-CE-159098] p0428 880-25100
V/STOL rotary propulsor noise prediction model evaluation and update
[AD-A082616] p0429 880-25106
Supporting statement for community study of human response to aircraft noise
[NASA-TR-81803] p0486 880-26885
Cost/benefit tradeoffs available in aircraft noise technology applications in the 1980's
[AD-A082028] p0495 880-27357
Influence of noise reduction on weight and cost of general aviation propellers
[AD-A082120] p0497 880-27366
Community noise exposure resulting from aircraft operations. Volume 7: Acoustic data on aircraft ground ramp noise suppressors
[AD-A08371] p0502 880-27837
[AD-A081159] p0502 880-27838
Noise Abatement Economic Policy Analysis Model NAPAM, volume 1
[AD-A081190] p0502 880-27839
[AD-A079493] p0502 880-27840
PAF integrated noise model validation. Phase 1: Analysis of integrated noise model calculations for air carrier flyovers
[AD-A089226] p0502 880-27862
Assessment of the environmental compatibility of differering helicopter noise certification standards
[AD-A080525] p0503 880-28153
Correction procedures for aircraft noise data. Volume 1: Pseudotones
[AD-A081626] p0503 880-28157
Correction procedures for aircraft noise data. Volume 2: Background noise considerations
[AD-A082011] p0503 880-28158
A comprehensive analytical model of rotorcraft aerodynamics and dynamics. Part 3: Program manual

SUBJECT INDEX

Disturbance caused by aircraft noise
[ASA-TR-P-7574] p0519 880-28294
Annoyance due to multiple airplane noise exposure
[ASA-TP-1706] p0540 880-28294
Atmospheric turbulence effects on aircraft noise propagation
[NASA-CE-159125] p0540 880-29005
Effects of conversation interference on annoyance due to aircraft noise
[ASA-TP-1712] p0558 880-29911
IBM Integrated Noise Model, version 2: Programmer's guide
[AD-A079622] p0560 880-30156
Investigation of performance, noise, and detectability characteristics of Remotely Piloted Vehicle (RPV) propellers
[AD-A088325] p0636 880-32399
Development of noisecheck technology for measuring aircraft noise exposure
[AD-A080633] p0639 880-33182
USAF bioenvironmental noise data handbook. Volume 119: C-135B aircraft, near and far-field noise
[AD-A089753] p0640 880-33184
Predicted airframe noise levels
[NASA-TR-81809] p0655 880-34218
Aircraft noise prediction program validation
[NASA-CE-159133] p0655 880-34219
AIRCRAFT NOISE PREDICTION

AIRCRAFT PARTS

Flaw detection of aircraft components in operation
--- Russian book
p0011 880-11079
An experimental method for investigating the mutual aerodynamic interference of aircraft components at supersonic velocities
p0056 880-15767
Series EB welding of high-loaded titanium structures
p0061 880-16563
Electron beam and diffusion welding as an economic procedure for building Airbus-flap tracks
p0389 880-16970
Thermal spraying of aircraft- and engine components
p0661 880-16971
Technology of adhesive bonding of aircraft parts
--- Russian book
p0157 880-23066
The An-24 aircraft - Design and maintenance /3rd revised and enlarged edition/ --- Russian book
p0160 880-23460
Helicopter /BSBA/ in-flight escape system - Component qualification
p0160 880-23460
The fatigue performance of service aircraft and the relevance of laboratory data
p0212 880-27789
The evolution of aircraft wing design; Proceedings of the Symposium, Dayton, Ohio, March 18, 19, 1980
p0319 880-30019
Problems involved in the detection of aircraft defects
p0321 880-33108
Effect of some aircraft loading program modifications on the fatigue life of open hole specimens
p0341 880-36706
Vacuum arc switched inverter tests at 2.5 MVa
p0360 880-37852
Concerning the design of spherical bearings
p0511 880-45695
Application of electromagnetic methods and means of nondestructive inspection in series production of aircraft
p0521 880-46068
Scatter of fatigue-life data for elements of full-scale light-aircraft wings under steady loads
p0525 880-46068
Mathematical formulation of the problem of selecting the tube diameters of aircraft deicing systems
p0564 880-87405
Applying computer aided design /CAD/ to the 767
p0572 880-88800
A comparison of the pitching and plunging response of an oscillating airfoil
--- Russian book
p0641 880-48800
AIRCRAFT NOISE PREDICTION
AIRCRAFT PILOTS

Parametric study of variation in cargo-airplane performance related to projection from current to spanloader designs

Full-scale wind tunnel-investigation of the Advanced Technology Light Twin-Engine airplane (ATLIT) - Langley full scale tunnel

Aerodynamics of the new generation of combat aircraft with delta wings

A practical method for predicting roughness effects on aircraft

In-flight handling qualities investigation of Airbus A 310 DCL. Configurations on landing approach using the DFVLR-DP 320 variable stability aircraft

Advanced turboprop potential for high speed

Theory for computing the size and shape of a region of influence associated with a maneuvering vehicle

Wind-tunnel tests of the XV-15 tilt rotor aircraft

Aircraft dynamic response to damaged runways

UK approach to aircraft dynamic response on damaged and repaired runways

Parameters affecting aircraft performance on runways in bad condition

Subsonic aircraft: Evolution and the matching of size to performance

Fuel/engine/airframe tradeoff study

The operational roles of the F-16

The Tornado all-weather high-speed low-level system

F-16 European test and evaluation

The development of the world’s first triengine business jet, the Bystere Falcon 50

CL-600 challenger

Review of five years of flight testing the B-1

Aircraft Assessment and Acceptance Testing

USAF development test and evaluation

Some examples of procedures used in UK for acceptance testing of aircraft produced by the aircraft industry under government contract

A review of flight test instrumentation systems for acceptance testing of the production aircraft

Performance testing production airlines

Evaluation of lateral and directional characteristics and spinning behaviour

Atmospheric turbulence simulation techniques with application to flight analysis

Handling qualities of large flexible aircraft

Air cushion craft development, first revision

Role of unsteady aerodynamics in aircraft response

Flying qualities design criteria

AIRCRAFT PILOTS

The impact of the limits of simulation in extending the use of simulators in training

Glider accidents in France in the last twenty years

A controversial subject - The minimal pilot crew

The Tornado all-weather high-speed low-level system

A controversial subject - The minimal pilot crew

Atmospheric turbulence, simulation techniques with

Flying qualities design criteria

Bole of unsteady aerodynamics in aircraft response

Air cushion craft development, first revision

Evaluation of lateral and directional

Performance testing production airlines

A review of flight test instrumentation systems for acceptance testing of the production aircraft

Performance testing production airlines

Evaluation of lateral and directional characteristics and spinning behaviour

Atmospheric turbulence simulation techniques with application to flight analysis

Handling qualities of large flexible aircraft

Air cushion craft development, first revision

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Flying qualities design criteria

AIRCRAFT PILOTS

The impact of the limits of simulation in extending the use of simulators in training

Glider accidents in France in the last twenty years

A controversial subject - The minimal pilot crew

The Tornado all-weather high-speed low-level system

A controversial subject - The minimal pilot crew

Atmospheric turbulence, simulation techniques with

Flying qualities design criteria

Bole of unsteady aerodynamics in aircraft response

Air cushion craft development, first revision

Evaluation of lateral and directional

Performance testing production airlines

A review of flight test instrumentation systems for acceptance testing of the production aircraft

Performance testing production airlines

Evaluation of lateral and directional characteristics and spinning behaviour

Atmospheric turbulence simulation techniques with application to flight analysis

Handling qualities of large flexible aircraft

Air cushion craft development, first revision

Role of unsteady aerodynamics in aircraft response

Flying qualities design criteria

SUBJECT INDEX

The pilot face to face with concrete realities - application of flight regulations and instructions to various flight problems

A non-Gaussian atmospheric turbulence model for the pilot-aircraft simulator studies of aircraft handling qualities

Pilot-aircraft system response to wind shear

A model-based technique for predicting pilot opinion ratings for large commercial transports

Han-in-the-loop simulation systems for aircraft fire control using cockpit displays

Perception of aircraft separation with pilot-preferred symbology on a cockpit display of traffic information

Airframe crashworthiness studies: Findings in accidents involving an aerial application aircraft

Analysis of general aviation single-pilot IFR incident data obtained from the NASA aviation safety reporting system

Organization of automatic control systems for technological processes in aircraft mechanical engineering -- Russian book

AIRCRAFT PILOT - Achievement by international collaboration

Production of wide-body aircraft -- Russian book

All-Equipment Production Reliability Tests [AEPRT]

New materials and methods for airframe construction

Fabrication of double-curvature skins by rolling

Technological and commercial aspects of aircraft production

Profile cutting with direct data allocation and real-time operations planning

Cost effective systems production on the basis of new design and production principles, using a light aircraft as an example

Pantener hole quality, volume 1 -- design analysis of fatigue life and drilling techniques for fasteners in aircraft production

Cost analysis of a helicopter transmission and drive train

Future V/STOL airplanes: Guidelines and techniques for acquisition program analysis and evaluation, executive summary

Cost estimating relationships for airframes in the development and production phases

AIRCRAFT PRODUCTION COSTS

AIRCRAFT RELIABILITY

Reliability of aircraft disconnect joints -- Russian book

In the structural life of an aircraft wing limited

Designing to life cycle cost in the Horris program


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Reliability of aircraft disconnect joints -- Russian book

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AIRCRAFT RELIABILITY

Reliability of aircraft disconnect joints -- Russian book

In the structural life of an aircraft wing limited

Designing to life cycle cost in the Horris program

AIRCRAFT STRUCTURES

Automation of aircraft control under unsteady flight conditions --- Russian book

Stability and control taught by design of tall surfaces

[NASA-PAPER 80-1835] p0867 A80-43106

Stability of asymmetric equilibria flight states

[NASA 80-1567] p0515 A80-45866

Navy V/STOL hover and low-speed Flying Qualities Criteria Recent developments

[NASA 80-1594] p0517 A80-45866

Diversification analysis of aircraft high angle-of-attack flight dynamics

[NASA 80-19097] p0517 A80-45892

Helicopter stability and control test methodology

[NASA 80-1610] p0518 A80-45902

A direct method for synthesizing low-order optimal feedback control laws with application to flutter suppression

[NASA-TP-1979-7] p0518 A80-45903

The effects of inhomogeneities in atmospheric turbulence on the dynamic response of an aircraft

[NASA 80-1610] p0518 A80-45904

Time-domain computation of aircraft gust covariance matrices

[NASA 80-1610] p0518 A80-45905

Influence of fitting jobs on the quality and price cost of aircraft assembly


Simulated vortex encounters by a twin-engine commercial transport aircraft during final approach

[NASA-PAPER 800775] p0576 A80-49717

Stability parameters of aircraft

[AGARD-AG-262] p0702 A80-12102

Initial study of the response of an aircraft to lateral gusts

[AGARD-AG-262] p0181 A80-17084

Aircraft identification experience

[NASA-TP-1979-7] p0241 A80-19100

Rotocraft identification experience


Identification experience in extreme flight regimes

[NASA-TP-1979-7] p0241 A80-19102

An approximate analysis of wing unsteady aerodynamics

[NASA-A075022] p0289 A80-20239

Aircraft motion sensitivity to dynamic stability derivatives --- motion simulation studies using cross coupling derivatives on fighter/ bomber aircraft

[NASA-A075421] p0294 A80-20283

Definition of a two level control system for nonlinear motion control

[ONERA-RT-1979-7] p0355 A80-22364

An analytical study of effects on aeroelasticity on control effectiveness

[NASA-CR-163197] p0421 A80-24322

Maximum likelihood method for estimating airplane stability and control parameters from flight data in frequency domain

[NASA-TP-1637] p0421 A80-24323

On the use in stability analysis of the relationships between the coefficients of a quasi-aerodynamic and those of quadratic factor

[NASA-TR-79005] p0422 A80-24333

Evaluation of longitudinal characteristics including stability handling and CG range

[NASA-TR-81928] p0597 A80-31335

Phase 2 and 3 wind tunnel tests of the J-97 powered, external augmenter V/STOL model --- at Mach 60 by 80 wind tunnel


Experimental techniques in unsteady aerodynamics

[NASA-CR-163576] p0645 A80-33373

Longitudinal stability and control in wind shear with energy height rate feedback

[NASA-TR-81928] p0645 A80-33386

AIRCRAFT STRUCTURES

MT AFTERBOARDS
MT AFTEBARDS
MT FOREBODIES
MT POSTLAGES
MT ROGERS (FOREBODIES)
MT PLASTIC AIRCRAFT STRUCTURES

Aircraft designers follow the birds --- lightweight composite materials and metal

Joining techniques in aircraft structures

Subject Index

Diffusion bonding - Aerospace applications

A regression model of fatigue crack propagation under flight simulation loading --- for aluminum alloys

Wind tunnel model deflection system

Structural fatigue experiments

Third body formation and the wear of PTFE fiber-based dry bearings

Design of damping systems and their application

Future applications of welding technologies in the aerospace industry

AV-8B Advanced Carrier

Influence of burnishing on the structure and durability of elements operating under variable loads

Sonic fatigue design data for bonded aluminum aircraft structures

Practical method of fatigue crack growth analysis for damage tolerance assessment of aluminum structure in fighter type aircraft

Code optimization for solving large 3D MFP problems --- electromagnetic scattering by aircraft structures

Preliminary weight estimation of engine section structure

Composites for aerospace applications

Advanced composite material applications to V-WHA structure

Characterization of graphite/epoxy laminates for aeroelastic tailoring

The process of chemical milling in machining aircraft structures

Composites in aircraft manufacturing - An impressive rise --- in Western Europe

Looking ahead --- in aircraft design

Resin matrices and their contribution to composite properties

Mechanical fasteners dominating aerospace --- aircraft and spacecraft structural joining techniques

Advanced strategic aircraft concepts

Thermostructural analyses of structural concepts for hypersonic cruise vehicles

Vibrational modes of an aircraft simulator motion, system

Crack-detectives foil aircraft failure

SAFEAIR pushes SPP/DD for structures --- in naval aircraft design and construction

Main erosion of lightning protection coatings for carbon fibre composites

AV-8B - A second generation V/STOL

Fatigue in machines and structures - Aircraft

Failure mechanisms for advanced composite sandwich construction in hostile environments --- naval aircraft structures

Repair of advanced composite structure --- in aircraft

A-62
Advanced composites serviceability program - Status review — inspection of aircraft structures
p0197 A80-26690
Nondestructive evaluation of graphite composite aircraft structures
p0197 A80-26691
Measurements of control stability characteristics of a wind-tunnel model using a transfer function method
[IAIA 80-00457] p0200 A80-26957
Analytical determination of the influence of elasticity and mass distribution on the aerodynamic characteristics of an aircraft in quasi-steady motion
p0202 A80-27132
The use of the spectral summation of time histories of fatigue damages in order to examine the combined stress state of structures
p0203 A80-27152
Method of determining steady-state aerodynamic characteristics for an elastic aircraft in free longitudinal motion
p0204 A80-27173
Applying pressure —— Releasing stress —— stress coiling aircraft structures
p0207 A80-27257
The potential for fatigue damage from the accidental release of conductive carbon fibers from aircraft components
p0209 A80-27596
Composite components on commercial aircraft
p0209 A80-27597
Cantilever primary aircraft structure
p0211 A80-27875
Technological aspects of future very large airplanes
p0216 A80-28499
New materials and methods for airframe construction
p0217 A80-28905
Optimal control of flight vehicle motion in a turbulent atmosphere
p0260 A80-29050
Transverse bending of elastically thin-stiffened three-layer cantilever plates of variable layer thickness
p0262 A80-29212
A dynamic vibration generator for full-scale structures
p0262 A80-29218
Ensuring geometrical accuracy of riveted aircraft component contours —— Russian book
p0271 A80-30325
Evolution of the hybrid wing — TF-117/F-18 type
[IAIA 80-30645] p0279 A80-31013
Real life aging properties of composites
p0279 A80-32077
The influence of test equipment during resonance tests of light structures —— aircraft aeroelastic model
p0280 A80-32228
Developments in ultrasonic welding for aircraft
p0328 A80-34797
Comparison of surface treatments of carbon structures and their influence on long term strength of metal bonds
p0328 A80-34805
Current and projected use of carbon composites in United States aircraft
p0329 A80-34840
On experimental versus theoretical inclinable backling of narrow graphite/epoxy plates in compression
[IAIA 80-0866] p0330 A80-35007
Composited wing/finelage integral concept
[IAIA 80-0785] p0331 A80-35044
Built-up low-cost advanced titanium structures /SupTAS/
[IAIA 80-0785] p0331 A80-35045
Analysis of cracks at attachment legs
[IAIA 80-0753] p0332 A80-35048
Release-rate calorimetry of multilayered materials for aircraft seats
[IAIA 80-0759] p0332 A80-35052
Honeycomb sandwich joints for primary structure —— of aircraft
[IAIA 80-0780] p0333 A80-35070
Finite element analysis of F-16 aircraft canopy
[IAIA 80-0804] p0334 A80-35086
Durability and consistency of composite materials —— for L-1011 aircraft Vertical exhaust piping
[IAIA 80-0811] p0334 A80-35092
Technology of graphite-resin composite materials and their application in the aeronautical industry
p0336 A80-35771
Static tests at model scale indicating rear-fuselage installation effects on engine exhaust noise
[IAIA PAPER 80-1046] p0340 A80-35991
Composites in future transports. I — Non-metallics
p0374 A80-36547
Fabrication of double-curvature skins by rolling —— for aircraft structures
p0376 A80-36780
On the compliance of control surface support brackets —— aircraft structures
p0376 A80-36795
Evolution of aerospace materials and technologies. I
[IAIA PAPER NT 79-22] p0378 A80-36856
Application of fracture mechanics to OS1F aircraft structural integrity requirements
[IAIA PAPER NT 79-25] p0378 A80-36860
A long European experience — The adhesive bonding of metals
p0379 A80-36862
Nesh definition by the conversational topological method and optimization in finite element structural calculations
[IAIA PAPER NT 79-30] p0379 A80-36864
Current developments in aircraft fatigue evaluation procedures
[IAIA PAPER NT 79-33] p0379 A80-36867
Experimental methodology and application of fracture mechanics to matrix composites
p0379 A80-36869
Fiber structures on the Mirage 2000 and Mirage 4000
p0380 A80-36876
A review of nondestructive inspection reliability on aircraft structure
p0381 A80-37203
A nondestructive optical method for critical field inspection of aircraft canopy acrylic panels
p0381 A80-37212
Wing effect on jet noise propagation
[IAIA PAPER 80-1047] p0394 A80-38646
'Fish-edge' fairing structure —— of airships
p0394 A80-39297
Load specifications for the envelopes of a captive balloon and flexible airship
p0404 A80-39299
Advanced structures — Meeting the challenge of low-cost future aircraft systems
[IAIA PAPER 80-1868] p0404 A80-43313
Structure and service life verification for the Tornado
p0508 A80-49520
Technology of graphite-resin composite materials and their applications in the aeronautical industry. II
p0509 A80-45150
Cost effective series production on the basis of new design and production principles, using a light aircraft as an example
[DGFB PAPER 80-038] p0523 A80-46289
Study of the relaxation of the tightening force of bolted joints —— in supersonic transport aircraft
p0525 A80-46860
Calorimetric sensor for measuring temperature fields generated by intense heat sources
p0526 A80-47179
An investigation into the feasibility of producing aircraft structural components using wet lay-up of carbon fibre fabric
p0527 A80-47211
Some applications of the methods of failure mechanics in analyzing the strength and service life of aircraft structures
p0528 A80-47355
Influence of fitting jobs on the quality and prime cost of aircraft assembly
p0563 A80-47388
Calculation of aircraft wing reliability from sudden failures
p0564 A80-47403
30 years experience with primary adhesive bonded structures
p0569 A80-48077
AIRCRAFT STRUCTURES CONTD

Corrosion fatigue behavior of coated 4340 steel for blade retention bolts of the AB-1 helicopter p0572 ABO-48935
Integration of CAD/CAM systems for production of structural components p0572 ABO-48937
Structural integration as a means of cost reduction [NAS-TEL-SC07-30] p0579 ABO-49850
Transverse bending of cantilevered three-layer plates with layers of variable thickness stiffened along the contours by elastic diaphragms p0581 ABO-50467
Dynamic vibration exciter for full-scale structures p0581 ABO-50473
Living with the ageing structure --- aircraft inspection and maintenance p0582 ABO-50581
Airline view of long life structures p0582 ABO-50582
Boutique maintenance of high life structures p0582 ABO-50583
Designing for long-life aircraft structures p0582 ABO-50585
The relevance of service experience data in the fatigue evaluation process of the F-27 The development of maintenance schedules for aircraft structures p0583 ABO-50587
Structural integrity - the accident investigator's view The advanced-composites hurdle for 767 production p0583 ABO-50591
Bench scale dynamic evaluation apparatus for integral fuel tank sealants [AIAA 79-0810] p0584 ABO-52647
Analysis of thin-wall beams by the method of segments p0010 NB-10043
On the eigenmannage snap-through problem p0019 NB-10047
A study to develop optimization algorithms for aircraft wing structures [AD-A072668] p0027 NB-10196
Swept frequency scattering measurements of aircraft target identification [AD-A071749] p0032 NB-10420
Improved methods for predicting spectrum loading effects, phase 1 report, Volume 1: Results and discussion [AD-A072386] p0039 NB-11071
Modal analysis of aircraft structures p0065 NB-12003
New methods for ground tests of aeronautical structures p0065 NB-12006
Practical aspects of the calculation of structural vibrations p0065 NB-12007
A special crack tip element for three-dimensional crack problems [EAA/STEDC-BOTE-374] p0074 NB-12036
Friction characteristics of steel skids equipped with skids on a lakebed surface --- landing gear [NASA-TR-80-817] p0076 NB-13027
The use of strip theory in the dynamics of deformable aircraft [EAA/STEDC-BOTE-933] p0079 NB-13035
Formulation of the equations of motion of a deformable aircraft using Lagrange's equations in an arbitrary non-inertial frame of reference [EAA/STEDC-BOTE-941] p0079 NB-13036
A suggestion as to a general derivation of the equations of motion of a deformable aircraft for small perturbations which will be most generally acceptable [EAA/STEDC-BOTE-979] p0080 NB-13038

SUBJECT INDEX

Review of investigations into aeronautics related fatigue of the Federal Republic of Germany [LDP-S-142] p0124 NO-14222
Applications of modern hydrodynamics to aeronautics. Part 1: Fundamental concepts and the most important theorems. Part 2: Applications [NASA-184] p0126 NO-15034
The aerodynamic forces on aircraft hulls [NASA-184] p0126 NO-15039
Evaluation of approximate methods for the prediction of noise shielding by aircraft components [NASA-TP-1006] p0137 NO-15172
Dynamic identification of light aircraft structures and their flutter certification p0139 NO-15145
Application of random time domain analysis to dynamic flight measurements --- E-1 aircraft p0173 NO-16226
The analysis of measured surface loads as a basis for the derivation of acceptable load limits for military aircraft components p0175 NO-17038
Calculation of natural frequencies and mode shapes of mass loaded aircraft structures p0180 NO-17278
Aerostucture nondestructive evaluation by thermal field techniques [AD-A076584] p0185 NO-17095
Additional information about FALSTAFF --- fighter aircraft loading standard for fatigue evaluation [NLB-TU-79056-0] p0186 NO-17508
Evaluation of the crack gage concept for monitoring aircraft flaw growth potential, Volume 2 [AD-A076320] p0186 NO-17509
Composite components on commercial aircraft [NASA-TP-802311] p0227 NO-18109
Angular vibration measurement techniques --- airborne electro-optical package disturbances p0228 NO-18222
A review of Australian investigations into aeronautical fatigue during the period April 1977 to March 1979 --- structural strain and fatigue life studies on aircraft structures and construction materials [AD-A071641] p0230 NO-18049
Significance of large scatter of composite properties to aircraft reliability [AD-A077804] p0235 NO-19062
USAF damage tolerant design handbook: Guidelines for the analysis and design of damage tolerant aircraft structures, revision A [AD-A070216] p0236 NO-19065
The history of static test and Air Force structures testing [AD-A077029] p0246 NO-19136
Some recent measurements of structural dynamic damping in aircraft structures p0253 NO-19576
Daeping problems in acoustic fatigue p0253 NO-19580
Structural optimization with static and aeroelastic constraints p0300 NO-21266
Another look at aircraft-triggered lightning p0313 NO-21999
Analysis and measurements of low frequency lightning component penetration through aerospace vehicle metal and graphite skins p0314 NO-21951
Development of fire-resistant, low smoke generating, thermally stable end items for commercial aircraft and spacecraft using a basic polyiside resin [NASA-CH-160576] p0356 NO-22492
Failure analysis in aviation [NL-BP-78020-0] p0362 NO-22384
The failure of aircraft structures [NL-BP-78040-0] p0362 NO-22385
An investigation of residual stresses in simulated wing panels of 7075-76 aluminium [AD-A008063] p0370 NO-23693
A general panel method for the analysis and design of arbitrary configurations in incompressible
SUBJECT INDEX

FLIGHT SERVICE EVALUATION OF ADVANCED COMPOSITE AIRCRAFT STRUCTURES

APPLICATIONS OF HASTBAH IN GUST RESPONSE ANALYSIS

ADVANCED COMPOSITE MATERIALS AND COSTS

ECONOMIC LIFE CRITERIA FOR METALLIC AIRFRAMES

APPLIED STRESSES IN HIGH TEMPERATURE RESIN MATRIX COMPOSITES

FRAME HARDNESS VARIATION

AERIAL INSTRUMENTS

RANGE FINDING

PERFORMANCE CHARACTERISTICS

AIRCRAFT SURVIVABILITY

MULTIPLE TACTICAL AIRCRAFT COMBAT PERFORMANCE

FLIGHT TEST EVALUATION OF AIRBORNE TIRE PRESSURE MONITORING SYSTEMS

IMPROVED TIRE/WHEEL CONCEPT FOR AIRCRAFT STRUCTURES

FLIGHT TEST EVALUATION OF INFLATABLE DEPLOYMENT SYSTEMS FOR SPACE SKIDS

AIRCRAFT閣LES

FLIGHT PERFORMANCE

STABILITY AND CONTROL

WEAPONS

EFFECTIVENESS

DETERMINATION OF AIRCRAFT WEAPONS EFFECTIVENESS

AIRCRAFT AIRCRAFT AIRCRAFT

WEAPONS AND HOVERING CAPABILITIES

WING-ON-WING STRIKES

AIRCRAFT AIRCRAFT AIRCRAFT

FLIGHT TEST

FLIGHT CHARACTERISTICS

WEAPONS

AIRCRAFT AIRCRAFT AIRCRAFT

FLIGHT PERFORMANCE

STABILITY AND CONTROL

WEAPONS

AIRCRAFT AIRCRAFT AIRCRAFT

FLIGHT TEST

FLIGHT CHARACTERISTICS

WEAPONS

AIRCRAFT AIRCRAFT AIRCRAFT

FLIGHT TEST

FLIGHT CHARACTERISTICS

WEAPONS

AIRCRAFT AIRCRAFT AIRCRAFT

FLIGHT TEST

FLIGHT CHARACTERISTICS

WEAPONS

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FLIGHT TEST

FLIGHT CHARACTERISTICS

WEAPONS

AIRCRAFT AIRCRAFT AIRCRAFT

FLIGHT TEST

FLIGHT CHARACTERISTICS

WEAPONS

AIRCRAFT AIRCRAFT AIRCRAFT

FLIGHT TEST

FLIGHT CHARACTERISTICS

WEAPONS

AIRCRAFT AIRCRAFT AIRCRAFT

FLIGHT TEST

FLIGHT CHARACTERISTICS

WEAPONS
Conformal dapping analysis of multielement airfoils with boundary-layer corrections

Experimental and computational study of transonic flow past oscillating airfoils

Studies of leading-edge thrust phenomena

Calculations of inviscid supercritical subsonic flow past a lifting profile of arbitrary thickness — German thesis

Calculations of transient flow past oscillating airfoils

Flow of a compressible fluid over an isolated airfoil and through a cascade

Concurrent and inverse transonic wing design methods

The rational design of an airfoil for a high-performance jet trainer

Effect of weather conditions on airport operations

A note on an instability mechanism for the core of a rolled-up vortex sheet

Procedural feasibility of reduced spacing under IFR operations with applications to Atlanta and O'Hare

Development of test methods for scale model wind tunnel investigations in the NASA Langley Vortex Research Facility — agricultural aircraft

Airfield wake vortices. Citations from the NASA database

Analysis of nonlifting and lifting airfoils in transonic flow by parametric differentiation

The laminar lightplane or the aircraft performance revolution in action

Visualization of the laminar-turbulent transition in the flow over an airfoil using the smoke-wire technique

Effect of weather conditions on airport operations

Application of unsteady airfoil theory to rotary wings

Class of shockfree airfoils producing the same surface pressure

Direct computation of transonic solutions for aerofoil sections and multiple-speed generators

Surveillance and communication systems using mobile media on the airport surface

Aerofoils down to critical Reynolds numbers and the performance of remotely controlled gliders

Theoretical investigation of the aerodynamics of double nose cone airfoil sections

Advanced research on helicopter blade airfoils

Unsteady aerodynamics of conventional and supercritical airfoils

System to measure the pressure distribution on fan aerofoil surfaces during flutter conditions

Transonic flow over airfoils with tangential injection

Computational methods for the design of adaptive airfoils and wings

Analysis of nonlifting and lifting airfoils in transonic flow by parametric differentiation

Prediction and measurement of turbulent aerodynamic trailing edge flows

Experimental studies of the laminar separation bubble on a two-dimensional airfoil at low Reynolds numbers

Lift improvement of an aerofoil by periodic deformations

Calculations of transonic flow about an airfoil in a wind tunnel

Spine curves and their application to the design of turbine blade profiles
A comparison of various numerical methods for calculating subcritical inviscid isentropic flow over two-dimensional airfoils
[BASA-FP-1769] p0936 880-22270
A comment on the origin of endwall interference in wind tunnel tests of airfoils
[BASA-TH-9096] p0936 880-22280
Advanced propeller aerodynamic analysis
[ADST-25510] p0932 880-22345
NASA propeller noise research
[ADST-25511] p0932 880-22346
Propeller dynamic and aeroelastic effects
[ADST-25512] p0932 880-22348
The VIASA 8 subsonic aerodynamic nuclear gas turbine vulnerability code
[AD-A081722] p0939 880-21256
Core compressor exit stage, 2
[BASA-TH-1941] p0936 880-23312
Airplane wing leading edge variable camber flap
[AD-A081922] p0939 880-23514
Simple turbulence models and their application to boundary layer separation
[BASA-CH-3203] p0941 880-26269
Further investigation of a finite difference procedure for analyzing the transonic flow about harmonically oscillating airfoils and wings
[BASA-TH-3109] p0940 880-26271
Overlay coatings for gas turbine airfoils
[AD-A082651] p0940 880-25506
A computer program to generate two-dimensional grid about airfoils and other shapes by the use of Poisson's equation
[BASA-TH-3110] p0947 880-26266
Design and analytical study of a rotor airfoil
[BASA-CH-2988] p0947 880-26267
Numerical optimization of circulation control airfoils
[DTSBDC-80/060] p0947 880-26271
Application of rapidly solidified alloys --- aluminum alloy fan blades and iron alloy bearings
[AD-A083896] p0945 880-26431
A numerical and experimental study of the turbulent wakes of turbomachinery rotor blades, isolated airfoils, and a cascade of airfoils
[BASA-TH-80166] p0945 880-27797
Time-variant aerodynamics for torsional motion of large-turbine airfoils
[BASA-TH-80167] p0946 880-27799
Numerical optimization of circulation control airfoils
[AD-A080929] p0946 880-27923
Coupled bending-torsion flutter in cascades with applications to fan and compressor blades
[BASA-TH-16376] p0945 880-27996
Modelling requirements for the calculation of the turbulent flow around airfoils, wings and bodies of revolution
[BASA-TH-16797] p0951 880-27663
Comparison of elastic and elastic-plastic structural analyses for cooled turbine blade airfoils
[BASA-TH-16798] p0951 880-27719
An approximate factorization solution of the Navier-Stokes equations for transonic flow using body-fitted coordinates with application to NASA 64A010 airfoils
[BASA-CH-16377] p0952 880-28307
Heavy lift helicopter: Prototype technical summary
[AD-A085200] p0952 880-28343
Dynamic stall on advanced airfoil sections
[AD-A085800] p0954 880-29252
A computer program for the design and analysis of low-speed airfoils
[BASA-TH-80210] p0952 880-29271
Quiet Clean Short-haul Experimental Engine (QCSEE) under-the-fuselage engine composite fan blades: Preliminary design test report
[BASA-CH-134846] p0954 880-29298
Quantitative measurements of the effects of variations in panel method computer programs
[BASA-TH-805358] p0957 880-30279
The VSBP stability and control digital bicycle
Volume 3: Plot module
[AD-A0866559] p0959 880-30317
Mathematical modeling of linear and non-linear aircraft structures
[AD-A09-6867] p0959 880-31326

A-68
AIBPLAHE PBODDCTIOB COSTS

A consideration of general aviation in the United States

Factors affecting the retirement of commercial aircraft

Outlook for global Positioning System (GPS) in civil aircraft operations

Problems of older jet aeroplanes - A regulatory authority view

Simulation defines alternatives for Copenhagen terminal expansion

Capacity payoffs at large hub airports from ATC initiatives

The future development of large hub airports as seen by airlines

Fuel - a system problem of major proportions - fuel conservation in airline operations

Flight management systems

The maintenance of transport aircraft at Air France

Fuel economy in the airliners

Airport capacity and delays

Optical design of airport control tower cabs

Organization of regional airports

Computer simulation of an air cargo small package system

Design of a wind shear detection radar for airports

Interchange design for passengers in airports

Marseilles - Metamorphosis of an airport

An analytical method of testing pavement strength

Airfields, railway stations and people

How effective can sound barriers be for maneuvering hypersonic flight vehicles

A method for administrative assignment of runway slots

Assessment of operational automated guidance systems - AIRTRAPS, phase 2

Criteria for applying commercial aircraft warranties in USAF aircraft purchases

Cargo Logistics Airlift Systems Study (CLASS).

Volume 5: Summary

Analysis safety: DC-10 crash of May 25, 1979

AIRPLANE PRODUCTION COSTS

Application of parametric weight and cost estimating relationships to future transport aircraft

Mini-BHP technology development

Advanced structures - Meeting the challenges of low-cost future aircraft systems

Structural integration as a means of cost reduction

Cost estimating relationships for airframes in the development and production phases

Design to life cycle costs interaction of engine and aircraft - combat aircraft

Military engine programs with cost objectives

AIRPORT REAONS

MT DESCRIBE ADDRESS REASON SYSTEM

Airport radio navigation systems - Russian book

Radar beacon trilateration sensor tests at Logan International Airport

AIRPORT LIGHTS

MT RUNWAY LIGHTS

Easy maintenance improved airfield lighting economy

BAIRCIS - A new lighting control system for Gatwick

AIRPORT PLANNING

Definition of a system concept study for future air traffic control

Requirements for short instrument runways

How effective can sound barriers be - for aircraft noise reduction

Airfield packages - A help for developing countries - in airport planning and construction

Hydants or airfield fuelers

Airports, railway stations and people - passenger accommodations

AIRPORT SAVINGS

Computer simulation of an air cargo small package sorting system

Airport capacity and delays

Approximate estimation of the least number and optimal distribution of landing airports for maneuvering hypersonic flight vehicles

Design of a wind shear detection radar for airports

Organization of regional airports

Optical design of airport control tower cabs
The re-organization of airport administration in Canada

Simulation defines alternatives for Copenhagen terminal expansion

Aeropuerto de Caracas - An unusual new general aviation facility near the city

Primary radar in ATC

Noise zoning around airports in the Netherlands

Technology to increase airport capacity

A matrix method for airport site evaluation

The importance of runway capacity - An analytical approach

Design concept for LR2 airport facilities

Airport construction in the Third World - A look at the problems

On the basic geometry of an efficient terminal-space configuration with heavy transiting traffic

Conception, construction, and maintenance of airports

ICAO Zagreb meeting --- airport problems and prospects

New turnoffs for 'optima runway occupancy times'

Airport desires and needs concerning noise levels and handling of new transport aircraft

Environment-compatible and economic airport drainage

Airport equipment and know-how from England - an airport forms survey

Airline efforts to improve airfield and airspace operations - Atlanta

Allocation of limited airport facilities to improve utilization in the deregulation environment

Land use factors and airport operations safety

Safety considerations in the design of airport improvements

Operational consideration for safety during airport construction and maintenance

The FAA satellite airport program

Allocating and accommodating small aircraft operations in the Baltimore-Washington B-region

Analysis of airport authority operating costs

Air terminal design - Decentralization and shape

Computer simulated passenger service levels for airport terminals

Airport studies and designs: Handbook

Methodology for the evaluation of a radar site

Airport ground access

Airport obstacle maps

Aviation forecasting, planning, and operations

The third London airport: To build or not to build

A new theory for rapid calculation of the ground patterns of the incident sound intensity produced by a maneuvering jet airplane
INDEX

Gaseous fuels for airship propulsion p0405 A80-39304
The Air Products/Prodair helium infrastructure at airship bases p0405 A80-39305
Infrastructure of cargo airships p0405 A80-39306
Application prospects for the airship p0405 A80-39311
Airship — A modern transport system p0406 A80-39312
Possibilities of using airships in the fields of iron metallurgy, mining, and offshore activities p0406 A80-39313
Conditions of airship utilization in forests p0406 A80-39314
The heavy load airship — Response to the development of international transports p0406 A80-39315
U.S. Navy studies of surveillance airships p0406 A80-39316
Why have none of the airship projects conceived during the last fifteen years not been realized to the present p0406 A80-39320
The economics and technology of LTA p0406 A80-39321
Propulsion options for the HI STOL long endurance drone airship [AD-A074595] p0121 H80-14113
The aerodynamic forces on airship hulls [NASA-184] p0126 H80-15039
The development of the zeppelins dirigible for long distance transportation [NASA-TM-76143] p0488 H80-27303
Measures for improving the zeppelins airships for long distance transportation [NASA-TM-76142] p0495 H80-27351
Possibility study of applying laminar flow control to an LTA vehicle [AD-A081148] p0629 H80-32351
AIRSPACE
On the basic geometry of an efficient terminal-space configuration with heavy transiting overflight traffic p0388 A80-37702
airline efforts to improve airfield and airspace operations - Atlanta [SASE PAPER 800721] p0574 A80-49679
General aviation operating requirements for the 1980's [SASE PAPER 800734] p0574 A80-49666
The role of a flight management system in terminal airspace [SASE PAPER 800706] p0576 A80-49697
Air traffic density and distribution measurements [AD-A073229] p0715 H80-14064
A flight investigation of system accuracies and operational capabilities of a general aviation/air transport area navigation system [BNAV] [AD-A081168] p0362 H80-23288
air traffic in NATO Europe: Its characteristics and its needs p0491 H80-27325
AIRSPEED
A Doppler technique for measuring an aircraft's velocity from the spectra of its RF transmissions p0050 A80-14495
Estimating aircraft true airspeed using temperatures from two different probes p0054 A80-15125
Investigation of the permissible 9 x 9 phase space of safe landing maneuvers p0262 A80-29205
Software for a correlation velocity sensor — for aircraft p0262 A80-32443
Analysis of the effect of time selection of a signal reflected from a surface on the accuracy which ground speed can be measured p0391 A80-30296
The problem of the optimum cruising Mach number p0567 A80-47779
Helicopters breaking the 200 km barrier — Three systems could do it this decade p0572 A80-48625
Opportunities for development of future helicopter operations [SASE PAPER 800702] p0575 A80-49692
Study of admissible safe prelanding maneuver 8-V phase space p0581 A80-50640
A flutter-speed formula for wings of high aspect ratio p0139 H80-15147
Air speed and attitude probe [NASA-CACR-11009-1] p0223 H80-16036
Measurement of aircraft speed and altitude [NASA-TP-1046] p0247 H80-24296
Low-speed airspeed calibration data for a single-engine research-support aircraft [NASA-TP-8132] p0477 H80-26264
Experimental and analytical studies of a true airspeed sensor [NASA-CR-163264] p0479 H80-26297
Development and flight test results of an autothrottle control system at Mach 3 cruise [NASA-TP-1621] p0483 H80-26328
Bifilar analysis study, volume 1 [NASA-CR-159227] p0602 H80-31382
Analytic and experimental studies of a true airspeed sensor p0604 H80-31396
AEROMODELLING
U-FLIGHT RELIABILITY
U-AIRCRAFT RELIABILITY
U-FAILURES
U-WARNING SYSTEMS
ALCOHOLS
AT ETHANOLS
Problems with the use of chemicals on runways during winter use p0375 A80-36767
The current role of alcohol as a factor in civil aircraft accidents [AD-A08626] p0542 H80-29266
ALGEBRA
AT HIGEVARIABLES
AT HIGEVECTORS
AT HERMITIAN POLYNOMIAL
AT LINEAR EQUATIONS
AT LINEAR TRANSPORTATION
AT MATRICES (MATHEMATICS)
AT NONLINEAR EQUATIONS
AT POLYNOMIALS
AT QUADRATIC EQUATIONS
AT QUARTIC EQUATIONS
AT STATE VECTORS
AT STIFFNESS MATRIX
AT STRESS TENSORS
AT VECTOR SPACES
AT VECTORS (MATHEMATICS)
AT VORICITY
ALGORITHMS
Error analysis of an algorithm for magnetic compensation of aircraft — microprocessor program for simulation p0053 A80-14944
Controlling adaptive antenna arrays with the sample matrix inversion algorithms p0159 H80-23283
Scalar update navigation algorithms for a low-cost NAVSTAR GPS receiver — in general aviation aircraft avionics p0281 A80-32629
Algorithms and logic for incorporating ILS into VNAV [NASA-TP-737] airspace area navigation system [NASA-TP-80167] p0026 H80-10152
Automation of flight on-line strategic control: The case of speed control on pre-established routes p0115 H80-14070
Radar data utilization in automating the sequencing of aircrafts in terminal areas p0116 H80-14071
Tactical analysis of conflicts in an air traffic control system: Design and implementation of a provisional model p0116 H80-14072
A-73
ANTIREFECTION TECHNIQUES FOR DETECTING FALSE TRACKS IN AIR TRAFFIC SIMULATION WITH SECONDARY RADAR

ONBOARD COLLISION AVOIDANCE SYSTEM: ENVIRONMENTAL INFLUENCE ON THE TRACKING ALGORITHMS REQUIREMENTS

PRELIMINARY TEST RESULTS OF A FLIGHT MANAGEMENT ALGORITHM FOR FUEL CONSERVATIVE DESCENTS IN A TIME-BASED MET ERED TRAFFIC ENVIRONMENT — FLIGHT TESTS OF AN ALGORITHM TO MINIMIZE FUEL CONSUMPTION OF AIRCRAFT BASED ON FLIGHT TIME

CONCEPTS FOR OPTIMIZING FLIGHT MANAGEMENT ALGORITHMS FOR FUEL CONSERVATIVE DESCENTS IN A TIME-BASED MET ERED TRAFFIC ENVIRONMENT

LANDING SYSTEM RELIABILITY AND SAFETY MODEL

ALPHA-JET AIRCRAFT

THE ALPH A-JET AT INTRODUCTION

INDUSTRIAL TRIAL RUN OF THE AVA DERIVATIVE BALANCE ON AN ALPH A-JET AIRCRAFT IN A 3-m WIND TUNNEL

ROLL CONTROL BY DIGITALLY CONTROLLED SEGMENT SPINDLES

DIRECT SIDE FORCE AND DIRECTION CONTROL WITH THE ALPHA JET

COMPOSITE COMPONENTS UNDER IMPACT LOAD AND EFFECTS ON THE LOADING CAPACITY OF THE AIRPLANE

COMPARISON OF AERODYNAMIC COEFFICIENTS OBTAINED FROM THEORETICAL CALCULATIONS WITH WIND TUNNEL AND FLIGHT TEST DATA REDUCTION FOR THE ALPHA-JET AIRCRAFT

ALPES MOUNTAINS (EUROPE)

ALPIL-ALPS AIRPORTS - FRANCE'S MOUNTAIN AIRPORTS

ALTERNATING CURRENT GENERATORS

U-AV GENERATORS

ALTERNATIVES

Fundamental characteristics of alternate fuel effects in continuous combustion systems

AIAA 80-1531-12

ALTERNATIVES (GENERATORS)

U-AV GENERATORS

ALTERNATIVES

U RADIO Altimeters

Pilot-static system - Errors and calibrations

General aviation altimetry errors for collision avoidance systems

COMPARISON OF AERODYNAMIC COEFFICIENTS OBTAINED FROM THEORETICAL CALCULATIONS WITH WIND TUNNEL AND FLIGHT TEST DATA REDUCTION FOR THE ALPHA-JET AIRCRAFT

ALTITUDE

FLIGHT ALTITUDE

LOW ALTITUDE

The extraction of altitude data in a 3D radar environment

LOW ALTITUDE DRONE ALTITUDE REQUIREMENTS FOR FAST INFILTRATION PARACHUTES

REFERENCE ALTITUDE SPECIFICATIONS

ALTITUDE TESTS

HIGH ALTITUDE TESTS

ALUMINUM

ALUMINUM OXIDES

ALUMINIZING

ALUMINUM COATINGS

ALUMINUM POWDERED ALUMINUM

PRELIMINARY DESIGN OF COMPOSITE WING-BOX STRUCTURES FOR GLOBAL DAMAGE TOLERANCE

DESIGN AND TEST OF A BORON-ALUMINUM HIGH-STRENGTH ALLOYS

ALUMINUM ALLOYS

THE ROLE OF ALUMINUM SEPARATION IN THE WEAR OF ALUMINUM-BRONZE-STEEL INTERFACES UNDER CONDITIONS OF BOUNDARY LUBRICATION — IN AIRCRAFT-ENGINE SYSTEMS

A REGRESSION MODEL OF FATIGUE CRACK PROPAGATION UNDER FLIGHT SIMULATION LOADING — FOR ALUMINUM
ANALYTIC GEOMETRY

BY WEIGHTING FUNCTIONS
An analytical solution of lift loss for a round planform with a central lifting jet
[AN-1084669] p0587 880-30276

ANALYTIC GEOMETRY

BY COEFS

ANALYTICAL CHEMISTRY
Chemical characterization and quality control for an adhesive
[AD-80-307739] p0607 880-31558

ANALYTICAL

BY ENGINE ANALYSES

ANOMALY

BY RAD (ANATOMY)

BY RNC (ANATOMY)

ANOMALOUS

The development and operation of the BDC anechoic acoustic test facility
[IAIA PAPER 80-0982] p0392 880-36833

Evaluation of approximate methods for the prediction of noise shielding by airframe components
[ASA-TP-1909] p0137 880-15129

ANOMETER

BY BOT-PLATA ANEMOMETERS

BY BOT-WIRE ANEMOMETRS

BY LASER ANEMOMETRS

Air flow measurements in a large irregularly shaped tunnel using anemometer and pitot-static tube traverse
[HB-660] p0082 880-13061

Dynamic behavior of a beam drag-force analysis
[ASA-TP-1687] p0426 880-24995

Ground wind vortex sensing system calibration tests
[AD-80-36867] p0342 880-29259

ANOMENENT

BY VELOCITY MEASUREMENT.

ANGLE OF ATTACK

Hypersonic viscous shock layer on sweptback wings of infinite span at different angles of attack
[80-11208] p0108 880-11208

A new look at C sub n beta --- slender aircraft flight stability dynamic equilibrium
[ASA-TP-19012] p0054 880-15126

Investigation of leading-edge devices for drag reduction of a 60-deg. delta wing at high angles of attack
[ASA PAPER 80-0310] p0094 880-18309

Centrifugal forces on a thin wing in hypersonic flight at large angles of attack
[ASA] p0151 880-21315

Effects of forebody, wing and wing-body-LIFX flowfields on high angle of attack aerodynamics --- leading edge extensions
[SAGE PAPER 791082] p0194 880-26638

Control system techniques for improved departure/spin resistance for fighter aircraft
[SAGE PAPER 791083] p0194 880-26639

High-angle-of-attack flying qualities (HBA) -- an overview of current design considerations
[SAGE PAPER 791085] p0195 880-26640

Investigatory investigation of the effects of vortex bursting on the high-angle-of-attack lateral-directional stability characteristics of highly-swept wings
[ASA 80-0463] p0201 880-26960

Influence of the angle of attack on the thermal flux at the stagnation point at supersonic speeds
[ASA 80-0463] p0203 880-27138

Airfoil at high angle of attack actuated by plunging motion
[AAAF PAPER ST 80-9] p0377 880-36800

The INF Lille rotation balance and associated experimental techniques --- for wind tunnel control loss evaluation during high angle of attack flight
[ASA PAPER ST 80-13] p0377 880-36804

Experimental study of transonic flows in an air intake at high angle of attack
[ASA PAPER M 80-17] p0377 880-36806

Experimental and numerical study of the flow in an intake at high incidence
[ASA PAPER M 80-19] p0376 880-36805

Synthesis of test results on the Concorde at high angle of attack
[ASA PAPER ST 80-26] p0376 880-36804

Expected improvements from wind tunnel model testing at high angle of attack
[SAGE, TP NO. 1960-36] p0444 880-40804

Linear boundary layer on swept wings of infinite span at an angle of attack
[ASA PAPER ST 80-1270] p0457 880-42964

Determination of an angle of attack sensor correction for a general aviation airplane at large angles of attack as determined from wind tunnel and flight tests
[IAIA PAPER 80-1845] p0470 880-43303

Optimization of tactical aircraft maneuvers utilizing high angles of attack
[ASA 19-1596] p0517 880-45869

Bifurcation analysis of aircraft high angle-of-attack flight dynamics
[ASA 19-1599] p0517 880-45892

Pseudosteady state analysis of nonlinear aircraft maneuvers
[ASA 80-1600] p0518 880-45893

Application of high-alpha control system concepts to a variable-sweep fighter airplane
[ASA PAPER 80-1582] p0579 880-50098

High Mach number dynamic stability of pointed cones at small angles of attack
[ASA 80-15419] p0615 880-50101

Influence of angle of attack on profile losses in turbine cascade with porous cooling
[ASA 80-15419] p0615 880-50104

Technical evaluation report on the fluid dynamics panel Symposium on High Angle of attack aerodynamics --- slender wings, bodies of revolution, and body configurations
[AGARD-AR-145] p0025 880-10147

The analysis of wing-body combinations at moderate angles of attack --- similarity bodies
[AD-074284] p0036 880-11600

Prediction of lateral aerodynamic loads on fighter aircraft at high angles of attack
[ASA-TP-19092] p0076 880-13002

High angle of attack characteristics of different fighter configurations
[SAB-TP-1845] p0114 880-16058

Control considerations for CV/ fighters at high angles of attack
[ASA 80-15416] p0141 880-15600

Wind tunnel investigation of controls for DF on a fighter-type configuration of higher angles of attack
[ASA 80-15416] p0142 880-15616

Nonlinear aerodynamics of all-movable controls
[ASA 80-15413] p0143 880-15713

Summary of theoretical and experimental investigations of vortex lift at high angles of attack
[AD-074083] p0168 880-16037

Application of the Estimation--Before-Modeling (EBM) system identification method to the high angle of attack/sideslip flight of the T-2C jet trainer aircraft. Volume 2: Simulation study using T-2C wind tunnel model data
[AD-079922] p0235 880-19061

Application of the Estimation--Before-Modeling (EBM) system identification method to the high angle of attack/sideslip flight of the T-2C jet trainer aircraft. Volume 3: Identification of T-2C aerodynamic stability and control characteristics from actual flight test data
[AD-079924] p0237 880-19072

Application of the Estimation--Before-modeling (EBM) system identification method to the high angle of attack/sideslip flight of the T-2C jet trainer aircraft. Volume 1: Executive summary
[AD-090025] p0237 880-19073

Influence of pitching moment characteristics on departure and coordinated roll reversal boundaries for fighter configurations
[AD-082335] p0222 880-24328

Sensor for measuring instantaneous angle of attack of helicopter blades
[BASA-CP-3297] p0343 880-25330

Global stability and control analysis of aircraft at high angles of attack
[AD-084938] p0536 880-28374

Ranges and critical values of advance ratio for blade/vortex intersection patterns of a helicopter rotor
[RPL-NP-79030-0] p0599 880-31360

A-76

SUBJECT INDEX
Flight visualization study of the B17F 8F
[ASA-PAPER 60-09-18] p0456 A80-42154

Validation of high angle-of-attack analysis methods
[AD-A087621] p0605 A80-31384

A comprehensive investigation into the supersonic viscous flow about a slender cone at high angle of attack: Experimental and theoretical results
[ASA-PAPER 70-09-15] p0024 B80-10198

Experimental unsteady aerodynamics of conventional and supercritical airfoils -- conducted in the Area 11Checkout supersonic wind tunnel
[ASA-PAPER 81-0122] p0651 A80-30345

Rotary balance data for a typical single-engine general aviation design for an angle of attack range of 8 deg to 90 deg: Lower wing model C -- wind tunnel tests
[ASA-PAPER 90-03-203] p0631 A80-32366

ANGLES (GEOMETRIC)

BY ANGLE OF ATTACK

BY CHASSIS INCINDENCE

BY LEADING EDGE SWEEP

BY SWEEP ANGLE

ANGULAR ACCELERATION

Influence of acceleration on the critical speed of a Jeffcott rotor
[ASA-PAPER 83-07-98] p0460 A80-42214

Experiments in sensing transient rotational acceleration cues on a flight simulator
[ASA-PAPER 79-09-15] p0024 B80-10193

Angular vibration of aircraft.
Vol. 1: Executive summary
[ASA-PAPER 81-07169] p0027 B80-10197

Angular vibration of aircraft. Vol. 2: Prediction methods for angular vibration
[ASA-PAPER 81-0717] p0027 B80-10198

ANOMALOUS DISTRIBUTIONS

Combinations of 148 navigation stars and the star tracker
[ASA-PAPER 82-02203] p0631 A80-32366

ANGULAR MOTION

U ANGULAR VELOCITY

Angular velocity measurement techniques -- airborne electro-optical package disturbances
p0228 B80-18222

Fiber optic sensors for measuring angular position and rotational speed -- air breathing engines
p0229 B80-18368

ANIMALS

BY BIRDS

BY INSECTS

ANIMATION

U MOTION

ANOMALOUS DUCTS

Performance of annular prediffuser-combustor systems
[ASA-PAPER 80-09-15] p0456 A80-42154

ANOMALOUS FLOW

The annular jet technique for nozzle/afterbody throttle dependent drag testing
[AIAA-PAPER 80-1163] p0399 A80-38985

The effect of blade-wakes on the performance of short dump-diffuser type combustor inlets
p0486 A80-41151

Vorticity modelling of blade wakes behind isolated annular blade-rows -- Induced disturbances in swirling flows
[ASA-PAPER 80-09-140] p0462 A80-42253

Coannular jets -- Are they really quiet and why
[ASA-PAPER 80-09-100] p0462 A80-42253

ANOMALOUS NOISES

Noise suppression due to annulus shaping of an inverted-toroidal-profile coaxial nozzle
p0336 A80-35498

A unique coaxial plug nozzle jet noise
Prediction procedure
[AIAA-PAPER 80-1007] p0339 A80-35498

Prediction of flyover noise from single and coaxial jets
[ASA-PAPER 80-1031] p0340 A80-35498

Flight effects on the aero/acoustic characteristics of inverted profile coaxial nozzles
[ASA-PAPER 81-02149] p0030 A80-10220

Noise suppression due to annulus shaping of conventional coaxial nozzles
[ASA-PAPER 81-01661] p0339 A80-22047

Experimental aerodynamic and acoustic modeling of the Variable Cycle Engine (VCE) tested coannular exhaust nozzle system
[ASA-PAPER 81-01221] p0641 A80-33345

ANNULAR SUSPENSION AND POINTING SYSTEM

Flight software requirements and design support
[ASA-PAPER 81-03225] p0560 B80-30061

ANTENNA ARRAYS

BY STEERABLE ANTENNAS

Antennas (Current status and problems) -- Russian book
p0011 A80-11890

Pulse compression results using metallic reflector array lines
p0553 A80-10197

Controlling adaptive antenna arrays with the sample matrix inversion algorithm
p0159 A80-23283

Reactance-controlled short-backfire array
p0263 A80-29483

Optimal evaluation of angular coordinates of an aircraft in multichannel radio direction finding
p0521 A80-66136

Bellshaped coverage of four-faced aircraft antennas
[AD-A073079] p0524 A80-46539

Dipole broadside glide slope array --- for landing systems
[AD-A077042] p0168 B80-16047

Chicago monostatic acoustic vortex sensing system. Volume 1: Data collection and reduction
[AD-A076929] p0680 A80-27306

ANTENNA COMPONENTS

BY ANTENNA FEEDS

Antennas (Current status and problems) -- Russian book
p0011 A80-11890

Some novel design techniques for conformal antennas
p0558 A80-15892

Design of a wind shear detection radar for airports
p0152 A80-21429

Buoyant module VHF antenna design for submerged systems/aircraft communications
p0174 A80-26524

A broadband, circularly polarized, phase steered array
p0323 A80-34166

Frequency independent sidelobe suppression and lobesharpening using broad beam antennas
p0323 A80-34178

Pattern shaping with a metal plate lens --- microwave antenna design
p0508 A80-44267

Coaptation of aircraft mounted antenna radiation patterns at frequencies above 300 MHz -- II
p0568 A80-47826

Experimental loop antennas for 60 KHz to 200 KHz
[ASA-CASE-162729] p0128 B80-15063

Combined vibration/temperature/sidelobe environmental testing of VHF blade antennas
p0180 B80-17301

A program for predicting antenna radiation patterns
p0300 A80-21356

Very lightweight air traffic management system using an electronic scan antenna
p0492 A80-27335

Complementary cross-slot phased array antenna
[ASA-CASE-BS-1532-1] p0556 A80-29543

Precision 1-band DME tests
[AD-A085053] p0645 A80-33388

ANTENNA FEEDS

The analysis of an elliptic twist reflecting Cassegrain antenna using GTD -- geometrical theory of diffraction
p0058 A80-15847

The study of an RPM dipole antenna type simulator
p0066 A80-39411

ANTENNA RADIATION PATTERNS

U ANTENNA RADIATION PATTERNS

The 'Hartello' 3D radar antenna --- for civil use
and military technology p0058 A80-15815
BP aircraft antennas - Some predicted and measured results p0058 A80-15827
Radiation characteristics of printed slot antenna with a switchable parasitic slot p0058 A80-15889
Some novel design techniques for conformal antennas p0058 A80-15892
Experimental procedure to determine limits of ISM interference affecting navigational ILS equipment --- Industrial, Scientific and Medical
Buoyant module VHF antenna design for submerged systems/aircraft communications p0212 A80-27760
Reactance-controlled short-backfire array p0214 A80-28254
Electronically steered antennas p0263 A80-29943
Near-field pattern analysis of airborne antennas p0402 A80-39169
Pattern shaping with a metal plate lens - microwave antenna design p0508 A80-44267
Computation of aircraft mounted antenna radiation patterns at frequencies above 300 MHz - II
Hexispherical coverage of four-faced aircraft antennas [AD-A073079]
Measurement of radiation patterns of antennas in non-steady flight [NLR-TR-78016-9]
Comparison of measured data with FP-77 propagation model predictions [AD-A076568]
A program for predicting antenna radiation patterns p0220 H80-18259
Features study: A study of RF external transmissions --- to determine configuration of aircraft and spacecraft [AD-A080606]
Research on near field pattern effects [AD-A079325]
A statistical model for multipath reflection effects of antennas mounted on aircraft [AD-A080369]
Radiation by sources on perfectly conducting convex cylinders with an impedance surface patch [AD-A084385]
Airborne antenna pattern code user's manual [AD-A086331]
ANTENNAS
MT AIRCRAFT ANTENNAS
MT CASSEGRAIN ANTENNAS
MT DIPOLAR ANTENNAS
MT HORN ANTENNAS
MT LENS ANTENNAS
MT LOOP ANTENNAS
MT MICROWAVE ANTENNAS
MT MISSILE ANTENNAS
MT MONOPOLE ANTENNAS
MT OMNIDIRECTIONAL ANTENNAS
MT RADAR ANTENNAS
MT RADIO ANTENNAS
MT SPIDER ANTENNAS
MT STEERABLE ANTENNAS
MT WAVEGUIDE ANTENNAS
Shipboard antenna tests for GPS p0190 A80-25144
Computer study of Tulsa International Airport runway 178 glide slope sites [AD-A075521] p0177 H80-17049
ANTHROPOMETRY
ANTIFREEZES
Problems with the use of chemicals on runways during winter use p0375 A80-36767
ANTIFRiction BEARINGS
MT BALL BEARINGS
MT ROLLER BEARINGS
Third body formation and the wear of PTFE fibre-based dry bearings
SUBJECT INDEX
[AIAA PAPER 79-1407-7] p0051 A80-14742
Prediction of dynamic properties of a rotor supported by hydrodynamic bearings using the finite element method [CE21-1-44-29-0] p0165 H80-17482
ANTIFREEZING ADDITIVES
Aircraft anti-icing/de-icing [AD-A074128]
Carburetor ice: A review p0310 H80-15078
Carburetor ice: A review [TI-79-9] p0361 H80-23279
Carburetor ice: A review [TF-57-19] p0361 H80-23290
ANTIOXIDANTS
The chemical stability of hydro-treated fuels and their stabilization by antioxidants p0002 A80-10200
Alkyl derivatives of resorcinol used as antioxidants in jet fuels p0336 A80-35801
Bennich base used as an antioxidant in jet fuels p0336 A80-35802
ANTISKID Devices
Behavior of aircraft antiskid braking systems on dry and wet runway surfaces. A slip-velocity-controlled, pressure-bias-sulated system [NASP-7T-4-105] p0070 H80-12008
Trials to compare the stopping performance of three anti-skid systems and to demonstrate methods of determining aircraft stop distances on the standard military reference wet surface [5-T-RENO-17/9] p0349 H80-22318
ANTISKIDGEAR VEHICLE
Sea king Kh. 50 helicopter flight control system: A mathematical model of the AFCS (ASW) mode [AD-A086969] p0592 H80-30318
Remotely piloted seaplane for antiskidewarfare [AD-A086932] p0603 H80-31380
ANTISKIDGEAR VEHICLE AIRCRAFT
MT CL-66 AIRCRAFT
MT P-3 AIRCRAFT
MT S-3 AIRCRAFT
MT SB-3 HELICOPTER
Contingency rating options for ISB-1EB V/STOL aircraft [AIAA PAPER 80-1854] p0513 A80-85785
A mission training simulator for the Bismarck KR NK Z and some aspects of the derivation and verification of its system models p0254 H80-19826
ANTONOV AIRCRAFT
MT AN-24 AIRCRAFT
ANTONOV AN-24 AIRCRAFT U AN-24 AIRCRAFT
APERTURES
MT IRIS (MECHANICAL APERTURES)
APPLICATIONS OF MATHEMATICS
Mathematics for computer graphics --- Book on numerical design engineering of aerospace systems p0050 A80-14598
A matrix method for airport site evaluation p0322 A80-33293
APPROACH
MT AIRBORNE RADAR APPROACH
MT INSTRUMENT APPROACH
Pilot performance during simulated approaches and landings made with various computer-generated visual glidepath indicators [AD-A066220] p0026 H80-10151
Altitude response of several airplanes during landing approach —— including space shuttle [NASA-TR-80186] p0122 H80-14139
Optimum intensity setting of approach and runway light systems [AD-A075485] p0168 H80-16046
Evaluation of the potential for reduced longitudinal spacing on final approach [AD-A076838] p0169 H80-16049
Flight evaluation of configuration management system concepts during transition to the landing approach for a powered-lift STOL aircraft [NASA-TR-81146] p0245 H80-19127
Subject Index

I nte r a l l y augmented approach couplers
[AD-A080488] p0290 H80-20248

St udy of optical techniques for indirect generation of runway approach light
[AD-A080834] p0499 H80-27398

Flight evaluation of a radar cursor technique as an aid to airborne radar approach
[AD-A080015] p0531 H80-28331

APPROACH AND LANDING TESTS (ALT)

Experience with an adaptive stick-gain algorithm to reduce pilot-induced-oscillation tendencies
[AIAA 80-1517] p0516 A80-05670

Orbiter landing loads : mathematical model description and correlation with ALT flight data
[NASA-SP-1056] p0172 H80-16091

Dynamic stability derivatives of space shuttle orbiter obtained from wind-tunnel and approach and landing flight tests
[NASA-TP-1634] p0307 H80-21336

Approach Control

Flight simulation of a radar cursor technique
[AD-A077722] p0490 H80-27315

SSIS Initial Evaluation Report. Davis-Beach
[AD-A086635] p0490 H80-27320

APPROPRIATIONS

National Aeronautical and Space Administration
[AD-A087210] p0372 H80-24210

APPROXIMATION

MT FINITE DIFFERENCES THEORY

MT FINITE ELEMENT METHOD

MT LEAST SQUARES METHOD

MT RELAXATION METHOD (MATHEMATICS)

On a smooth approximation method and its application to mathematical description of wing aerodynamic characteristics
[AD-A077851] p0294 H80-20282

Inequalities and approximation with applications to VSTOL aircraft --- using control theory for optimal control approximations
[AD-A077851] p0294 H80-11099

Parametric study of the Orbiter rollout using an approximate solution
[NASA-TR-10087] p0882 H80-13188

Evaluation of approximate methods for the prediction of noise shielding by airframe components
[NASA-TP-1004] p0137 H80-21705

An approximate factorization solution of the Navier-Stokes equations for transonic flow using body-fitted coordinates with application to NASA 64A010 airfoils
[NASA-CR-163376] p0529 H80-28307

APPROXIMATION METHODS

U APPROXIMATION

ARC GENERATORS

Long arc simulated lightning attachment test using
[AD-A080488] p0290 H80-20248

ARC SPARING

Materials Coating Techniques
[AD-A080488] p0290 H80-20248

ARC WELDING

NASA-TUNGSTEN ARC WELDING

ARCHITECTURE (COMPUTERS)

Advanced avionic architectures for the 1980's - A software view
[AD-A077722] p0490 H80-27315

The TI data flow architectures - The power of concurrency for avionics
[AD-A077722] p0490 H80-27320

Single chip custom LSI microcomputers for avionics applications
[AD-A077722] p0490 H80-27320

An LSI digital signal processor for airborne applications --- onboard computer for radar systems
[AD-A077722] p0490 H80-27320

A comparison of computer architectures for the NASA demonstration advanced avionics system
[AD-A077722] p0490 H80-27320

Modular packaging for TIES --- Tactical Information Exchange System
[AD-A077722] p0490 H80-27320

Distributed computer architecture for the discrete address beacon system
[AD-A077722] p0490 H80-27320

FAA Technical Center Digital Cockpit Simulation Facility navigation, guidance, and control software architecture
[AIAA 80-1719] p0387 H80-37693

A flight control system using the DADS architecture
[AD-A080015] p0531 H80-28331

Trends in digital data processing and system architecture --- avionics applications
[AD-A080015] p0531 H80-28331

A fault tolerant architecture approach to avionics reliability improvement
[AD-A080015] p0531 H80-28331
Mechanization architecture for enhancement of avionics planning data base
[AD-A075572] p0292 H80-20267
Flight software requirements and design support system
[NAS-CR-163425] p0560 H80-30061

ARCTIC ENVIRONMENTS
U ICE ENVIRONMENTS
ARCTIC REGIONS
Feasibility tests of use of the tri turbo-3 aircraft for arctic MIBT drops
[AD-A073159] p0639 H80-11074

AREA NAVIGATION
Algorithms and logic for incorporating ILS NASA TCT E-737 airplane area navigation system
[HNAS-TA-10152] p0026 H80-10152
Designing low cost receivers for general aviation users
p0304 H80-21307
The integration of area navigation and the microwave landing system
p0493 H80-27337

ARGON LASERS
Application of a lamar light device to the smoke visualization of flows in a wind tunnel
p0316 H80-22242

ARGUMENTS (MATHEMATICS)
INDEPENDENT VARIABLES
AIRLINES LAUNCH VEHICLE
Influence of the design on the cost, using the Airbus as the airline booster as an example
[DGLC PAPER 80-037] p0522 A80-46280

ARIP (EXPECT PREDICTION)
C COMPUTERIZED SIMULATION
U IMPACT PREDICTION

ARITHMETIC
MT FLOATING POINT ARITHMETIC
ARMED FORCES
MT ARMED FORCES (FOREIGN)
MT ARMED FORCES (UNITED STATES)
MT NAVY
ARMED FORCES (FOREIGN)
Investigations of an active vibration isolation system for helicopters
ARMED FORCES (UNITED STATES)
A systematic technique for the identification of crash hazards in U.S. Army aircraft
p0579 H80-50113
Analysis of helicopter maintenance fault isolation criteria/techniques
[AD-A080596] p0345 H80-22257
US Army survey of acrcrew survival kits/vests
[AD-A081153] p0415 H80-28283
US Army users outlook on air traffic management
p0492 H80-27333
Progress on the US Air Force approach for the practical management of engine life cycle costs --- gas turbine engines
p0598 H80-31345
Criteria for applying commercial aircraft warranties in U.S. aircraft purchased
[AD-A088776] p0640 H80-33343

AROMATIC COMPOUNDS
Effect of naphthenic aromatic hydrocarbons on the oxidizability of hydrogenated jet fuel --- jet engine fuels
p0088 A80-17675
Analytical techniques for aromatic components in aircraft
[AD-A086343] p0592 H80-30536

ARRAYS
MT ANTENNA ARRAYS
MT PHASED ARRAYS
MT STEERABLE ANTENNAS

ARRESTING CABLE
Investigation of landing flare in presence of wind shear
[DPLL-PH-79-20] p0363 H80-23299
Development and testing of an automatic lap belt retraction and release system
[AD-A089050] p0415 H80-24282

ARROW WINGS
Hypersonic viscous shock layer on sweptback wings of infinite span at different angles of attack
p0068 H80-11208
Hypersonic slipflow of a viscous gas over a slender delta-wing
p0150 A80-21286

SELECTING THE OPTIMAL GEOMETRICAL TWIST OF AN AERODYNAMICALLY FLAT CYLINDER AS KEY TO THE FLOW AROUND A SLIGHTLY CURVED SURFACE

INDEX

Low-speed wind-tunnel tests of a 1/10-scale model of an advanced arrow-wing supersonic cruise configuration designed for cruise at Mach 2.2 --- Langley Full Scale Wind Tunnel
[HNAS-TA-80152] p0026 H80-10135
Pressure data for four analytically defined arrow wings in supersonic flow --- Langley Unitary Plan Wind Tunnel tests
[HNAS-TA-80185] p0620 H80-32332
Low-speed aerodynamic characteristics of a highly swept wing core configuration with several deflected leading edge concepts
[HNAS-TA-80186] p0641 H80-33347

ARTEMISIUS
MT INSECTS
MT ARTIFICIAL SATELLITES
MT COMMUNICATION SATELLITES
MT COSMOS SATELLITES
MT GROS 3 SATELLITES
MT NAVIGATOR SATELLITES
MT NAVIGATION SATELLITES
MT NAVIGATION TECHNOLOGY SATELLITES
MT NAVSTAR SATELLITES
MT SEASAT-A SATELLITE
MT TRANSIT SATELLITES
MT ARMY COMPONDS
MT ARTIFICIAL COMPOUNDS

AVIONICS PLANNING DATABASE
MT CLIMBING FLIGHT

AVSDS
MT AIRPORT SURFACE DETECTION EQUIPMENT

ASCENT RATIO
MT HIGH ASCENT RATIO
MT LOW ASCENT RATIO
Selection of a rational structure diagram for a large-ascent-ratio wing
p0263 A80-29227
The combined effect of axial velocity density ratio and aspect ratio on compressor cascade performance
[ASAE PAPER 80-GT-138] p0462 A80-42251
Airbus airfoils cut fuel burn - High aspect ratio, thickness, low sweep contribute
p052a A80-46682
Selecting rational high-ascent-ratio wing structural stiffening scheme
p0582 A80-50482
Flow-around small-ascent-ratio delta wing with vortex "bursting"
[p0019 H80-10060
Effect of sweep and aspect ratio on the longitudinal aerodynamics of a spanloader wing in- and out-of-ground effect --- conducted in Langley V/STOL wind tunnel
[HNAS-TA-80193] p0220 H80-17993
Core compressor exit stage study, 1: Aerodynamic and mechanical design
[NASA-CH-159718] p0424 H80-19113
Core compressor exit stage study, 2
[NASA-CH-159812] p0364 H80-23312

ASSEMBLIES
MT SUBASSEMBLIES
MT TAIL ASSEMBLIES
Ensuring geometrical accuracy of riveted aircraft component contours --- Russian book
p0271 A80-30325

ASSEMBLING
Influence of fitting jobs on the quality and prime cost of aircraft assembly
p0563 A80-47388

ASSEMBLY LANGUAGE
Using a language developed for aircraft simulators --- advantages and disadvantages of using FORTRAN and assembly language
p0255 H80-19831

ASSESSMENTS
MT DAMAGE ASSESSMENT
MT TECHNOLOGY ASSESSMENT

ASTEROIDS
MT VENUS ANOMALY

ASTROLOGY (THADARAE)
Effect of thermally induced porosity on an an-h-BIP powder metallurgy superalloy
p0269 A80-29990
Research and applications in atmospheric electricity and military operations, with an emphasis on lightning effects and atmospheric electricity interactions with aircraft. The index includes subjects such as:

- Weather phenomena and atmospheric electricity
- Lightning effects on aircraft
- Air traffic control and navigation
- Aircraft structural integrity
- Environmental monitoring and analysis

The index covers a wide range of topics, from basic research in atmospheric conditions to practical applications in aviation and defense. It highlights the interdisciplinary nature of the field, encompassing areas such as meteorology, electrical engineering, and aeronautics.
AVOIDANCE

Impacts of technologies selected on the reliability and operational availability of equipments. Cost considerations

A new approach to maintainability prediction --- avionics, ground, and shipboard electronics

Reliability growth through environmental simulation --- electronic equipment

The A-7 head-up display reliability programme

Reliability management of the avionic system of a military strike aircraft

Formal methods for achieving reliable software

Software development for TORMAD: A case history from the reliability and maintainability aspect

Modeling and Simulation of Avionics System and Command, Control and Communications systems --- conferences

A mission training simulator for the Mirage NF MK 2 and some aspects of the derivation and verification of its system models

The role of the aircraft model in avionic systems simulation

Avionics evaluation program: Simulation models for the effectiveness analysis of avionics

Simulation for whole life development

A simulation support system, the development tool for avionic systems and subsystems

Fire control for air-to-air gunnery in high performance fighter aircraft

Simulation with integration for dynamic tests of the logical elements of principal onboard computers

Cruise-missile-carrier navigation requirements

Modeling the human operator: Applications to system cost effectiveness

Advanced FIREPLYS assessment generalized mechanization requirements report

Mechanization architecture for enhancement of avionics planning data base

A study of two avionics life cycle cost models and their applicability in the communications-electronics-meteorological environment

An operating and support cost model for avionics automatic test equipment --- f-16 aircraft

The vulnerability of commercial aircraft avionics to carbon fibers

A standardization evaluation potential study of the common multi-mode radar program

Solid state power controllers (ISM-2A)

Reliability measurement for operational avionics software

Suppression of electrostatic radioelectric interference on aircraft

Parametric study of helicopter aircraft systems costs and weights

SUBJECT INDEX

Integrated rack concept study for V/STOL type aircraft

A dynamic evaluation of the Integrated Avionics Control Systems (IACS)

Standard avionics packaging, mounting, and cooling baseline study

The development and test of a tactical self-contained landing system -- landing military helicopters when the safe corridor is unknown

Evolution and transition of today's military landing system to compatibility with present and future civil aircraft systems --- multirole receivers and the marine remote area approach

Digital Avionics Information System (DAIS):

Guidance and control software

Aerospace computer systems: Avionics applications. Citations from the RTLS data base

Nonoperating failure rates for avionics study

Feasibility study for integrated flight trajectory control fighter

Electro-magnetic compatibility --- the effect of interference on aircraft systems

Atmospheric Electricity-Aircraft Interaction

Protection of aircraft avionics from lightning indirect effects

Static charging effects on avionics systems

Alligation techniques for effects of static charging on avionics

Guidance and control software


Validation of the operating and support cost model for avionics automatic test equipment (OSCATE)

Static charging effects on avionics systems

Guidance and control software

Aerospace computer systems: Avionics applications. Citations from the RTLS data base

Nonoperating failure rates for avionics study

Feasibility study for integrated flight trajectory control fighter

Electro-magnetic compatibility --- the effect of interference on aircraft systems

Atmospheric Electricity-Aircraft Interaction

Protection of aircraft avionics from lightning indirect effects

Static charging effects on avionics systems

Guidance and control software

Aerospace computer systems: Avionics applications. Citations from the RTLS data base

Nonoperating failure rates for avionics study

Feasibility study for integrated flight trajectory control fighter

Electro-magnetic compatibility --- the effect of interference on aircraft systems

Atmospheric Electricity-Aircraft Interaction

Protection of aircraft avionics from lightning indirect effects

Static charging effects on avionics systems

Guidance and control software

Aerospace computer systems: Avionics applications. Citations from the RTLS data base

Nonoperating failure rates for avionics study

Feasibility study for integrated flight trajectory control fighter

Electro-magnetic compatibility --- the effect of interference on aircraft systems

Atmospheric Electricity-Aircraft Interaction

Protection of aircraft avionics from lightning indirect effects

Static charging effects on avionics systems
The aerodynamics of axial flow wind power turbines

Calculation method of the turbine stages with cylindrical blades

Calculation of axi-symmetrical flows in the flow section of turbomachines in solving the problem of optimization of stages

Experimental study of low aspect ratio compressors blading

Algorithms for calculating turbine cooling flow and the resulting decrease in turbine efficiency

Aerodynamics of advanced axial-flow turbomachinery

Numerical calculation of transonic axial turbomachinery flows

An experimental evaluation of the performance deficit of an aircraft engine starter turbine

High bypass turbofan component development.

The aerodynamics of contra-rotating axial flow wind power turbines

AXIAL LOADS

ST AXIAL COMPRESSION LOADS

AXIAL STRAIN

Axi-symmetrical dynamics of a sheet under large deformation conditions

Effects of axi-symmetrical contractions on turbulence of various scales

AXI-SYMMETRIC BODIES

Experimental study of confluence with separation on an afterbody of revolution

The design of axi-symmetrical cowls for splayed nozzles for high by-pass ratio turbofan engines

AXI-SYMMETRIC DEFORMATION

ST AXIAL STRAIN

AXI-SYMMETRIC FLOW

ST ANNUAL FLOW

Acoustic radiation from axi-symmetrical ducts - A comparison of theory and experiment

Evaluation of an analysis for axi-symmetrical internal flows in turbomachinery ducts

Calculation of axi-symmetrical flows in the flow section of turbomachines in solving the problem of optimization of stages

A theoretical study of the coherence of jet noise

Fan noise caused by the ingestion of anisotropic turbulence - A model based on axi-symmetrical turbulence theory

A multi-grid code for 3-D transonic potential flow about axi-symmetrical inlets at angle of attack

Potential flow past a wing profile with a trailing edge of finite thickness

Geometry of circulation zones downstream of fan bodies and gasdynamic screens of various forms and blockage ratios

On rotating stall in an axi-symmetrical gas ejector

Measurements and calculations of the isothermal flow in axi-symmetrical models of combustor geometries

AXIALS

U SRAFTS (MACHINE ELEMENTS)

A2F AIRCRAFT

U A-6 AIRCRAFT

B-1 AIRCRAFT

Achieving effective Radar Cross Section flight profiles on the B-1 aircraft

Review of five years of flight testing the B-1

Analyses and tests of the B-1 aircraft structural node control system

Application of random time domain analysis to dynamic flight measurements --- B-1 aircraft

Selected topics from the structural acoustics program for the B-1 aircraft

Solid state power controller verification studies

Review of five years of flight testing the B-1

B-52 AIRCRAFT

Identification of aerelastic parameters using a recursive sequential least squares method

Parameter identification of B-52 CCV flight test data including aeroelastic effects

Developing, mechanizing and testing of a digital active flutter suppression system for a modified B-52 wind-tunnel model

Model order reduction using the balanced state representation theory, application and interactive software implementation

B-70 AIRCRAFT

Wind-tunnel/flight correlation study of aerodynamic characteristics of a large flexible supercritical cruise airplane C9-70-1)

Wind-tunnel tests of a 0.03-scale model at Mach numbers from 0.6 to 2.53

Extrapolation of wind-tunnel data to full-scale conditions

Wind-tunnel/flight correlation study of aerodynamic characteristics of a large flexible supercritical cruise airplane (EB-701)

Comparison between characteristics predicted from wind-tunnel measurements and those measured in flight
Subject Index

- Effect of background levels on community responses to aircraft noise
- Correction procedures for aircraft noise data.
- Background noise levels
- Aircraft program for target background, and sky radiance measurements
- Aircraft for target background, and sky radiance measurements
- Background noise levels
- Balloons
- Emergency in-flight egress opening for general aviation aircraft -- pilot bailout
- A method of simplifying weight and balance for small aircraft
- Development of flexible rotor balancing criteria
- Operating characteristics of high-speed, jet-lubricated 35-millimeter-bore ball bearing with a single-outer-land-guided cage
- Ceramic in rolling element bearings
- Effect of cage design on characteristics of high-speed-jet-lubricated 35-millimeter-bore ball bearing -- turbojet engines
- Balloons
- Test and evaluation of graphite/epoxy composite structure
- The development of passive Doppler techniques in LBSL/ISL and their applications to ballistic and aerodynamic measurements
- Missile burst overpressure levels on the AB-15 helicopter low-altitude test unit
- Fire control for air-to-air gunnery in high performance fighter aircraft
- Technical options for flexible dirigibles
- The scientific balloon program of the Centre National d’Etudes Spatiales - Status and perspectives
- The scientific balloon program of the Centre National d’Etudes Spatiales - Status and perspectives
- A balloon-borne three axis stabilized platform for large astronomy experiments
- Analysis of thin-wall beams by the method of segments
- Fan noise reduction by single- and double-wall barriers -- for turbojet engine shielding
- Status of cavity noise phenomena measurement and suppression on the B-1 aircraft
- Aircraft collision avoidance - Perspectives on the utilization of an onboard system of detection and resolution of air-air conflicts
- Laser beam system for aircraft collision hazard determination
- Adaptive main-beam nulling for narrow-beam antenna arrays
- Measurement of stress distribution in sandwich beams under four-point bending
- Analysis of thin-wall beams by the method of segments
On thin-wall beam effective stiffness - p0019 880-10057
Two-dimensional finite-element analyses of simulated rotor-fragment impacts against rings and beams compared with experiments [NASA-CR-150645] - p0350 880-22323

BEARING (DIRECTION) Magnetic position and orientation tracking system - p0053 880-19450
BEARINGS
- FT ANTIFRICTION BEARINGS
- B BALL BEARINGS
- JOURNAL BEARINGS
- R ROLLER BEARINGS
- TRUST BEARINGS

Reliability improvement on aircraft engine bearing by discriminant analysis - p0271 880-30299
On the compliance of control surface support brackets -- aircraft structures - p0236 880-36795
Rolling of a loaded rotor around a rigid bearing - p0395 880-38669
Concerning the design of spherical bearings - p0511 880-45695
Design criteria for dry lubricated flight control bearings -- tests to assess design analysis and check equipment specifications
[AD-A071322] - p0031 880-10228
Application of rapidly solidified alloys -- aluminum alloy fan blades and iron alloy bearings
[AD-A083496] - p0485 880-26431
Stabilization of aerodynamically excited turbomachinery with hydrodynamic journal bearings and supports - p0558 880-29731

BEAT FREQUENCIES
Evaluation of the intensity of heat-induced vibrations - p0090 880-17965

BECH AIRCRAFT
D BECH AIRCRAFT
BECH AIRCRAFT

BEHAVIOR
MW HUMAN BEHAVIOR
BEH BEHAVIOR
US-1 HELICOPTER
IV-15 AIRCRAFT
P-59

BEHENTS
BEER TEA

BT ELASTIC BENDING Measurement of stress distribution in sandwich beams under four-point bending - p0192 880-25498

BENDING Moment flapping with minimum energy -- simulate the drag for a bending moment at the wing root [NASA-TM-81774] - p0167 880-16035
Comparison of calculated and measured blade loads on a full-scale tilting protector in a wind tunnel [NASA-TM-81228] - p0622 880-31386

BENDING THEORY
Transverse bending of elastically rim-stiffened three-layer cantilever plates of variable layer thickness - p0262 880-29212
Transverse bending of cantilevered three-layer plates with layers of variable thickness stiffened along the contours by elastic diaphragms - p0581 880-50467

BENDING VIBRATION
Theoretical and experimental parameter-studies of oscillating turbine blades in a centrifugal force field - p0392 880-38359
Flerural torsional vibrations of a wing - p0525 880-46851

BEING SEA
Determining sea-ice boundaries and ice roughness using GECOS altimeter data [NASA-CR-155682] - p0357 880-22759

BIBLIOGRAPHIES
Hydrogen as a fuel. Citations from the international aerospace abstracts data base [FTIS/PS-79/0771/1] - p0019 880-13937
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(bibliography), 1979 - p0125 880-16561

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Technological forecasting-aircraft design.
Citations from the International Aerospace... - p0170 880-16057


Fiscal year 1977 scientific and technical reports, articles, papers and presentations [NASA-TH-78250] - p0174 880-17014

Seals and gaskets. A bibliography with abstracts [PB80-802010] - p0230 880-18417
Publications in acoustic and noise control from NASA Langley Research Center during 1980-1979
--- bibliography [NASA-TH-80211] - p0231 880-18884


Military aircraft and similar technology at the Langley Research Center: A selected bibliography [NASA-TH-80204] - p0232 880-19024


Aircraft wake vortices. Citations from the NTIS data base [PB80-805666] - p0431 880-25303

Aircraft sonic boom: Effects on buildings. Citations from the NTIS data base [PB80-806334] - p0431 880-25304

Gas and steam turbines, general: Corrosion and erosion. Citations from the engineering index data base [PB80-806672] - p0435 880-25363


Holographic flow visualization: Citations from the NTIS data base [PB80-808199] - p0501 880-27681

Aerospace computer systems: Avionics applications. Citations from the NTIS data base [PB80-810179] - p0540 880-29065
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPP system concept based on time synchronisation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BIBLIOGRAPHY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air traffic congestion and capacity</td>
</tr>
<tr>
<td>Inertial navigation and guidance</td>
</tr>
<tr>
<td>Omega navigation system</td>
</tr>
<tr>
<td>Hydrogen use as a fuel</td>
</tr>
<tr>
<td>A compilation of computer software programs available in the Flight Dynamics Laboratory, 1979</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>BIBLIOGRAPHY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen use as a fuel</td>
</tr>
<tr>
<td>The von Benmann paradox</td>
</tr>
<tr>
<td>Blow-down and sled-run simulation of transonic flow regimes</td>
</tr>
<tr>
<td>Some measurements of gun blast on a lightning aircraft</td>
</tr>
<tr>
<td>Forward acoustic performance of a shock-swallowing high-tip-speed fan (QT-13)</td>
</tr>
<tr>
<td>Blade load</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BIBLIOGRAPHY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of tip planform on blade loading</td>
</tr>
<tr>
<td>Laser-optical blade tip clearance measurements system</td>
</tr>
<tr>
<td>Experimental study of the aerodynamics of a helicopter rotor blade model in an unsteady flow regime during wind tunnel tests</td>
</tr>
<tr>
<td>Study of blade aspect ratio on a compressor front stage</td>
</tr>
<tr>
<td>BLADE LOADS</td>
</tr>
<tr>
<td>Some measurements of gun blast on a lightning aircraft</td>
</tr>
<tr>
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</tr>
<tr>
<td>Noise generation by jet-engine exhaust deflection</td>
</tr>
<tr>
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<tr>
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<td>Study of blade aspect ratio on a compressor front stage</td>
</tr>
<tr>
<td>SUBJECT INDEX</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>Geometry of circulation zones downstream of bluff bodies and quadratic cross-sections of various forms and blockage ratios</td>
</tr>
<tr>
<td>Stability derivatives of blunt slender cones at high Mach numbers</td>
</tr>
<tr>
<td>Influence of the angle of attack on the thermal flux at the stagnation point at supersonic speeds</td>
</tr>
<tr>
<td>Complete viscous flowfield solutions about a blunt parabolic body in a supersonic stream</td>
</tr>
<tr>
<td>Real-gas effects on the aerodynamics of blunt cones as measured in a hypervelocity range</td>
</tr>
<tr>
<td>The normal force on a cruciform missile at bank</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BODY-WING CONFIGURATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental check of a direct method for optimizing the aerodynamic shape of bodies in supersonic flows</td>
</tr>
<tr>
<td>Development of a vortex-lift-design method and application to a slender maneuver-wing configuration</td>
</tr>
<tr>
<td>Effects of non-planar strake-wing on the vortex lift characteristics of a twin-jet fighter configuration</td>
</tr>
<tr>
<td>Euler solutions for wing and wing-body combination at supersonic speeds with leading-edge separation</td>
</tr>
<tr>
<td>Calculation of the supersonic flow past a winged bielliptical body</td>
</tr>
<tr>
<td>Computational transonic analysis for a supercritical transport wing-body configuration</td>
</tr>
<tr>
<td>Effects of forebody, wing and wing-body-LEX flowfields on high angle of attack aerodynamics</td>
</tr>
<tr>
<td>Leading-edge extensions</td>
</tr>
<tr>
<td>Analysis of the nonuniqueness of solutions to the problem of flow separation for small-aspect delta wings</td>
</tr>
<tr>
<td>A velocity potential panel method for the prediction of unsteady airloads on oscillating wings and bodies</td>
</tr>
<tr>
<td>Measurement of shock waves around a delta-wing semicircle</td>
</tr>
<tr>
<td>Wing-body pitch damping at arbitrary Mach number</td>
</tr>
<tr>
<td>Full-scale wind-tunnel investigation of the effects of wing leading-edge modifications on the high angle-of-attack aerodynamic characteristics of a low-wing general aviation airplane</td>
</tr>
<tr>
<td>An analysis of thrust-induced effects on the longitudinal aerodynamics of STOL fighter configurations</td>
</tr>
<tr>
<td>Grid generation and transonic flow calculations for three-dimensional configurations</td>
</tr>
<tr>
<td>Aerodynamic characteristics of configurations consisting of half-cones and flat delta wings</td>
</tr>
<tr>
<td>Wing-body yawing moment and sideforce derivatives due to sideslip: Nw and Nv</td>
</tr>
<tr>
<td>Investigation of the boundary condition at a wind tunnel test section wall for a lifting wing-body side at low supersonic speed</td>
</tr>
</tbody>
</table>
cross coupling derivatives on fighter/ bomber aircraft
[AD-A0794271] p0294 N00-20283
Feasibility study E-1 power controller
[AD-A0846146] p0555 N00-29371
Aerodynamic design of an extended-range guided bomb
[10G-C3719] p0070 N00-13023

BOOS

BT ADHESIVE BONDING
BT METAL BONDING
BT METAL-METAL BONDING

BOOS (EQUIPMENT)
Reduction of aerodynamic drag of external spray booms and nozzles used on DC-6 aircraft
p0327 A00-34596
Generation of a representative load sequence for the fatigue testing of Macchi NB 3268 spar boom
[AD-A074155] p0346 N00-22309
Conceptual design of a helicopter composite truss tail boom
[AD-A085132] p0532 N00-28342

BOOZ

A study of the prediction of cruise noise and laminar flow control noise criteria for subsonic air transports
[RASA-CR-159108] p0075 N00-12818
Near-field noise prediction for aircraft in cruising flight: Methods manual --- laminar flow control noise effects analysis
[RASA-CR-159105] p0075 N00-12819
Control of forebody three-dimensional flow separations
p0141 N00-15164
Boundary layer control by means of suction
[RASA-TE-75502] p0219 N00-17987
Experimental investigation of a circulation control aileron
[AD-A078825] p0233 N00-15046
Alliation of the side force and the yawing moment acting on a slender cone-cylinder body at high angles of attack, using small jet injection at subsonic and transonic speeds
[AD-A080317] p0303 N00-21289
Stability analysis for laminar flow control, part 2 --- laminar flow wings
[RASA-CR-3299] p0311 N00-21703
Development of the A-6/circulation control wing flight demonstrator configuration
[AD-A081214] p0355 N00-22365
Static and transient performance of TF-102 engine with up to 14 percent core bleed for the quiet short-haul research aircraft
[RASA-TF-1692] p0435 N00-25339
Design studies of Laminar Flow Control (LFC) wing concepts using superplastics forming and diffusion bonding (SFP/DB)
[RASA-CR-159220] p0479 N00-26293
Feasibility study of applying laminar flow control to an LTA vehicle
[AD-A081406] p0629 N00-32351
Evaluation of laminar flow control system concepts for subsonic commercial transport aircraft
[RASA-CR-159253] p0664 N00-33394

BOUNDARY LAYER SEPARATION
Solution of boundary layer equations with the aid of series --- for supersonic gas flow
p0376 N00-36791
Calculation of the turbulent boundary layer on an infinite swept wing using a three-dimensional mixing length model
[ESA-77-534] p0346 N00-22273

BOUNDARY LAYER FLOW

BT FREE-BOUNDARY
BT BRACKETED FLOW
BT SEPARATED FLOW
BT BOUNDARY LAYER SEPARATION

BOUNTARY LAYER CONTROL
Enhanced departure/spin recovery of fighter aircraft through control of the forebody vortex orientation
[AIAA PAPER 80-0173] p0094 A00-18352
Research programs in general aviation - Next generation aircraft
p0171 N00-18064
Reinforced plastics: Boron, carbon, and other reinforcing materials, volume 3. Citations from the NTIS data base --- polymer matrices
p0437 N00-25452

BOUNTARY LAYER SEPARATION
Determination of the intensity factor of composite structural members
p0090 A00-17958
Composite components on commercial aircraft
p0205 A00-27597
Determining stress intensity factors in composite structural elements
p0382 A00-37289
Effect of service environment on P-15 boron/epoxy stabilator
[AD-A076493] p0178 N00-17064
Reinforced plastics: Boron, carbon, and other reinforcing materials, volume 3. Citations from the NTIS data base --- polymer matrices
p0980-004750
p0437 N00-25452

BOUNTARY LAYER SEPARATION
Advanced composite material applications to P-14A structure
p0148 A00-21129
Wind tunnel design and performance for rough wall turbulent boundary layer
p0148 A00-21232

BOUNDARY LAYER SEPARATION
Determination of the profile losses on the turbine cascade blades
p0156 A00-29130
Investigations on vortex frequencies in wakes of cascade blades
p0261 A00-29136
Asymptotic integration of multicomponent chemical-inequilibrium boundary layer equations --- hypersonic gas flow analysis
p0386 A00-37552
Calculation of transonic viscous flows past wing profiles
p0445 A00-40909
The status of the theoretical methods for calculation of detached flows
BOUNDARY LAYER NOISE

Calculation of the flow in a supersonic air intake using allowance for the boundary layer on the fairings p0467 A80-42924
Theoretical method for the analysis of airfoils in viscous flows p0525 A80-46847
Allowance for unsteady boundary layer effects in two-dimensional transonic calculations [OHEPA, TP NO. 1960-109] p0623 A80-53294
Bypass compressible 3-dimensional boundary-layer flow near an asymmetric stagnation point with mass transfer p0625 A80-53582
Investigation of the boundary condition at a wind tunnel test section wall for a lifting wing-body model at low supersonic speed [AD-A072098] p0625 A80-10143
Measurements on a three-dimensional swept wing at low speeds. Part 1: The flow around the leading edge [FFA-130-P7-1] p0636 B80-11044
Measurements on a three-dimensional swept wing at low speeds. Part 2: The flow in the boundary layer on the main wing [FFA-131-P7-1] p0636 B80-11045
The aerodynamic forces on airship hulls [USAC-184] p0126 B80-15039
Boundary layer and wake modifications in compressor design systems: The effect of blade-to-blade flow variations on the mean flow field of a transonic rotor [AD-A076208] p0180 B80-17075
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Investigation of the boundary layer behavior on turbine airfoils [AD-A0759501] p0225 B80-18044
An integral method and its application to some three-dimensional boundary-layer flow problems [NSEC/79-79-139] p0312 B80-21705
A computer program to generate two-dimensional grids about airfoils and other shapes by the use of Poisson’s equation [NASA-TP-81198] p0477 B80-12046
Boundary layer measurements on a two-dimensional wing with flap and a comparison with calculations [FFA-075501] p0501 B80-27665
A computer program for the design and analysis of low-speed airfoils [NASA-TP-80210] p0541 B80-29254
Aerothermal analysis of a wing-elevator cowl with variable leading edge [NASA-TP-1703] p0638 B80-32692
BOUNDARY LAYER NOISE
U AERODYNAMIC LINES U BOUNDARY LAYERS U BOUNDARY LAYER SEPARATION
A numerical approach to subsonic viscous-inviscid interaction p0099 A80-19070
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An experimental and numerical investigation of a three-dimensional shock wave separated turbulent boundary layer [USAC-PAPER 80-1375] p0156 A80-22727
The Mitsubishi Diamond I - What are its chances on the current market p0157 A80-22984
A directionally sensitive hot-wire probe for detection of flow reversal in highly unsteady flows p0264 A80-29492
Design of flat plate leading edges to avoid flow separation p0272 A80-30571
Reflex cambered delta wings with leading edge separation p0285 A80-32527
Test study of the vortex regime of highly sweptback wings by extrapolation of the Jones method

SUBJECT INDEX

Separation pressure of a turbulent boundary layer at low Reynolds numbers [AIAA PAPER 80-1440] p0453 A80-81622
The effect of finite turbulence spatial scale on the amplification of turbulence by a contracting stream [AIAA PAPEB 80-1440] p0453 A80-41622
Three-dimensional interactions and vortical flows with emphasis on high speeds [NASA-TH-81169] p0302 B80-21286
La Recherche Aerospatiale Bi-monthly Bulletin number 1974-3 [HASA-TP-509] p0316 B80-22239
Explanatory study of a laminar-turbulent transition process close to laminar boundary layer separation p0316 B80-22246
Simple turbulence models and their application to boundary layer separation [NASA-CS-3283] p0414 B80-24629
A qualitative discussion of dynamic stall p0463 B80-33366
BOUNDARY LAYER STABILITY
A study of nonadiabatic boundary-layer stabilization times in a cryogenic tunnel for typical wing and fuselage models [AIAA 80-0417] p0198 B80-26932
Comparison of methods for prediction of transition by stability analysis [AIAA PAPER 80-1375] p0452 A80-81588
Verification of the experimentally determined laminar-turbulent transition on a swept wing p0667 B80-12046
Theoretical study of nonadiabatic boundary-layer stabilization times in a cryogenic wind tunnel for typical stainless steel wing and fuselage models [NASA-TH-80212] p0490 B80-25646
BOUNDARY LAYER TRANSITION
Transition in the infinite swept attachment line boundary layer p0048 A80-13573
Laminar separation bubble with transition /theory and experiment/ [OHEPA, TP NO. 1980-20] p0204 B80-27203
Comparison of methods for prediction of transition by stability analysis [AIAA PAPER 80-1375] p0452 A80-81588
Experimental studies of the laminar separation bubble on a two-dimensional airfoil at low Reynolds numbers [AIAA PAPER 80-1440] p0453 A80-81622
Boundary layer studies on highly loaded cascades using heated thin films and a traversing probe [ASME PAPER 80-GT-137] p0462 B80-42250
Investigation of the boundary layer behavior on turbine airfoils [AD-A075501] p0477 B80-12286
Detection of the transitional layer between laminar and turbulent flow areas on a wing surface using an accelerometer to measure pressure levels during wind tunnel tests [NASA-CASE-LAR-12261-1] p0287 B80-20224
Exploratory study of a laminar-turbulent transition process close to laminar boundary layer separation p0316 B80-22246
Aerodynamic characteristics of moving trailing-edge controls at subsonic and transonic speeds [EAA-PAPER 80-947] p0347 B80-22281
BOUNDARY LAYERS
MT ATMOSPHERIC BOUNDARY LAYER MT COMRESSIBLE BOUNDARY LAYER MT HYPERSOUND BOUNDARY LAYER
The effects of motion and g-seat cues on pilot Lockheed-Georgia's projects for the 1980s

On some properties of the bypass turbojet engine

The KC-135 - A successful multirole transport

Evolution of transport wings from C-130, C-141, Quiet powered-lift propulsion

HASA overview

The triple IBS bonus - C-5 aircraft conversion

Dynamic response of a Bach 2.5 axisymmetric inlet

Study of the antenal influence of combined powerplant air passage inlet channels

Influence of the thermal expansion of the gas on the rate of propagation of the flame front in a pulsating-type combustion chamber

Investigation of critical burning of fuel droplets

Both/blast tests of miscellaneous graphite composite parts

Soot formation and burnout in flames

Flat bun fault sensors

Butterfly Valves (Valves)

Aerodynamic investigations of a bypass turbofan stage

On some properties of the bypass turbojet engine

Study of the mutual influence of combined powerplant air passage inlet channels

Dynamic response of a Mach 2.5 axisymmetric inlet and turbojet engine with a poppet-value controlled inlet stability bypass system when subjected to internal and external airflow transients

High bypass turbofan component development. Amendment 1: Small fan redesign

Chilled recirculation ECS for aircraft

Measurements of cabin and ambient ozone on B747 airplanes

Ozone measurements in cabin air of Concorde

Reduced bleed air extraction for DC-10 cabin air conditioning

The cabin air conditioning and temperature control systems for the Boeing 767 and 757 airplanes

Fluid contamination of aircraft-cabin air and breathing oxygen

Recent developments in flight simulation techniques

Investigation of helicopter wire strike protection concepts

CABIN ATMOSPHERES

CABINS

C-5 AIRCRAFT

Evolution of transport wings from C-130, C-141, C-5 to C-X

The triple IBS bonus - C-5 aircraft conversion to inertial navigation

C-15 AIRCRAFT

Quiet powered-lift propulsion

C-130 AIRCRAFT

Lockheed-Georgia's projects for the 1980s

Evolution of transport wings from C-130, C-141, C-5 to C-X

C-135 AIRCRAFT

The KC-135 - A successful multirole transport aircraft

The effects of motion and g-seat cues on pilot simulator performance of three piloting tasks
Determination of the repeatability of PEC ---
[ADP-P-81-79/36] p0110 80-18109
flight tests for position error calibrating
[AYEP-P-81-79/36] p0110 80-18109
P-104 low-gravity calibration tests for materials
processing in space precursory experiments
[NASA-TN-81278] p0036 80-25355
Ground wind vortex sensing system calibration tests
[AD-A065647] p0042 80-29259
Loads calibrations of strain gage bridges on the
NASA project Aerelastic Research Wing (ABR-1)
[NASA-TN-81889] p0665 80-33393
CALORIMETERS
V ISUAL MEASUREMENT
Airplane wing leading edge variable camber flap
p0369 80-23514
CAMBERED WINGS
Conically cambered delta wings in supersonic flow.
I - Basic solutions
p0285 80-32526
Reuler cambered delta wings with leading edge
separation
p0285 80-32527
Conically cambered delta wings in supersonic flow.
II - Optimal solutions
p0286 80-32531
Variable camber airfoils
p0453 80-41780
Controlled supercritical crossflow on supersonic
wings - An experimental validation
[AAIA PAPER 80-1621] p0507 80-44158
Conical linear theory/impact theory method for
analysis and design of high speed configurations
[NASA-CR-3314] p0567 80-30273
CARBON FIBER REINFORCED PLASTICS
CARBON FIBER COMPOSITES
U WINGS
Carbon and graphite, Part 2. Carbon and graphite
composites - excluding carbon fiber composites.
A bibliography with abstracts
[PB80-802374] p0227 80-18144
Reinforced plastics: Boron, carbon, and other
reinforcing materials, volume 3. Citations from
the NTIS data base --- polymer matrices
[PB80-801750] p0237 80-25452
Carbon slurry fuels for volume limited missiles
[AD-A087427] p0608 80-31734
CAPACITORS
Capacitors for aircraft high power
[AD-A087427] p0608 80-31734
CAPILLARY WAVES
Dynamic behavior of a bean drag-force anemometer
[AD-A071319] p0028 80-10200
CAPTIVE TESTS
A study of the canopy design for the advanced
attack helicopter by use of computer graphics
[AD-A078291] p0236 80-19069
The verification of a computer model of internal
light reflections for helicopter canopy design
[AD-A080473] p0358 80-23142
CAPTIVE PLATES
Application of the variational-difference method
of straight lines to the calculation of wing
middle surface deformation
p0189 80-21276
Transverse bending of elastically rim-stiffened
three-layer cantilever plates of variable layer
thickness
p0262 80-29212
Transverse bending of cantilevered three-layer
plates with layers of variable thickness
stiffened along the contours by elastic diaphragms
p0581 80-50467
CAPTIVE PLATES
U WINGS
Carbon and graphite. Part 2. Carbon and graphite
composites - excluding carbon fiber composites.
A bibliography with abstracts
[PB80-802374] p0227 80-18144
Reinforced plastics: Boron, carbon, and other
reinforcing materials, volume 3. Citations from
the NTIS data base --- polymer matrices
[PB80-801750] p0237 80-25452
Carbon slurry fuels for volume limited missiles
[AD-A087427] p0608 80-31734
An investigation of possible electrical hazards of carbon fiber composites

Carbon fiber counting --- aircraft structures

Statistical aspects of carbon fiber risk assessment modeling --- fire accidents involving aircraft

Carbon/graphite composite material study --- risk and hazards of fiber release

A carbon fiber exposure test facility and instrumentation

Large-scale fiber release and equipment exposure installations

Perspective on the results

Carbon/graphite fiber risk analysis and assessment study: Assessment of the risk to Douglas commercial transport aircraft

Carbon/graphite fiber risk analysis and assessment study: Assessment of the risk to Douglas commercial transport aircraft

Laboratory and analytical studies for the NASA carbon fiber risk assessment

Electronic equipment vulnerability to fire released carbon fibers

Carbon fiber plane sampling for large scale fire tests at Dagway Proving Ground --- fiber release during aircraft fires

Process modifications for improved carbon fiber composites: Alleviation of the electrical hazards problem

Carbon monoxide: Circumpolar measurements of ozone, particles, and carbon monoxide from a commercial airliner

Indoor and outdoor carbon monoxide measurements at an airport

Carbon steel: Manufacture of low carbon astrology turbine disk shapes by hot isostatic pressing. Volume 2, project 1

Gladstone-Dale constant for CF4 experimental study and analysis of fiber counting methods

Advanced concept in aircraft crash firefighting

Carbon graphite composite material study --- risk and hazards of fiber release

Carbon fiber composites: Alleviation of the electrical hazards problem

Carbon and graphite. Part 1: Carbon and graphite fibers and fiber composites, volume 4, A bibliography with abstracts

Data reduction and analysis of graphite fiber release experiments

Assessment of the risk to the Lockheed L-1011 commercial transport aircraft

Assessment of the risk due to the use of carbon fiber composites in commercial and general aviation

Perspective on the results

The vulnerability of commercial aircraft avionics to carbon fibers

Evaluation of micron size carbon fibers released from burning graphite composites

High voltage spark carbon fiber detection system

An assessment of the risk arising from electrical effects associated with the release of carbon fibers from general aviation aircraft fires

An assessment of the risk arising from electrical effects associated with carbon fibers released from commercial aircraft fires

Advanced risk assessment of the effects of graphite fibers on electronic and electric equipment

An assessment of power system vulnerability to release of carbon fibers during commercial aviation accidents

Carbon fiber plume sampling for large scale fire experiments aircraft fires

CFB technology at Dornier

An investigation into the feasibility of producing aircraft structural components using wet lay-up of carbon fibre fabric

Composite components under impact load and effects of defects on the loading capacity --- Alpha Jet tail assembly

Holographic interferometry of carbon fiber reinforced plastic wingtips

Burn/blast tests of miscellaneous graphite composite parts

The potential for damage from the accidental release of conductive carbon fibers from aircraft composites

Current and projected use of carbon composites in United States aircraft

The transfer of carbon fibers through a commercial aircraft water separator and air cleaner

The potential for damage from the accidental release of conductive carbon fibers from burning composites

Carbon and graphite. Part 1: Carbon and graphite fibers and fiber composites, volume 4, A bibliography with abstracts

Carbon and graphite. Part 1: Carbon and graphite fibers and fiber composites, volume 4, A bibliography with abstracts

Carbon and graphite. Part 1: Carbon and graphite fibers and fiber composites, volume 4, A bibliography with abstracts

Carbon and graphite. Part 1: Carbon and graphite fibers and fiber composites, volume 4, A bibliography with abstracts

Data reduction and analysis of graphite fiber release experiments

Assessment of Carbon Fiber Electrical Effects

Approach to the assessment of the hazards --- fire released carbon fiber electrical effects

Release of carbon fibers from burning composites

Dissemination, resuspension, and filtration of carbon fibers --- aircraft fires

Evaluation of equipment vulnerability and potential shock hazards --- carbon fibers

Large-scale fiber release and equipment exposure experiments --- aircraft fires

Surveys of facilities for the potential effects from the fallout of airborne graphite fibers

Assessment of the risk due to release of carbon fiber in civil aircraft accidents, phase 2

Assessment of risk due to the use of carbon fiber composites in commercial and general aviation

Perspective on the results

The vulnerability of commercial aircraft avionics to carbon fibers

Evaluation of micron size carbon fibers released from burning graphite composites

High voltage spark carbon fiber detection system

An assessment of the risk arising from electrical effects associated with the release of carbon fibers from general aviation aircraft fires

An assessment of the risk arising from electrical effects associated with carbon fibers released from commercial aircraft fires

Advanced risk assessment of the effects of graphite fibers on electronic and electric equipment

An assessment of power system vulnerability to release of carbon fibers during commercial aviation accidents
CERAMICS IN ROLLING ELEMENT BEARINGS
p0553 880-29350

THE FABRICATION AND PROPERTIES OF HIP SILICON CARBIDE IN RELATION TO GAS TURBINE COMPONENTS
p0553 880-29351

DEVELOPMENT OF CERAMIC NOZZLE SECTION FOR SMALL RADIAL GAS TURBINE
p0553 880-29352

SOME EXPERIENCE IN THE DESIGN AND EVALUATION OF CERAMIC COSMOBUB CHAMBERS
p0554 880-29354

HIP SILICON NITRIDE
p0554 880-29360

CERTIFICATION
FLIGHT CERTIFICATION OF THE CESSNA TU206G AMPHIBIOUS FLOATPLANE
p0091 880-18166

NEW MATERIALS AND HELICOPTER CERTIFICATION
[AAAP PAPER 88 79-26] p0379 880-36861

CERTIFICATION --- OF AIRCRAFT
p0087 880-39577

SAFETY ANALYSES IN CERTIFICATION -- THE PRAGMATIC APPROACH AND THE RATIONAL APPROACH
p0087 880-39578

TECHNICAL GUIDANCE FOR CERTIFICATION
p0087 880-39579

CERTIFICATION TEST PROCEDURES FOR AIRCRAFT APPROACH CONTROL, AR/909-41, REVISION
[AD-A004805] p0531 880-28332

CESSNA AIRCRAFT
U T-37 AIRCRAFT
FLIGHT CERTIFICATION OF THE CESSNA TU206G AMPHIBIOUS FLOATPLANE
p0091 880-18166

FULL SCALE VISUALIZATION OF THE WING TIP VORTICES GENERATED BY A TYPICAL AGRICULTURAL AIRCRAFT

AIRCRAFT ACCIDENT REPORT: THOMAS L. HAMMON, CESSNA CITATION 501, N15MT, NEAR CANTON, OHIO, AUGUST 2, 1979
[NTSB-88040-2] p0415 880-24279

CESSNA MILITARY AIRCRAFT
U MILITARY AIRCRAFT

CEMENT
AUTOIGNITION CHARACTERISTICS OF AIRCRAFT-TYPE FUELS

CF-104 AIRCRAFT
U CANADIAN AIRCRAFT
U F-104 AIRCRAFT

CFRD
U CARBON FIBER REINFORCED PLASTICS

CH-53 HELICOPTER
U H-53 HELICOPTER

CH-113 HELICOPTER
U CH-46 HELICOPTER

CH-46 HELICOPTER
CH-46 COMPOSITE ROTOR BLADE FLIGHT STRESS SURVEY DATA. VOLUME 3: PLOTTED FOWARD ROTOR BLADE CHORD, TORSION AND ABSOLUTE LOADS
[AD-A075612] p0130 880-15077

CH-47 AIRCRAFT
SIMILAR VALUES AND FEEDBACK - DESIGN EXAMPLES --- FOR CH-47 HELICOPTER
p0015 880-12716

TRAINING EFFECTIVENESS OF THE CH-47 FLIGHT SIMULATORS
[AD-A072317] p0021 880-10236

STUDY FOR INCORPORATING TIME-SYNCHRONIZED APPROACH CONTROL INTO THE CH-47/VALT DIGITAL NAVIGATION SYSTEM
[NASA-CR-159515] p0037 880-11058

DIGITAL ADAPTIVE CONTROLLERS FOR VERTICAL-OFFSET VEHICLES

COMPARISON OF ANALYTICAL AND FLIGHT TEST IDENTIFIED AERODYNAMIC DERIVATIVES FOR A TANDEM-ROTOR TRANSPORT HELICOPTER
[NASA-TP-1581] p0177 880-17060

ARTIFICIAL ICING TEST CH-47C HELICOPTER WITH FIBERGLASS ROTOR BLADES
[AD-A081660] p0419 880-24305

VISUAL PROBLEM AND NIGHT LANDING GUIDANCE OF THE CH-47 (CHINOOK) HELICOPTER
[AR/ST/NT-SF-50] p0432 880-25312

DESIGN AND ANALYSIS OF CH-47 EXTERNAL CARGO HANDLING SYSTEM (COMBINED LOAD)
[AD-A080057] p0634 880-32384

CH-54 HELICOPTER
ANALYSIS OF FAULT ISOLATION CRITERIA/TECHNIQUES
p0409 880-40305

ANALYSIS OF HELICOPTER MAINTENANCE FAULT ISOLATION CRITERIA/TECHNIQUES
[AD-A080596] p0345 880-22257

CHAINS
U SEATS

CHACODYRITES
U ALUMINUM OXIDES
U CARBON MONOXIDE
U HYDROGEN PEROXIDE
U NITRIC OXIDE
U NITROGEN OXIDES
U SICERIUM OXIDES

CHANCE-VOUGHT MILITARY AIRCRAFT
U MILITARY AIRCRAFT

CHANNEL FLOW
SEPARATION DUE TO SHOCK-WAVE-TURBULENT BOUNDARY LAYER INTERACTION
[OMEHA, TP NO. 1979-146] p0102 880-20003

PRESSURE LOSSES IN THE INLET AND OUTLET CHANNELS OF HIGH-PRESSURE SINGLE- AND TWO-STAGE AXIAL-FLOW FANS
p0261 880-29133

STUDY OF THE MUTUAL INFLUENCE OF COMBINED POWERPLANT AIR PASSAGE INLET CHANNELS
p0616 880-51900

REVERSE PSEUDO-UNSTEADY AERODYNAMIC CALCULATION METHODS
p0652 880-33616

CHANNELS (DATA TRANSMISSION)
SELF-ORGANIZING BUS CONTROL -- ON AVIONIC NODES AND INTERFACES
p0280 880-32419

AVIONIC SYSTEM ARCHITECTURE INVESTIGATION (AVSAB II)
[AD-A071743] p0040 880-11080

AN AIR TRAFFIC CHANNEL SIMULATION BY MEANS OF RAY-TRACING TECHNIQUES
p0117 880-14088

L-BAND MEASUREMENTS IN THE AIR TRAFFIC CHANNEL TO CHARACTERIZE SECONDARY RADAR SYSTEMS
p0117 880-14092

CHAOTIC CLOUD PATTERNS
U CLOUDS (METEOROLOGY)

CHAPMAN SHEAR LAYER
U SHEAR LAYER

CHAPMAN-JOUGT PLAN
U DETONATION
U PLASMA PROPAGATION

CHARACTERISTIC EQUATIONS
U EIGENVALUES
U EIGENVECTORS

CHARACTERISTIC FUNCTIONS
U EIGENVALUES
U EIGENVECTORS

CHARACTERISTIC METHOD
U METHOD OF CHARACTERISTICS

CHARACTERIZATION
ANALYTIC REPRESENTATION OF TURBINE CHARACTERISTICS IN FORM CONVENIENT FOR COMPUTER CALCULATION OF GT5 PARAMETERS
p0017 880-10024

CHARACTERS
U SYMBOLS

CHANGE COUPLED DEVICES
A HELMET-MOUNTED SIGHT USING C.C.D. TECHNOLOGY
p0005 880-10880

A SOLID STATE/C.C.D. COCKPIT TELEVISION SYSTEM
p0324 880-36190

CHANGE TRANSFER DEVICES
U CHANGE COUPLED DEVICES

CHARGED PARTICLES
U THERMAL PLASMAS
U THERMAL PLASMAS

FOG DISPERSION -- CHARGED PARTICLE TECHNIQUE

CHARGE GAGING
FLIGHT TESTS FOR THE STUDY OF RADIOELECTRIC PERTURBATIONS OF ELECTROSTATIC ORIGIN
[OMEHA, TP NO. 1980-58] p0408 880-40819

CHARTS
U METEOROLOGICAL CHARTS

CHECKPOINT
CHECKING OF COMMUNICATIONS AND RADIO NAVIGATION SYSTEMS

AIRCRAFT STATIC CHARGING TESTING
p0597 880-31340

AIRCRAFT STATIC CHARGING TESTING
p0610 880-31757

A-104
CIVIL AVIATION

CIVIL ATUTIOI
CIBCOLATIOI COBTBOl AIBFOILS
CIBCOLATIOB
CIBCOLATIOB COBTBOL BOtOBS
CIBCOUB POL1BIZATIOB
CIBCOUB PLATES
CTBCOLAB CTLIHDBHS
CISCHITS
BT SBITCBING CIBCOITS
BT FOHEB SDPPLI CIBCOITS
BT HICEOIiVE CIBCDITS
BT BATBICES (CIBCOITS)
BT LOGIC CIECOITS
HI GATES (CIECDITS)
BT ECHO SDPPBESSOES

Airport ground traffic services in the Vest Geraan
Slider accidents in Prance in the last ten years
The role of technology as air transportation faces
Safety in aviation; achievements and targets
Badio and optical flight support systeas and
Operation of airborne egnipaent and flight safety
Lov speed aerodynanic characteristics of sings of
and blockage ratios
Geoaetry of circulation zones downstream of bluff
Maintenance of aircraft, helicopters, and aircraft
Electronic instrumentation in civil aviation
Advanced circulation control wing systea for Bavy
A broadband, circularly polarized, phase steered
On viags of circular design
Soie intodnctory concepts based on the unsteady
flow about circular cylinders
CIRCULAR PLATES
On wings of circular design
CIRCULAR POLARIZATION
A broadband, circularly polarized, phase steered
array
CIRCULAR TUBES
Windtunnel tests of a tubular supersonic inlet for
CIRCULATION
Geometry of circulation zones downstream of bluff
bodies and gasdynaaic screens of various forms
and blockage ratio
Experimental investigation of a circulation
control aileron
CIRCULATION CONTROL AIRFOILS
Advanced circulation control wing system for Navy
STOL aircraft
Low speed aerodynamic characteristics of wings of
aspect ratios 3 and 4 equipped with high lift
systems
Development of high lift devices for application
to advanced Navy aircraft
CIRCULATION CONTROL ROTORS
A hybrid composite helicopter main rotor blade
employing pneumatic lift control
CIVIL AVIATION
Electronic instrumentation in civil aviation
The market for large civil helicopters
Operation of airborne equipaest and flight safety
--- Russian book
Radio and optical flight support systems and
communications in civil aviation --- Russian book
The role of technology as air transportation faces
the fuel situation
Glider accidents in France in the last ten years
Maintenance of aircraft, helicopters, and aircraft
engines /2nd revised and enlarged edition/ ---
Russian book
Airport ground traffic services in the West German
Republic and the US open-air policy - Critical
remarks concerning Article 9 of the
supplementary agreement of Nov. 1, 1978 to the
German-American Air Traffic Agreement of 1955
Safety in aviation; achievements and targets
AEROPP - Mensage and data switching systems for
aeroonastical operations
LONGITUDINAL STABILITY AND CONTROL IN WIND SHEAR

With energy height rate feedback

[ASME-TH-81082] p0649 880-33416

COILS

ATOMIC CLOCKS

CLOSED LOOP SYSTEMS

U FEEDBACK CONTROL

CLOTHES

U FABRICS

CLOTHING

CLIMATE

CLOTHING INDUSTRIES

A microprocessor controlled system for determining the height of clouds

p0324 880-34188

CLOUD PHYSICS

Meteorological instrumentation system on the T-28 thunderstorm research aircraft

p0588 880-50686

Icing nozzle element optimization test, January 1979

[AD-591175] p0417 880-25297

Microphysical properties of artificial and natural clouds and their effects on UH-1H helicopter icing

[AD-11084633] p0570 880-38324

CLOTHES

ATOMIC CLOCKS

CLOTHES

MATERIALS

Climate study

p0324 880-34188

CLOTHES

Protection and specification of clutches to be used with gas turbine generators

[ASME PAPER 80-GT-33] p0457 880-42166

CLIMATE

Atmospheric measurements of targets and clutter

p0196 880-26502

Experimental survey of the statistical properties of dynamic clutter in ATR primary radars

p0396 880-38844

COAL

Microbial deterioration of hydrocarbon fuels from oil shale, coal, and petroleum. I: Exploratory experiments

[AD-1073761] p0123 880-14259

Defining and upgrading of syngas fuels from coal and oil shales by advanced catalytic processes

[PR-2315-37] p0296 880-24007

Defining and upgrading of syngas fuels from coal and oil shales by advanced catalytic processes

[PR-2315-42] p0295 880-24042

Defining and upgrading of syngas fuels from coal and oil shales by advanced catalytic processes

[PR-2315-40] p0539 880-28550

Defining and upgrading of syngas fuels from coal and oil shales by advanced catalytic processes

[PR-2315-48] p0607 880-31629

COAL DERIVED LIQUIDS

Defining and upgrading of syngas fuels from coal and oil shales by advanced catalytic processes

[PR-2315-49] p0607 880-31629

[PF-2315-49] p0607 880-31629
Early flight test experience with Cockpit Displayed Traffic Information (CDTI) [NASA-TH-80221]
p0228 880-18037
The effect of viewing time, time to encounter, and practice on perception of aircraft separation on a cockpit display of traffic information [NASA-TH-80175]
p0229 880-18038
Crew station design facility feasibility study [AD-A078134]
p0235 880-19064
The operational roles of the F-16 [AD-A078134]
p0559 880-30200
Perception of aircraft separation with pilot-preferred symbology on a cockpit display of traffic information [NASA-TH-81172]
p0604 880-31397

CO-edge

CT REDUNDANT CODING

COEFFICIENT OF FRICTION
Friction characteristic of steel skids equipped with steps on a laid-back surface --- landing gear [NASA-TH-81347]
p0607 880-13027
The friction classification of runways --- using measurements made with the continuous recording runway friction meter [5/T-880-6-79]
p0423 880-24339
The response of turbine engine rotors to interference rubs [NASA-TH-81516]
p0501 880-27696

COEFFICIENTS

MT AEROACOUSTIC COEFFICIENTS
MT COEFFICIENT OF FRICTION
MT DISENCHARGE COEFFICIENTS
MT HEAT TRANSFER COEFFICIENTS
MT INFLUENCE COEFFICIENT
MT NOISE TRANSFER COEFFICIENTS
MT STRUCTURAL INFLUENCE COEFFICIENTS

COHERENCE

Effects of criteria on flight simulation study 1: Heading deviation tolerance [AD-A080508]
p0650 880-33423

COHERENT ACOUSTIC RADIATION

A study of partial coherence for identifying interior noise sources and paths on general aviation aircraft [NASA-TH-80197]
p0145 880-15876
COHERENT RADAR
Airborne radar coherent transmitters p0323 880-34395

COHERENT ACOUSTIC RADIATION

CoH RACEHC AIRCRAFT

F-5 AIRCRAFT

COLLISIONS

Applying pressure ... Relieving stress --- stress coining aircraft structures p0207 880-27257

COKE AIRCRAFT

U A-29 AIRCRAFT

COLD FLOW TESTS

Cold-air investigation of a 4 1/2 stage turbine with stage-loading factor of 4.66 and high specific work output. 2: Stage group performance [NASA-TP-1668]
p0435 880-25338

COLD FORMING

COLD WORKING

COLD WORKING

CT EXPLOSIVE FORMING

Applying pressure ... Relieving stress --- stress coining aircraft structures p0207 880-27257

COLLECTORS

U ACCELERATORS

COLLISION AVOIDANCE

MT BEACON COLLISION AVOIDANCE SYSTEM
The collision avoidance problem requires a mix of partial solutions p0015 880-12930
Covariance simulation of BCS - An aircraft collision avoidance system p0107 880-20915
AirCraft collisions p0163 880-24027
A collision avoidance system using Navstar/GPS and ARCS p0190 880-25157
Theoretical limitations on collision avoidance systems p0197 880-26811

The automatization of the detection of collision risks for French air traffic control p0325 880-34226
General aviation altimetry errors for collision avoidance systems p0336 880-35404
Collision danger and collision avoidance [NASA-TT-527-BEV] p0375 880-36769
Safety indicators --- for aircraft flight p0408 880-39590
The automatic detection of collision risks for the control of air traffic in France p0570 880-48139
An automated conflict-alert function for an air traffic control system p0821 880-52995
The superposition of two-dimensional error fields and its influence on flight safety of air traffic [NASA-TT-527-BEV] p0078 880-13022
Over/limit: FAA R and S programs --- air traffic control and collision avoidance [GPO-30-212]
p0086 880-13988
Onboard collision avoidance system: Environmental influence on the tracking algorithms requirements [AD-A077713]
p0117 880-18105
p0169 880-16050
Collision avoidance systems. A bibliography with abstracts [RTS/75-92115]
p0169 880-16053
Infrared runway collision avoidance system analysis --- carbon dioxide lasers [AD-A070131]
p0171 880-16069
Report on the task force on aircraft separation assurance, appendices --- systems analysis of collision avoidance systems integration in the air traffic control airspace utilization system [AD-A077773]
p0222 880-18017
Development of a bird/aircraft strike hazard assessment methodology [AD-A075586]
p0290 880-22046
ARPS/ATC simulation tests with site adaptation logic in the Philadelphia terminal area [AD-A083718]
p0489 880-27308
An evaluation of aircraft separation assurance concepts using airborne flight simulators. Volume 1: Study report [AD-A083986]
p0489 880-27310
An evaluation of aircraft separation assurance concepts using airborne flight simulators. Volume 2: Appendices [AD-A083097]
p0489 880-27311
Precision navigation for air traffic control airspace utilization system [AD-A083997]
p0490 880-27317
Midair conflicts and their potential avoidance by progressive implementation of automation [AD-A077331]
p0492 880-27331
Determination of the safety in a high-latitude, high-altitude organized track system with reduced lateral separation --- statistical tests [AD-A077332]
p0492 880-27332
Flight investigation of cockpit-displayed traffic information utilizing coded symbology in an advanced operational environment [NASA-TP-1664]
p0496 880-27360
Active BCS performance in a garble environment [NASA-TT-527-BEV]
p0542 880-29267
NASA aviation safety reporting system [NASA-TH-81197]
p0629 880-32352
FAA's collision avoidance systems [GPO-80-611]
p0631 880-32365

COLLISION WARNING DEVICES

U COLLISION AVOIDANCE U WARNING SYSTEMS

COLLISIONS

MT BIRD-AIRCRAFT COLLISIONS
MT BEACON COLLISIONS
MT AEROSOL COLLISIONS
MT MOLECULAR COLLISIONS

AEROSOLS
MT AEROSOLS
MT FOG

COLOR

The influence of colors on the visibility of aircraft and ground obstacles p0047 880-13117
Development of a color alphanumeric liquid crystal display --- suitable for aircraft command and...
An optical technique for the investigation of flow in gas turbine combustors
Predictions of the flow field and local gas composition in gas turbine combustors
Limitation of the content of harmful substances in aircraft engine exhaust gases - New requirements on combustor chambers
Test and analysis of the ASALM-PV insulated combustion chamber
Size distribution and surface area measurements of gas turbine combustor smoke
Estimation of noise source strengths in a gas turbine combustor
The use of the spectral summation of fatigue damages in order to examine the combined stress state of structures
Model studies of acoustic resonators
An experimental investigation of pressure oscillations in a side dump ramjet combustor
Aircraft engine combustor casing life simulation evaluation
Elementary considerations for ramjet modelling
Prospects for computer modeling in ramjet combustors
Suppression of self-oscillations in combustion chambers by means of resonance sound absorbers
Gasdynamic analysis of gas-turbine combustion chambers with graduated air admission
The effect of blade-wakes on the performance of short dump-diffuser type combustor inlets
Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet
Gas turbine combustor design challenges for the 1980's
Modeling techniques for the analysis of ramjet combustion processes
Analytical and experimental evaluations of the effect of broad property fuels on combustors for commercial aircraft engines
Conceptual examination of gas phase particulate formation in gas turbine combustors
Performance of annular prediffuser-combustor systems
Atomizing characteristics of swirl gas combustor models with swirl blast fuel injectors
Fuel property effects on life characteristics of aircraft turbine engine combustors
The development and application of improved combustor wall cooling techniques
Low 80/fz heavy fuel combustor program
Fuel character effects on 379 and 1101 engine combustor emissions
Probe effects in gas turbine combustor emission measurements
Some aspects on increasing gas turbine combustor exit temperature

An optical technique for the investigation of flow in gas turbine combustors
Predictions of the flow field and local gas composition in gas turbine combustors
Limitation of the content of harmful substances in aircraft engine exhaust gases - New requirements on combustor chambers
Test and analysis of the ASALM-PV insulated combustion chamber
Size distribution and surface area measurements of gas turbine combustor smoke
Estimation of noise source strengths in a gas turbine combustor
The use of the spectral summation of fatigue damages in order to examine the combined stress state of structures
Model studies of acoustic resonators
An experimental investigation of pressure oscillations in a side dump ramjet combustor
Aircraft engine combustor casing life simulation evaluation
Elementary considerations for ramjet modelling
Prospects for computer modeling in ramjet combustors
Suppression of self-oscillations in combustion chambers by means of resonance sound absorbers
Gasdynamic analysis of gas-turbine combustion chambers with graduated air admission
The effect of blade-wakes on the performance of short dump-diffuser type combustor inlets
Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet
Gas turbine combustor design challenges for the 1980's
Modeling techniques for the analysis of ramjet combustion processes
Analytical and experimental evaluations of the effect of broad property fuels on combustors for commercial aircraft engines
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Atomizing characteristics of swirl gas combustor models with swirl blast fuel injectors
Fuel property effects on life characteristics of aircraft turbine engine combustors
The development and application of improved combustor wall cooling techniques
Low 80/fz heavy fuel combustor program
Fuel character effects on 379 and 1101 engine combustor emissions
Probe effects in gas turbine combustor emission measurements
Some aspects on increasing gas turbine combustor exit temperature

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Predictions of the flow field and local gas composition in gas turbine combustors
Limitation of the content of harmful substances in aircraft engine exhaust gases - New requirements on combustor chambers
Test and analysis of the ASALM-PV insulated combustion chamber
Size distribution and surface area measurements of gas turbine combustor smoke
Estimation of noise source strengths in a gas turbine combustor
The use of the spectral summation of fatigue damages in order to examine the combined stress state of structures
Model studies of acoustic resonators
An experimental investigation of pressure oscillations in a side dump ramjet combustor
Aircraft engine combustor casing life simulation evaluation
Elementary considerations for ramjet modelling
Prospects for computer modeling in ramjet combustors
Suppression of self-oscillations in combustion chambers by means of resonance sound absorbers
Gasdynamic analysis of gas-turbine combustion chambers with graduated air admission
The effect of blade-wakes on the performance of short dump-diffuser type combustor inlets
Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet
Gas turbine combustor design challenges for the 1980's
Modeling techniques for the analysis of ramjet combustion processes
Analytical and experimental evaluations of the effect of broad property fuels on combustors for commercial aircraft engines
Conceptual examination of gas phase particulate formation in gas turbine combustors
Performance of annular prediffuser-combustor systems
Atomizing characteristics of swirl gas combustor models with swirl blast fuel injectors
Fuel property effects on life characteristics of aircraft turbine engine combustors
The development and application of improved combustor wall cooling techniques
Low 80/fz heavy fuel combustor program
Fuel character effects on 379 and 1101 engine combustor emissions
Probe effects in gas turbine combustor emission measurements
Some aspects on increasing gas turbine combustor exit temperature

An optical technique for the investigation of flow in gas turbine combustors
Predictions of the flow field and local gas composition in gas turbine combustors
Limitation of the content of harmful substances in aircraft engine exhaust gases - New requirements on combustor chambers
Test and analysis of the ASALM-PV insulated combustion chamber
Size distribution and surface area measurements of gas turbine combustor smoke
Estimation of noise source strengths in a gas turbine combustor
The use of the spectral summation of fatigue damages in order to examine the combined stress state of structures
Model studies of acoustic resonators
An experimental investigation of pressure oscillations in a side dump ramjet combustor
Aircraft engine combustor casing life simulation evaluation
Elementary considerations for ramjet modelling
Prospects for computer modeling in ramjet combustors
Suppression of self-oscillations in combustion chambers by means of resonance sound absorbers
Gasdynamic analysis of gas-turbine combustion chambers with graduated air admission
The effect of blade-wakes on the performance of short dump-diffuser type combustor inlets
Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet
Gas turbine combustor design challenges for the 1980's
Modeling techniques for the analysis of ramjet combustion processes
Analytical and experimental evaluations of the effect of broad property fuels on combustors for commercial aircraft engines
Conceptual examination of gas phase particulate formation in gas turbine combustors
Performance of annular prediffuser-combustor systems
Atomizing characteristics of swirl gas combustor models with swirl blast fuel injectors
Fuel property effects on life characteristics of aircraft turbine engine combustors
The development and application of improved combustor wall cooling techniques
Low 80/fz heavy fuel combustor program
Fuel character effects on 379 and 1101 engine combustor emissions
Probe effects in gas turbine combustor emission measurements
Some aspects on increasing gas turbine combustor exit temperature

An optical technique for the investigation of flow in gas turbine combustors
Predictions of the flow field and local gas composition in gas turbine combustors
Limitation of the content of harmful substances in aircraft engine exhaust gases - New requirements on combustor chambers
Test and analysis of the ASALM-PV insulated combustion chamber
Size distribution and surface area measurements of gas turbine combustor smoke
Estimation of noise source strengths in a gas turbine combustor
The use of the spectral summation of fatigue damages in order to examine the combined stress state of structures
Model studies of acoustic resonators
An experimental investigation of pressure oscillations in a side dump ramjet combustor
Aircraft engine combustor casing life simulation evaluation
Elementary considerations for ramjet modelling
Prospects for computer modeling in ramjet combustors
Suppression of self-oscillations in combustion chambers by means of resonance sound absorbers
Gasdynamic analysis of gas-turbine combustion chambers with graduated air admission
The effect of blade-wakes on the performance of short dump-diffuser type combustor inlets
Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet
Gas turbine combustor design challenges for the 1980's
Modeling techniques for the analysis of ramjet combustion processes
Analytical and experimental evaluations of the effect of broad property fuels on combustors for commercial aircraft engines
Conceptual examination of gas phase particulate formation in gas turbine combustors
Performance of annular prediffuser-combustor systems
Atomizing characteristics of swirl gas combustor models with swirl blast fuel injectors
Fuel property effects on life characteristics of aircraft turbine engine combustors
The development and application of improved combustor wall cooling techniques
Low 80/fz heavy fuel combustor program
Fuel character effects on 379 and 1101 engine combustor emissions
Probe effects in gas turbine combustor emission measurements
Some aspects on increasing gas turbine combustor exit temperature

An optical technique for the investigation of flow in gas turbine combustors
Predictions of the flow field and local gas composition in gas turbine combustors
Limitation of the content of harmful substances in aircraft engine exhaust gases - New requirements on combustor chambers
Test and analysis of the ASALM-PV insulated combustion chamber
Size distribution and surface area measurements of gas turbine combustor smoke
Estimation of noise source strengths in a gas turbine combustor
The use of the spectral summation of fatigue damages in order to examine the combined stress state of structures
Model studies of acoustic resonators
An experimental investigation of pressure oscillations in a side dump ramjet combustor
Aircraft engine combustor casing life simulation evaluation
Elementary considerations for ramjet modelling
Prospects for computer modeling in ramjet combustors
Suppression of self-oscillations in combustion chambers by means of resonance sound absorbers
Gasdynamic analysis of gas-turbine combustion chambers with graduated air admission
The effect of blade-wakes on the performance of short dump-diffuser type combustor inlets
Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet
Gas turbine combustor design challenges for the 1980's
Modeling techniques for the analysis of ramjet combustion processes
Analytical and experimental evaluations of the effect of broad property fuels on combustors for commercial aircraft engines
Conceptual examination of gas phase particulate formation in gas turbine combustors
Performance of annular prediffuser-combustor systems
Atomizing characteristics of swirl gas combustor models with swirl blast fuel injectors
Fuel property effects on life characteristics of aircraft turbine engine combustors
The development and application of improved combustor wall cooling techniques
Low 80/fz heavy fuel combustor program
Fuel character effects on 379 and 1101 engine combustor emissions
Probe effects in gas turbine combustor emission measurements
Some aspects on increasing gas turbine combustor exit temperature
Investigation of the thermal state of longitudinally cooled rotor blades

Influence of the thermal expansion of the gas on the rate of propagation of the flame front in a pulsed-type combustion chamber

Influence of working-fluid issuance through a nozzle on the rate of flame front propagation in a pulsed-type combustion chamber

Calculation of the static characteristics of two-hole swirl injectors

Pressure is a liquid in a gas bubble generated by blasting a high-explosive in an inertially sealed parabolic chamber — for explosive forging

Influence of fuel-air mixture phase inhomogeneity on combustion efficiency in straight-flow chamber

Theoretical study of the thermodynamic parameters of the combustion products of model gas jet generator fuels

Influence of quality of fuel-air mixture preparation in prechamber on correlation of temperature fields before and after combustion chamber mixer

Effect of swirl, wake parameter and wake Reynolds number on recirculation in combustion chambers of jet engines

Measurements and calculations of the isothermal flow in axisymmetric models of combustor geometries

Influence of gas turbine engine combustion chambers geometric parameters on mixture formation characteristics

Study of homogeneous combustion chamber temperature field nonuniformity with primary zone parameter variation — of fuel-air parameters

Study of mass exchange between primary zone and secondary air jets in gas turbine engine combustion chambers

Fundamental characterization of alternate fuel effects in continuous combustion systems

Preserving quality and flame stability: A theoretical and experimental study

Advanced catalytic combustors for low pollutant emissions, phase 1

Effect of degree of fuel vaporization upon emissions for a premixed partially vaporized combustion system — for gas turbine engines

Quiet Clean Short-haul Experimental Engine

Calculation of the static characteristics of two-hole swirl injectors

Pressure is a liquid in a gas bubble generated by blasting a high-explosive in an inertially sealed parabolic chamber — for explosive forging

Influence of fuel-air mixture phase inhomogeneity on combustion efficiency in straight-flow chamber

Theoretical study of the thermodynamic parameters of the combustion products of model gas jet generator fuels
Subject Index

Combustion Instability

Fuel research: Combustion effects overview
Fuel property effects in stirred combustors
Performance deterioration of commercial high-bypass ratio turbofan engines
The energy efficient engine project

Combustion Physics

Turbulent effects in continuous combustion systems
Conceptual model of turbulent flameholding for combustor emissions measurement
Probe effects in gas turbine combustor emissions

Combustion Product

Soot formation and burnout in flames

Effect of fuel molecular structure on soot formation in gas turbine combustion
Carbon/Graphite composite material study --- risk and hazards of fiber release

Combustion Stability

Study of homogeneous combustion chamber temperature field nonuniformity with primary zone parameter variation
Combustion-gas temperature sensors for turbine and turbojet engines

Combustor Waves

U plane propagation

Combustors

Use of combustion chambers in electrical power generation

Aircraft humidification system development

The interior design of wide bodied aircraft

Safety and Comfort - The airliner cabin

Command and Control

Radar remote --- command and control center

E-3a Sentry, airborne early warning and control for Europe

A nonlinear observer/command generator tracker approach to the ym-97 helicopter gun turret control law design

Air Defense Ground environment - A case for automation

Survivable C3 --- command, control and communication centers in military electronics defense

Evaluation of trainable gun with director fire control system

Modeling and Simulation of Avionics Systems and Command, Control and Communications systems --- conferences

Simulation for whole life development

Command-Control

A-112
SUBJECT INDEX

Joining techniques in aircraft structures [p0006 A80-11345]
Damping capacity of plastic compressor blades [p0120 A80-19686]
Composites for aerospace applications [p0147 A80-21217]
Research developments for aircraft safety [p0154 A80-22148]
The cautious course to introducing new SDH technology into production systems --- Structures, Dynamics and materials [p0193 A80-26343]
Advanced composites --- Special topics; Proceedings of the Conference, El Segundo, Calif., December 4-6, 1979 [p0197 A80-26878]
The potential for damage from the accidental release of conductive carbon fibers from aircraft composites [p0209 A80-27596]
Composite center fuselage -- Phase I [p0278 A80-32068]
HDI policy and techniques for advanced composites --- nondestructive inspection [p0320 A80-34860]
Release-rate calorimetry of multilayered materials for aircraft seats [IAIA 80-07659] [p0332 A80-35052]
Engine environmental effects on composite behavior --- moisture and temperature effects on mechanical properties [IAIA 80-06955] [p0335 A80-35101]
Composites in future transports. I -- Roa-metallics [p0378 A80-36547]
Evolution of aerospace materials and technologies. I [AAAP PAPER HT 79-22 1] [p0378 A80-36547]
Moisture absorption of polyester-E glass composites [p0381 A80-37171]
Design, manufacturing, and operational behavior of helicopter composite blades [p0411 A80-40665]
Forward swept wing flight demonstrator [IAIA PAPER 80-1802] [p0518 A80-45750]
Fabrication techniques for advanced reinforced plastics; Proceedings of the Symposium, University of Salford, Salford, Lancs., England, April 22, 23, 1980 [p0527 A80-47200]
Damping capacity of compressor blades of composite materials [p0566 A80-47512]
The advanced-composites hurdle for 767 production [p0568 A80-51562]
Fracture mechanics in engineering application; Proceedings of the International Conference, Bangalore, India, March 26-30, 1979 [p0623 A80-53426]
Materials and structures technology [p0029 N80-10210]
Protective coatings for aircraft composites in nuclear environments [AD-A078899] [p0123 N80-14199]
Composite structural materials [NASA-CR-162578]
Quiet Clean Short-haul Experimental Engine (QCEE) Under-the-Wing (UTW) composite nacelle subassembly test report --- to verify strength of selected composite materials [NASA-CR-135075] [p0130 N80-15076]
Quiet Clean Short-haul Experimental Engine (QCEE) Under-the-Wing (UTW) composite nacelle [NASA-CR-135255] [p0135 N80-15119]
Effect of service environment on F-15 burner/epoxy stabilizer [AD-A076409] [p0176 N80-17064]
The potential for damage from the accidental release of conductive carbon fibers from burning composites [NASA-TM-802123] [p0227 N80-18108]
Carbon and graphite. Part 2. Carbon and graphite composites -- excluding carbon fiber composites. A bibliography with abstracts [FB80-002374] [p0227 N80-18144]

COMPOSITE STRUCTURES

Evaluation of aircraft windshield materials in a simulated supersonic flight environment [AD-A07677] [p0282 N80-19082]
Assessment of Carbon Fiber Electrical effects [NASA-CP-21119] [p026 N80-19193]
Approach to the assessment of the hazard --- fire released carbon fiber electrical effects [NASA-CR-159217] [p0277 N80-19194]
Release of carbon fibers from burning composites [NASA-CR-159218] [p0277 N80-19195]
Evaluation of micro size carbon fibers released from burning graphite composites [NASA-CR-159217] [p0310 N80-21544]
Analysis and measurements of low frequency lightning component penetration through aerospace vehicle metal and graphite skins [p0314 N80-21951]
Flight service evaluation of Kevlar-49 epoxy composite panels in wide-bodied commercial transport aircraft [NASA-CR-159231] [p0368 N80-23371]
The nuclear thermal effects on humidity saturated composite materials [AD-A077195] [p0426 N80-28472]
In-situ survey of composite structures [AD-A081801] [p0426 N80-28463]
Evolution of materials and associated technologies in aerospace material structures [SKIA-792-551-106] [p0479 N80-26294]
Investigation of application parameters and testing of rain erosion coatings [NASA-A03578] [p0499 N80-27430]
Composite structural materials --- aircraft structures [NASA-CR-163377] [p0532 N80-28339]
Impact of modern materials on the development of helicopters [NASA-CR-15979-120] [p0533 N80-28347]
Development of a fire test facility for graphite fiber-reinforced composites [NASA-CR-159193] [p0538 N80-28443]
Carbon fiber counting aircraft structures [NASA-TM-80117] [p0588 N80-2846]
Application of fully stressed design procedures to redundant and non-isotropic structures [NASA-TM-81042] [p0558 N80-29767]
Design and analysis of a stiffened composite fuselage panel [NASA-CR-159302] [p0611 N80-31820]
Advanced structures maintenance concepts [AD-A087609] [p0627 N80-32324]
Application of advanced technologies to small, short-haul transport aircraft [NASA-CR-152363] [p0629 N80-32353]
Experimental and analytical studies for the NASA carbon fiber risk assessment [NASA-CR-159214] [p0651 N80-33490]
Process modifications for improved carbon fiber component: alleviation of the electrical hazards problem [NASA-CR-163631] [p0651 N80-33494]
Time-temperature-stress capabilities of composite materials for advanced supersonic technology application, phase I [NASA-CR-159267] [p0651 N80-33496]
Conduction heat transfer analysis in composite materials [AD-A088791] [p0651 N80-33499]

COMPOSITE STRUCTURES BY LAYERS

Method of determining the load classification number, LCB, of a semirigid composite runway surface [p0002 A80-10237]
Third body formation and the wear of PTFE fibre-based dry bearings [ASM PAPER 79-1107-7] [p0051 A80-10974]
Composites in aircraft manufacturing -- An impressive rise in Western Europe [p0133 A80-21923]
Principles of design of a carbon fibre composite aircraft wing [p0155 A80-22270]
Advanced composites -- Special topics; Proceedings of the Conference, El Segundo, Calif., December 4-6, 1979 [p0197 A80-26878]

A-115
Repair of advanced composite structures in aircraft
Advanced composite serviceability program -- Status review -- Inspection of aircraft structures
Composite components on commercial aircraft
Induced effects of lightning on an all composite aircraft
Minimum-base designs of stiffened graphite/polyimide compression panels
Airworthiness certification of composite components for civil aircraft -- The role of non-destructive evaluation
Costs of graphite composite fabrication and repair -- of aircraft structures
Composite wing/fuselage integral concept (AIAA 80-0744)
Advanced composite structure repair guide (AIAA 80-0747)
Repair of advanced composite structures -- in damaged aircraft (AIAA 80-0776)
The development of the composite material engine nacelle (AIAA PAPER 79-38)
Fiber structures on the Mirage 2000 and Mirage 4000
CFP technology at Dornier
Design, manufacturing, and operational behavior of helicopter composite blades
Technology of graphite-resin composite materials and their applications in the aeronautical industry
Dynamics of flying equipment elements made from composite materials
Composite structural materials (NASA CR-162570)
Quiet Clean Short-haul Experimental Engine (QCSEE)
under-the-wing composite fan blade design report (NASA CR-135046)
Design study of prestressed rotor spar concept (NASA CR-159086)
Preliminary design of graphite composite wing panels for commercial transport aircraft (NASA CR-159103)
Advanced composite aileron for L-1011 transport aircraft (NASA CR-162863)
Advanced manufacturing development of a composite empennage component for L-1011 aircraft (NASA CR-162862)
Composite components on commercial aircraft
Data reduction and analysis of graphite fiber release experiments (NASA CR-159032)
Significance of large scatter of composite properties to aircraft reliability (AD-A077800)
Composite wall concept for high temperature turbine shrouds: Survey of low modulus strain isolator materials (NASA-TM-81463)
Advanced composite rotor hub preliminary design -- H-60 Helicopter (AD-A081951)
In-service inspection of advanced composite aircraft structure -- ultrasonic flaw detection (AD-A082331)
Flight service evaluation of an advanced composite empennage component on commercial transport aircraft (NASA CR-159286)
Composite structural materials -- aircraft structures

[HASA-TH-802-120] p0295 H80-20398
[HASA-CB-159032] p0234 B80-19048
[HASA-CB-159150] p0183 H80-17148
[HASA-CB-159086] p0178 B80-17062
[AIAA 80-0744] p0333 A80-35065
[HASA-CB-159578] p0024 H80-10134
[AD-A085132] p0445 A80-40913
[AD-A077378] p0329 A80-34810
[AD-A082331] p0445 A80-40913
[AD-A077378] p0329 A80-34810
[AD-A085132] p0445 A80-40913
[AD-A077378] p0329 A80-34810
[AD-A085132] p0445 A80-40913
[AD-A077378] p0329 A80-34810
[AD-A085132] p0445 A80-40913
[AD-A077378] p0329 A80-34810
[AD-A085132] p0445 A80-40913
[AD-A077378] p0329 A80-34810
[AD-A085132] p0445 A80-40913
[AD-A077378] p0329 A80-34810
[AD-A085132] p0445 A80-40913
[AD-A077378] p0329 A80-34810
[AD-A085132] p0445 A80-40913
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>transonic axial-flow compressor rotor</td>
</tr>
<tr>
<td>Calculation of high speed inlet flows using the Navier-Stokes equations</td>
</tr>
<tr>
<td>Calculation of transonic viscous flows past wing profiles</td>
</tr>
<tr>
<td>Complete viscous flowfield solutions about a blunt parabolic body in a supersonic stream</td>
</tr>
<tr>
<td>Investigation of transonic flow in a cascade using an adaptive mesh</td>
</tr>
<tr>
<td>Numerical study of separated turbulent flow over airfoils</td>
</tr>
<tr>
<td>The effect of the axial velocity density ratio on the aerodynamic coefficients of compressor cascades</td>
</tr>
<tr>
<td>Vorticity modeling of blade wakes behind isolated annular blade-rows - induced disturbances in swirling flows</td>
</tr>
<tr>
<td>A vortex-lattice method for the calculation of the monosteady separated flow over delta wings</td>
</tr>
<tr>
<td>Three dimensional supersonic flow through a cascade of twisted flat plates</td>
</tr>
<tr>
<td>Numerical solution of three-dimensional unsteady transonic flow over swept wings</td>
</tr>
<tr>
<td>A multi-grid code for 3-D transonic potential flow about axisymmetric inlet at angle of attack</td>
</tr>
<tr>
<td>Calculations of transonic flow about an airfoil in a wind tunnel</td>
</tr>
<tr>
<td>Numerical solution of three-dimensional unsteady transonic flow over swept wings</td>
</tr>
<tr>
<td>Computational transonic inverse procedure for wing design with automatic trailing edge closure</td>
</tr>
<tr>
<td>Grid generation and transonic flow calculations for three-dimensional configurations</td>
</tr>
<tr>
<td>Supercavitating hydrofoils with wetted upper sides</td>
</tr>
<tr>
<td>Numerical methods of turbosachinery</td>
</tr>
<tr>
<td>Calculation of the flow in a supersonic air intake with allowance for the boundary layer on the fairings</td>
</tr>
<tr>
<td>A Navier-Stokes scheme for the calculation of three-dimensional impinging jet flows</td>
</tr>
<tr>
<td>Shock-free wing design</td>
</tr>
<tr>
<td>A test of the method of Fink and Subs for following vortex-shoot concept</td>
</tr>
<tr>
<td>Unsteady compressible 3-dimensional boundary-layer flow near an axisymmetric stagnation point with mass transfer</td>
</tr>
<tr>
<td>Computational fluid mechanics of internal flow</td>
</tr>
<tr>
<td>The analysis of wing-body combinations at moderate angles of attack --- missile bodies</td>
</tr>
<tr>
<td>Aerodynamic characteristics of a hypersonic research airplane concept having a 70 deg swept double-delta wing at Mach numbers from 0.6 to 1.20, with summary of data from 0.6 to 1.2 --- Langley 8-ft transonic wind tunnel</td>
</tr>
<tr>
<td>A simplified model for the viscous crossflow in a slotted test section</td>
</tr>
<tr>
<td>Two dimensional aerodynamic interference effects on oscillating airfoils with flags in ventilated axisymmetric wind tunnels --- computational fluid dynamics</td>
</tr>
<tr>
<td>Use of advanced computers for aerodynamic flow simulation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMPUTER INFORMATION SECURITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>The use of the computer in the design of aerodynamic configurations</td>
</tr>
<tr>
<td>The role of computational aerodynamics in airplane configuration development</td>
</tr>
<tr>
<td>Computational aerodynamic design tools and techniques used at fighter development</td>
</tr>
<tr>
<td>Velocity-split Navier-Stokes solution procedure for incompressible high Reynolds number external flows</td>
</tr>
<tr>
<td>Development and validation of a combined rotor fuselage induced flow field computational method --- Langley V/STOL tunnel</td>
</tr>
<tr>
<td>An analysis method for multi-component airfoils in separated flow</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMPUTER ASSISTED INSTRUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The array processor AP-1208/190L for simulation applications</td>
</tr>
<tr>
<td>Analog aircraft weight and balance computer</td>
</tr>
<tr>
<td>Development of panel methods for subsonic analysis</td>
</tr>
<tr>
<td>COMPUTER GRAPHICS</td>
</tr>
<tr>
<td>The capability of CGI in flight simulation --- computer generated imagery</td>
</tr>
<tr>
<td>Mathematics for computer graphics --- numerical design engineering of aerospace systems</td>
</tr>
<tr>
<td>The shapes of things to come - an introduction to the capabilities of the British Aerospace Numerical Master Geometry System --- computer-aided design and manufacturing of aerodynamic surfaces</td>
</tr>
<tr>
<td>CADD on the F-18 program --- Computer Aided Design and Drafting</td>
</tr>
<tr>
<td>Flight simulation techniques - The quest for realism</td>
</tr>
<tr>
<td>CAD produced aircraft drawings</td>
</tr>
<tr>
<td>The CADD system - The designers' new tool</td>
</tr>
<tr>
<td>Design for quick reaction aircraft modification</td>
</tr>
<tr>
<td>Applying computer aided design /CAD/ to the 767</td>
</tr>
<tr>
<td>A study of the canopy design for the advanced attack helicopter by use of computer graphics</td>
</tr>
<tr>
<td>Computer graphics, related design and manufacturing process at Dornier</td>
</tr>
<tr>
<td>Computer graphics and related design processes in the UK</td>
</tr>
<tr>
<td>Using the computer to produce electric schemes --- information management</td>
</tr>
<tr>
<td>The use of the computer in the design of aerodynamic configurations</td>
</tr>
<tr>
<td>The graphical display of multi-dimensional aerodynamic flow field data</td>
</tr>
<tr>
<td>Modal order reduction using the balanced state representation theory, application and interactive software implementation</td>
</tr>
<tr>
<td>Interactive design system for aircraft dynamic control problems</td>
</tr>
<tr>
<td>COMPUTER INFORMATION SECURITY</td>
</tr>
<tr>
<td>The integrity of onboard computer programs: a solution</td>
</tr>
</tbody>
</table>
COMPUTER METHODS

COMPUTER PROGRAMS

COMPUTER PROGRAMMING

BY ON-LINE PROGRAMMING

Avionics software and equipment

Application of geometrical programming to problems of optimal design

p0008 A80-11354

Numerical prediction of compressible potential flow for arbitrary geometries— in airliner air-intake systems

p0203 A80-27127

Software engineering system requirements

p0211 A80-27743

Optimal GTS regulation program design— Gas Turbine Engine

p0616 A80-51899

Analytical investigation of the landing dynamics of a large airplane with a load-control system in the main landing gear

p0078 B80-13025

Tactical analysis of conflicts in an air traffic control system: Design and implementation of a provisional model

p0116 B80-14072

POSTAN program oblique in FL-format user’s manual

p0257 B80-19980

Software for flight critical digital engine controllers

p0457 A80-42163

Redesign of structural vibration modes by finite-element inverse perturbation

p0461 A80-42235

Numerical prediction of compressible potential flow for arbitrary geometries— in airliner air-intake systems

The avionics computer program: Practical experiences with a methodology Mirage F1 and Mirage 2000 aircraft

Cost-driven affecting the development of F-16

A computerized method for calculating flutter

A computer code for estimating installed performance of a swept wings in an about three-dimensional ramjets

Library of maps

The avionics computer program: Practical experiences with a methodology Mirage F1 and Mirage 2000 aircraft

Data reduction software for LOHAN-C flight test evaluation

Development of panel methods for subsonic analysis and design

An evaluation of the ADINA finite element program for application to aircraft overspeed vulnerability

Accuracy of hydrofoil loading predictions obtained from a lifting-surface computer program

Additional information about PALSTAF fighter aircraft loading standard for fatigue evaluation

A-120
Application of automated system to air traffic control — Russian book
p0050 880-18370

Modular strapdown guidance unit with embedded microprocessors
[AIAA PAPER 78-1239]
p0097 880-18534

Autonav and air traffic control
p0098 880-18722

CADD on the F-18 program — Computer Aided Design and Drafting
p0193 880-26365

Advanced computer program — for future automation and system performance improvements
p0197 880-26810

Experience from testing the Viggen electronic systems utilizing existing computer capacity
p0206 880-27235

Prox tape measure to computer tape — development of flight recorders
p0207 880-27263

ASTF Test Instrumentation System — Aeropropulsion Systems Test Facility
p0263 880-29486

A second generation instrumentation system for measuring cross coupling derivatives — from wind tunnel data
p0265 880-29502

Test system requirements for 767 aircraft electrical components
p0271 880-30012

Advanced avionics architectures for the 1980's - A software view
p0280 880-32420

An overview of the Sperry flight management computer system for the Boeing 757/767 airplanes
p0282 880-32436

Integrated system design — DAIS — Digital Avionics Information System
p0285 880-32468

Advanced digital avionics for the DC-9 Super 80
p0286 880-32470

The Fault Tolerant Multiprocessor engineering model / A report/ — computer systems design for avionics systems
p0285 880-32472

Processing and analysis of the data from a two spool gas turbine engine
p0343 880-36149

Distributed computer architecture for the discrete address beacon system
p0367 880-37693

Flexible formats — The controller controls the computer
p0388 880-37697

Perforability evaluation of the SIT computer — Software-Implemented Fault Tolerance computer onboard commercial aircraft during transoceanic flight
p0390 880-38043

Educational aspects of multi-microprocessor design used in flight simulation applications
[AIAA PAPER 80-1852]
p0471 880-43306

Avionics master plan data base mechanization architecture
[AD-A071545]
p0493 880-11083

Software methods for Fault-Tolerant avionics and control systems, working group meeting 1
[NASA-CR-2114]
p0075 880-12741

Experience in producing software for the ground station of a remotely piloted helicopter system
p0112 880-14038

HSSC-2 operating system design requirements specification
[NASA-CR-163396]
p0257 880-19861

Validation Methods Research for Fault-Tolerant Avionics and Control Systems: Working Group Meeting 2
[NASA-CR-2130]
p0357 880-23008

Software impact of selected-en route ATC computer replacement strategies
[AD-A071545]
p0362 880-23286

Analysis of expandability and modifiability of computer configuration concepts for ATC. Volume 1: Distributed concept
[AD-A084045]
p0490 880-27314

COMPUTER SYSTEM PERFORMANCE
Assessment of operational automated guideway systems-AIRTRAMS, phase 2
[FAA-88-182538]
p0013 880-32302
COHPOTBB SISTBBS PBOGBABS

COBPOTBB TBCHBIQ0BS

HI OPBBATIBG SYSTEBS (COBPOTBBS)

HI IBPOT/OOTPOT BOnTIHBS

The use of computer systems in air traffic control

Avionics software and equipment

A cost effective approach to ATE

FAA Technical Center Digital Cockpit Simulation

Facility navigation, guidance, and control

software architecture

[AlIAA 60-1719]

An assessment of and approach to the validation of
digital flight control systems

[AlIAA 60-45521]

Computer prediction of three-dimensional potential
flow fields in which aircraft propellers
operate: Computer program description and users
manual

[NASA-CR-162816]

MINITEST: A shortened version of TWIST

[LBD-TH-146]

Nondestructive evaluation of airport pavements.
Volume 2: Operational manual for PAVEN program
toc

[AD-A079495]

Formal methods for achieving reliable software
models

[AlIAA 60-19130]

An analysis of software reliability prediction
models

[AlIAA 60-19549]

Software development for TORNADO: A case history
from the reliability and maintainability aspect

[AlIAA 60-19554]

E-3I navigational computer system real-time
environmental simulator

[AlIAA 60-19824]

Simulation for whole life development

[AlIAA 60-19839]

A simulation support system, the development tool
for avionic systems and subsystems

[AlIAA 60-19840]

FORTRAN program library in PL-format user's manual

[AD-A077609]

Using the computer to produce electric schemas ---
information management

[AlIAA 60-19880]

USSABO computer program development, versions B
and C

[NASA-CR-3227]

Software impact of selected en route ATE computer
replacement strategies

[AD-A081478]

Flight software requirements and design support
system

[NASA-CR-163425]

Guidance and control software

[AIAA-AM-258]

An approach to the derivation and validation of
requirements

[AlIAA 60-32125]

Trends in the development of software for guidance
and control

[AlIAA 60-32126]

COMPUTER TECHNIQUES

Adaptive allocation of decisionmaking
responsibility between human and computer in
multitask situations

[AlIAA 60-18022]

Recent developments in flight simulation techniques

[AlIAA 60-20907]

Computational aerodynamics on large
computers

[AlIAA 60-27415]

Computer/experimens integration for unsteady
aerodynamic research

[AlIAA 60-29501]

Computer data base for 767 avionics interface
control

[AlIAA 60-32437]

Air Defense Ground environment - A case for
automation

[AlIAA 60-34154]

The extraction of altitude data in a 3D radar

[AlIAA 60-38583]

Technological and commercial aspects of aircraft
production

[DGIM PAPER 60-033]

[DGIM PAPER 60-46285]
An application of model-following control

CADD on the P-18 program — Computer Aided Design and Drafting

Minima mass designs of stiffened graphite/polyimide compression panels

A contribution to the design of radial compressor impellers with double-curved blades

CAD/CAM in packaging aerospace electronics

Use of a simulator in the development of a BPF system

Computer-aided design of temperature fields for cooled gas-turbine blades

Numerical design and optimization of propellers, II

CAD produced aircraft drawings

Effect of nose aircraft landing program modifications on the fatigue life of open hole specimens

Computer simulation as a first step towards computer-aided design of fluid power systems

The CADAM system — the designers' new tool

Computational methods for the design of adaptive airfoils and wings

Life and utilization criteria in design for balanced life and performance — aircraft gas turbine engine

Airfoil design and analysis using an information systems approach

Redesign of structural vibration modes by finite-element inverse perturbation

Design for quick reaction aircraft modification

Computation of aircraft mounted antenna radiation patterns at frequencies above 300 MHz — II

Applying computer aided design/CAD/ to the 767

Integration of CAD/CAM systems for production of structural components

Modern controls and the hybrid computer revisited — simulation systems for aircraft development and design

Development of a full authority digital fuel control system for a gas turbine engine using a hybrid computer system as a design aid

Temperature distribution planning for a cooled gas-turbine blade using an electronic computer

Multivariable digital control systems

An artificial viscosity method for the design of supercritical airfoils

Optimization of computer automated ultrasonic inspection system

Optimized aerodynamic design process for supersonic transport wing fitted with winglets — wind tunnel model

Optimized aerodynamic design process for supersonic transport wing fitted with winglets — wind tunnel model

Composite structural materials

A study of the canopy design for the advanced attack helicopter by use of computer graphics

Nondestructive evaluation of airport pavements. Volume 2: Operational manual for PAVBH program at TCC

The use of computers as a design tool

The use of computer aided design methods in airborne systems evaluation

Criteria for technology — computer aided design techniques applied to aircraft design cost benefit assessment

An acceptable role for computers in the aircraft design process

The use of computer based optimization methods in aircraft studies

Some fundamental aspects of transport aircraft conceptual design optimization

Computer graphics, related design and manufacture process at Dornier

Computer graphics and related design processes in the UK

Using the computer to produce electric schemes — information management

The use of the computer in the design of aerodynamic configurations

Wing design process by inverse potential flow computer programs

The role of computational aerodynamics in airplane configuration development

Computational aerodynamic design tools and techniques used at fighter development

Use of computers in the aerodynamic design of the HMT fighter

Numerical methods for design and analysis of an aerodynamic design tool for modern aircraft

Structural optimization with static and aeroelastic constraints

Computer programs for the design and performance evaluation of nacelles for high bypass-ratio engines

Interactive aided design system for aircraft dynamic control problems

An experimental evaluation of a helicopter rotor section designed by numerical optimization

Civil component program wing section. Predimensioning of a supercritical wing

Interactive design system for aircraft dynamic control problems

Technical evaluation report on the Flight Mechanics Panel Symposium on the Use of Computers as a Design Tool

A modeling technique for design and simulation of hydrostatic journal bearings

COMPUTERIZED SIMULATION

Subject Index

The use of computers as a design tool [AEDAR-CP-280]

The use of computer aided design methods in airborne systems evaluation [p0298 N80-21243]

Criteria for technology — computer aided design techniques applied to aircraft design cost benefit assessment [p0298 N80-21244]

An acceptable role for computers in the aircraft design process [p0298 N80-21245]

The use of computer based optimization methods in aircraft studies [p0298 N80-21246]

Some fundamental aspects of transport aircraft conceptual design optimization [p0299 N80-21247]

Computer graphics, related design and manufacture process at Dornier [p0299 N80-21251]

Computer graphics and related design processes in the UK [p0299 N80-21252]

Using the computer to produce electric schemes — information management [p0299 N80-21256]

The use of the computer in the design of aerodynamic configurations [p0299 N80-21258]

Wing design process by inverse potential flow computer programs [p0300 N80-21259]

The role of computational aerodynamics in airplane configuration development [p0300 N80-21260]

Computational aerodynamic design tools and techniques used at fighter development [p0300 N80-21261]

Use of computers in the aerodynamic design of the HMT fighter [p0300 N80-21262]

Numerical methods for design and analysis of an aerodynamic design tool for modern aircraft [p0300 N80-21263]

Structural optimization with static and aeroelastic constraints [p0300 N80-21266]

Computer programs for the design and performance evaluation of nacelles for high bypass-ratio engines [p0301 N80-21270]

Interactive aided design system for aircraft dynamic control problems [p0301 N80-21274]

An experimental evaluation of a helicopter rotor section designed by numerical optimization [p0303 N80-21287]

Civil component program wing section. Predimensioning of a supercritical wing [p0303 N80-21217]

Interactive design system for aircraft dynamic control problems [p0303 N80-26329]

Technical evaluation report on the Flight Mechanics Panel Symposium on the Use of Computers as a Design Tool [AEDAR-MP-150]

Quantitative measurements of the effects of variations in panel method computer programs [AD-1086358]

A modeling technique for design and simulation of hydrostatic journal bearings [p0653 N80-33745]
Aerodynamic characteristics of controls — conferences
[AGABD-CP-262] p0139 880-15149
Proceedings of the 7th Ann. Tri-Service Meeting for Aircraft Engine Monitoring and Diagnostics
— conferences
[AD-A076126] p0225 880-18045
Workshop on Aircraft Surface Representation for Aerodynamic Coeposition
[HASA-TM-81170] p0232 880-19025
* Proceedings of a Workshop on V/STOL Aircraft Aerodynamics, volume 2 — conferences
[AD-A076809] p0233 880-19042
Proceedings of a Workshop on V/STOL Aircraft Aerodynamics, volume 1
[AD-A075115] p0237 880-19074
* Parameter Identification — conference on techniques applied to aircraft flight test data [AGABD-LS-106] p0240 880-19094
The 4th International Symposium on Air Breathing Engines
[AD-A079563] p0242 880-19114
Avionics Reliability, Its Techniques and Related Disciplines — conferences
[AGABD-CP-261] p0250 880-19159
Modeling and Simulation of Avionics Systems and Command, Control and Communications systems — conferences
[AGABD-CP-268] p0253 880-19099
The use of computers as a design tool [AGABD-CP-280] p0298 880-21243
Advanced technology airfoil research, volume 2 — conferences
[HASA-CF-2046] p0302 880-21203
Global positioning system for general aviation: Joint FAA-RASA Seminar — conferences
[HASA-TM-81017] p0304 880-21299
General Aviation Propulsion [HASA-CF-2126] p0350 880-22327
Eighth EASTON/EN's Colloquium [HASA-CF-2131] p0426 880-26648
Technical evaluation report on the 54th (A) Propulsion and Energy Systems Panel meeting on Advanced Control Systems for Aircraft Powerplants [AGABD-AR-152] p0436 880-25397
Air Traffic Management: Civil/Military and Technologies — conference [AGABD-CP-273] p0491 880-27323
Selected NASA research in composite materials and structures [AGABD-CO-1912] p0538 880-28486
First Computer Air Carrier Safety Symposium [AD-A089528] p0542 880-29260
Aircraft Research and Technology for Future Fuels [HASA-CF-2146] p0547 880-29300
Ceramics for turbine engine applications [AGABD-AR-157] p0552 880-29292

AERODYNAMIC COUPLING SHELLS

Flight evaluation of configuration management system concepts during transition to the landing approach for a powered-lift STOL aircraft [HASA-TM-81146] p0945 880-15127
Synthesis of a theoretical approach for employing adaptive configuration management in aeronautical weapon system programs p0350 880-23196

U CONVERGENCE
U CONVERGENCE REPORTING
Confocal mapping analysis of multielement airfoils with boundary-layer corrections [AIAA PAPER 80-0069] p0093 880-18261

U CONFORMATIONAL TRANSFORMATIONS
U CONFORMATIONAL MAPPING

CONGRESSIONAL REPORTS
Small transport aircraft technology. A report for the committee on commerce, science, and transportation, United States Senate [HASA-TM-80813] p0252 880-19953
Oversight: FAA R and D programs — air traffic control and collision avoidance [GPO-38-212] p0086 880-13980
FAA's collision-avoidance program [GPO-40-611] p0631 880-32365
Aviation safety: DC-10 crash of May 25, 1979 [GPO-54-572] p0648 880-33303

CONICAL BODIES
N. SLENDER CONES
Hysteresis of aerodynamic characteristics — for wing models and segmented conical bodies of revolution p0209 880-27167
Aerodynamic characteristics of configurations consisting of half-cones and flat delta wings with supersonic leading edges p0525 880-46853
Limiting values of the lift coefficient of lifting bodies with a flat surface at supersonic speeds p0525 880-46861
Real-gas effects on the aerodynamics of blunt cones as measured in a hypervelocity range [AD-A075526] p0289 880-20241

CONICAL CARRIERS
Reflex cambered delta wings with leading edge separation p0285 880-32527
Conically cambered delta wings in supersonic flow. II - Optimal solutions p0286 880-32531

CONICAL FLOW
Performance of conical diffusers up to the choking condition p0261 880-29130

CAREFUL numerical study of flowfields about asymmetric external conical casings [AIAA PAPER 80-1329] p0451 880-41562
Concerning the separated flow about an inflating parachute [BAA-TH-8092] p0628 880-32336

CERICAL SHELLS
Turbulent-boundary-layer excitation and response thereto for a high-performance conical vehicle - reentry p0228 880-18229

CONICS
Concerning the separated flow about an inflating parachute [BAA-TH-8092] p0628 880-32336

CONNECTIONS
U JOINTS (JUNCTIONS)

CONSOLES
U CONICAL BODIES

CONSERVATION
HYDROHEAT CONSERVATION

CONSOLES
Evaluation of the Aviation Weather And Reconnaissance System (AVRWS) [AIAA PAPER 80-2270] p0556 880-29586
Reliability and maintainability improvement program for the AV-8 A/TAV-8A harrier head-up display set. Volume 2: Modifications to display set control, C10626/A79-301(1)
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>CONTROL EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>[AD-1085370]</td>
<td>[AD-1078629]</td>
</tr>
<tr>
<td>CONSTANT SPEED PROPELLERS</td>
<td>p0204 880-19125</td>
</tr>
<tr>
<td>U VARIABLE PITCH PROPELLERS</td>
<td>p0307 880-21337</td>
</tr>
<tr>
<td>CONSTANT VOLUME BALLOONS</td>
<td>p0307 880-21338</td>
</tr>
<tr>
<td>U SUPERPRESSURE BALLOONS</td>
<td>p0308 880-21339</td>
</tr>
<tr>
<td>CONSTRAINS</td>
<td>Wind tunnel measurement of lateral aerodynamic derivatives using a new oscillatory rig, with results and comparisons for the Gnat aircraft [ABC-R-B-3404?] p0600 880-31366</td>
</tr>
<tr>
<td>NT TIRE CONSTANT</td>
<td>Control configured vehicles</td>
</tr>
<tr>
<td>Gladstone-Bale constant for CP4 — experimental design</td>
<td>Single values and feedback – Design examples --- for CH-47 helicopter p0015 880-12716</td>
</tr>
<tr>
<td>[NASA-TR-80228]</td>
<td>Combing civil transport aircraft with ‘active’ control elements</td>
</tr>
<tr>
<td>CONSTRAINTS</td>
<td></td>
</tr>
<tr>
<td>NT METEOROLOGICAL PARAMETERS</td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION</td>
<td></td>
</tr>
<tr>
<td>Construction problems for high Reynolds number wind tunnel models</td>
<td></td>
</tr>
<tr>
<td>[NASA-TR-786]</td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION MATERIALS</td>
<td></td>
</tr>
<tr>
<td>NT AIRCRAFT CONSTRUCTION MATERIALS</td>
<td></td>
</tr>
<tr>
<td>Method of determining the load classification number, LCN, of a semirigid composite runway surface</td>
<td></td>
</tr>
<tr>
<td>Aircraft gas turbine materials and processes</td>
<td>p0002 880-10237</td>
</tr>
<tr>
<td>p0003 880-10235</td>
<td></td>
</tr>
<tr>
<td>Fire-resistant materials for aircraft passenger</td>
<td></td>
</tr>
<tr>
<td>[NASA-TR-786]</td>
<td></td>
</tr>
<tr>
<td>CONSUMABLES (SPACER)</td>
<td></td>
</tr>
<tr>
<td>NT PROPELLANT STORAGE</td>
<td></td>
</tr>
<tr>
<td>NT WORKING FLUIDS</td>
<td></td>
</tr>
<tr>
<td>CONSUMPTION</td>
<td></td>
</tr>
<tr>
<td>NT ENERG CONSUMPTION</td>
<td></td>
</tr>
<tr>
<td>NT FUEL CONSUMPTION</td>
<td></td>
</tr>
<tr>
<td>CONTACT POTENTIALS</td>
<td></td>
</tr>
<tr>
<td>Electrical charging of fabric and film materials</td>
<td></td>
</tr>
<tr>
<td>p0019 880-10048</td>
<td></td>
</tr>
<tr>
<td>CONTACTS (ELECTRIC)</td>
<td></td>
</tr>
<tr>
<td>U ELECTRIC CONTACTS</td>
<td></td>
</tr>
<tr>
<td>CONTACTORIZATION</td>
<td></td>
</tr>
<tr>
<td>NT FUEL CONTAMINATION</td>
<td></td>
</tr>
<tr>
<td>Transport phenomena in labyrinth seals of turbomachines — French thesis</td>
<td></td>
</tr>
<tr>
<td>Fluid contamination of aircraft-cabin air and breathing oxygen</td>
<td></td>
</tr>
<tr>
<td>p0160 880-23374</td>
<td></td>
</tr>
<tr>
<td>p0161 880-23374</td>
<td></td>
</tr>
<tr>
<td>CONFLICTS</td>
<td></td>
</tr>
<tr>
<td>NT AUSTRALIA</td>
<td></td>
</tr>
<tr>
<td>NT EUROPE</td>
<td></td>
</tr>
<tr>
<td>CONSEQUENCE</td>
<td></td>
</tr>
<tr>
<td>The en route alternate and a rational basis for contingency fuel</td>
<td></td>
</tr>
<tr>
<td>p0622 880-52997</td>
<td></td>
</tr>
<tr>
<td>CONTROLES</td>
<td></td>
</tr>
<tr>
<td>Optimized discretization of two-dimensional continuous contours</td>
<td></td>
</tr>
<tr>
<td>Development of a new countouring device for isolatesity weather curve generation in ATC</td>
<td></td>
</tr>
<tr>
<td>radar displays</td>
<td></td>
</tr>
<tr>
<td>p0263 880-29228</td>
<td></td>
</tr>
<tr>
<td>Use of wagner functions in airfoil design optimization</td>
<td></td>
</tr>
<tr>
<td>Non-contacting electro-optical contouring of helicopter rotor blades</td>
<td></td>
</tr>
<tr>
<td>p0025 880-10139</td>
<td></td>
</tr>
<tr>
<td>p0026 880-10139</td>
<td></td>
</tr>
<tr>
<td>CONTRACT MANAGEMENT</td>
<td></td>
</tr>
<tr>
<td>Product performance enhancement in the United States Air Force</td>
<td></td>
</tr>
<tr>
<td>[AIRA PAPER 80-1816]</td>
<td></td>
</tr>
<tr>
<td>p0512 880-45738</td>
<td></td>
</tr>
<tr>
<td>CONTROL</td>
<td></td>
</tr>
<tr>
<td>Hanned engineering flight simulation validation, Part 1. Simulation requirements and simulator motion system performance [AD-1071304]</td>
<td></td>
</tr>
<tr>
<td>Linear systems analysis program, L228 (QB). Volume 1: Engineering and usage [NASA-TR-2861]</td>
<td></td>
</tr>
<tr>
<td>Power system control study. Phase 1: Integrated control techniques</td>
<td></td>
</tr>
<tr>
<td>p0130 880-15140</td>
<td></td>
</tr>
<tr>
<td>a-129</td>
<td></td>
</tr>
</tbody>
</table>
CONTROLLABILITY

CONTROLLABILITY

Some problems involving the assurance of the controllability of an aircraft in the control-wheel regime

A critique of handling qualities specifications for U.S. military helicopters

A pilot modeling technique for handling-qualities research

An experimental investigation of VTOL flying qualities requirements in shipboard landings

Flying-qualities criteria for wings-level-turn maneuvering during an airborne weapon delivery task

Quantification of V/STOL equivalent system controllability through analysis and ground-base simulation

Pilot control through the YAPCOS automatic flight control system

Flight evaluation of configuration management system concepts during transition to the landing approach for a powered-lift STOL aircraft

Preliminary algorithms evaluation, a STOL aircraft model with the airborne target acquisition fire control system and the heliborne modular missile system installed

The flying qualities of aircraft with augmented longitudinal and directional stability

Design of a nonlinear adaptive filter for suppression of shuttle pilot-induced oscillation tendencies

Precise controllability of the YF-17 airplane

Measurement of the handling characteristics of two light airplanes

Aircraft accident report: CONAIR, Inc., Piper PA-34-300, N6642L, Greater Cincinnati Airport, Covington, Kentucky, 8 October 1979

Exploratory pilot simulator study of the effects of winglets on handling qualities of a representative agricultural airplane

Evaluation of lateral and directional characteristics and spinning behavior

CONTROLLABLE ATMOSPHERES

NT CABIN ATMOSPHERES

CONTROLLABLE STABILITY

NT CONTROL

CONTROLLERS

NT SERVOMECHANISMS

NT SERVOMOTORS

Controllers for aircraft motion simulators

ALFA PAPER 80-00050

ALFA PAPER 80-18525

ALFA PAPER 80-11052

ALFA PAPER 80-21358

ALFA PAPER 80-23300

CONVERSION

NT FORCED CONVERSION

CONVECTIVE FLOW

Radiation in a wall jet flow environment --- mathematical models for noise reduction of STOL airplanes

CONVECTIVE HEAT TRANSFER

Evaluation of finite element formulations for transient conduction forced-convection analysis --- of heat transfer for active cooling of hypersonic airframes and engine structures

Convective-fluid cooling of nozzle-type turbine blades

Aerothermal analysis of a wing-elevator cove with variable leakage [NASA TP-1703]

The freight forwarder as an air carrier

CONVERGENCE

Effect of initial value on the behavior of flow calculations for blade-to-blade flow through a turbomachine

CONVERGENT NOISES

Wing effect on jet noise propagation

CONVERGENT-DIVERGENT NOISES

Characteristics of a Laval nozzle with gasdynamic regulation

Investigation of flows in Laval nozzles at small Reynolds numbers

Supersonic combustion, air dissociation through shock waves and aerodynamics of chemically reacting gases in a planar converging-diverging nozzles --- supersonic combustion ramjet engines

Development of a nozzle to improve the turning of supersonic Coanda jets

COOLANTS

U/V/STOL AIRCRAFT

COOLABILITY

Application of aerodynamic characteristics of certain circular plane-convex configurations to hybrid airships

COOLANTS

NT ENGINE COOLANTS

An investigation of ingress for a simple shrouded rotating disc system with a radial outflow of coolant [ASME PAPER 80-GT-49]

COOLING

NT AIR COOLING

NT FILM COOLING

NT GAS COOLING

NT LIQUID COOLING

NT QUENCHING (COOLING)

Influence of angle of attack on profile losses in turbine cascade with porous cooling

On determining the temperatures at given points of cooled turbine blades made from multilayer perforated materials

COOLING SYSTEMS

Experimental and theoretical investigation of the internal-duct hydraulics of stator and rotor blades for a semi-closed-circuit air cooling system

Thermal control systems for pod-mounted avionics

Chilled recirculation ECS for aircraft

Qualification of cooling systems design for high temperature on a turbine facility

Quality of cooling systems design for high temperature on a turbine facility
On film-cooling of turbine blades

The development and application of improved combustor wall cooling techniques

[10-10881] p0464 180-43906

Heat pipe avionic thermal control systems

[ASME PAPER 80-HT-6-1] p0459 180-42196

Effect of pulsed jet on the drag and performance of the engine cooling system for a general aviation twin-engine aircraft

[10-10885] p0472 180-43315

On calculating gas turbine efficiency reduction under the influence of air injection

[10-10886] p0564 180-47415

Study of combined operation of self-evacuating vortex tube with diffuser

[10-10887] p0021 180-10085

On the characteristics of centrifugal-reciprocating machines --- cryogenic coolers

[NASA-CR-162801] p0249 180-19849

Some advantages of methane as an aircraft gas turbine

[10-10888] p0556 180-29502

Low-temperature solder for joining large cryogenic structures --- cooling coils for the National Transonic Facility

[10-10889] p0637 180-32980

COORDINATE SYSTEMS

U COORDINATES

COORDINATES

UT GEOCENTRIC COORDINATES

Results of a Loran-C flight test using an absolute data reference

[10-10890] p0169 180-16051

CPFLIGHTS

U AIRCRAFT PILOTS

COPPER ALLOTS

U BROWSERS

CORE FLOW

Effect of the relative area of the flow core on the performance of a supersonic wind tunnel

[10-10891] p0088 180-17673

Experimental study of low aspect ratio compressor blade

[ASME PAPER 80-C-6] p0456 180-42197

Quiet Clean Short-haul Experimental Engine (QCSEE). Aerodynamic and aeromechanical performance of a 50.8 cm (20 inch) diameter 1.34 PE variable pitch fan with core flow


CORNER FLOW

Careful numerical study of flowfields about asymmetric external conical corners

[10-10892] p0451 180-41562

Numerical solution of the Navier-Stokes equations for a family of three-dimensional corner geometries

[10-10893] p0451 180-41576

A simplified shock-fitting solution to a supersonic internal corner flowfield

[10-10894] p0452 180-41615

The aerodynamic significance of fillet geometry in transonic compressor blade rows

[ASME PAPER 80-C-81] p0458 180-42174

An investigation of corner separation within a thrust augmentor having Coanda jets

[TASC-76153-30] p0023 180-10122

CORONA DISCHARGES

U ELECTRIC CORONA

CORROSION

MT ELECTRIC CORONA

CORROSIONAL RADIATION

MT ELECTRON BEAMS

CORRELATION

MT CORRELATION DETECTION

MT CROSS CORRELATION

MT DATA CORRELATION

MT SIGNAL ANALYSIS

MT STATISTICAL CORRELATION

Semiconductor correlations for gas turbine emissions, ignition, and flame stabilization

[10-10895] p0698 180-27393

CORRELATION DETECTION

A unified theory for determining human response to sound --- aircraft noise

[10-10896] p0386 180-37606

Interferometric locating system


CORRELATION FUNCTIONS

U CORRELATION

CORRELATORS

MT IMAGE CORRELATORS

CORROSION

MT CAVITATION CORROSION

MT FUEL CORROSION

MT HOT CORROSION

MT STRESS CORROSION

CORROSION PREVENTION

Corrosion protection in agricultural aircraft technology --- Russian book

Evaluation of coatings for wear and corrosion - Protection in air/fluid accumulators --- for Navy aircraft carriers

Development of corrosion-inhibited lubricants for gas turbine engines and helicopter transmissions

[ASLE PEPHINT 80-AM-6C-3] p0467 180-43160

Materials Coating Techniques

[AGARD-LS-106] p0437 180-25999

Applications of sprayed coatings

[10-10897] p0438 180-25507

CORROSION RESISTANCE

MT OXIDATION RESISTANCE

Fiberglass rotor produced

Main erosion of lightning protection coatings for carbon fibre composites

The fatigue performance of service aircraft and the relevance of laboratory data

Evaluation of coatings for wear and corrosion - Protection in air/fluid accumulators --- for Navy aircraft carriers

Airline view of long life structures

Gas and steam turbines, general: Corrosion and erosion... Citations from the engineering index data base

Manufacturing process development for dust and rain erosion resistant coated metallic clads for helicopter rotors

[10-10898] p0634 180-32385

CORROSION TESTS

MT SALT SPRAY TESTS

Comparative resistance of Beta-Si3B4 solid solutions to molten silicon attack

Development of corrosion-inhibited lubricants for gas turbine engines and helicopter transmissions

[ASLE PEPHINT 80-AM-6C-3] p0467 180-43160

Crosstube fatigue behavior of coated 9%40 steel for blade retention bolts of the AB-1 helicopter

[10-10899] p0572 180-48935

CROSSAIR AIRCRAFT

U A-7 AIRCRAFT

CROSSWEB

U ALUMINUM GUIDES

CROSS SATELLITES

The Russian satellite navigation system

[10-10900] p0109 180-20982

COST ANALYSIS

Shipping by air - Is the value of your time worth it

Value analysis and the optimum cost concept applied to aerospace

The energy problem - Its effect on aircraft design. II - The effects of fuel cost

Costs of graphite composite fabrication and repair --- of aircraft structures

Cost analyses for avionics acquisition

Evaluation and selection of new aircraft for the eighties

[10-10901] p0409 180-40311

[10-10902] p0106 180-20868

[10-10903] p0204 180-27202

[10-10904] p0279 180-32201

[10-10905] p0329 180-34081

[10-10906] p0490 180-40311

[10-10907] p0329 180-34081

[10-10908] p0470 180-43297

[10-10909] p0522 180-46280

[10-10910] p0522 180-46280

A-133
CYLINDRICAL CHAMBERS
Effect of flow swirling on heat transfer in the cylindrical part of the prenozzle volume of a model chamber
p0002 A80-10196

CYLINDRICAL SHELLS
On sound transmission into a stiffened cylindrical shell with rings and stringers treated as discrete elements
p0620 A80-52723
Sound transmission into a laminated composite cylindrical shell
p0620 A80-52725

CYLINDRIDS
U CYLINDRICAL BODIES

DARKO (DATA ANALYSIS)
U DATA PROCESSING
U DATA REDUCTION
U DATA TRANSMISSION

DAMAGE
NT CUMULATIVE DAMAGE
NT FATIGUE DAMAGE
NT IMPACT DAMAGE
NT RADIATION DAMAGE
NT RAIN IMPACT DAMAGE
Direct effects of lightning on an aircraft during intentional penetrations of thunderstorms --- T-28 aircraft
p0313 A80-21947
Aircraft sonic boom: Effects on buildings.
Citations from the NYS data base
[pB80-806338] p0431 A80-25304
Cumulative damage fracture mechanics under engine spectra
[AD-A0895934] p0536 A80-28365

DAMAGE ASSESSMENT
Crash tests of four identical high-wing single-engine airplanes
[NASA-TP-1699] p0588 A80-30296
Fatigue damage estimation for the B111 aircraft
fatigue data analysis system
[AD-A086470] p0589 A80-30301
Advanced structures maintenance concepts
[AD-A087609] p0627 A80-32324

DAMPERS (VALVES)
Off-design correlation for losses due to part-span dampers on transonic rotors
[NASA-TP-1693] p0538 A80-28352

DAMPING
NT VIBRATION DAMPING
NT VISCOELASTIC DAMPING
NT VISCOUS DAMPING
Wing-body pitch damping at arbitrary Mach number
[AIAA PAPER 80-1001] p0468 A80-43284
Measurement and prediction of the aerodynamic damping of compressor blades
[OWERA, TP NO. 1900-99] p0622 A80-53204
Damping in tapered annular seals for an incompressible fluid
[NASA-TP-1646] p0299 A80-19495
Apparatus for damping operator induced oscillations of a controlled system --- using adaptive filters to damp oscillations in a flight control system
[NASA-CASE-TRC-11041-1] p0296 A80-20408
Damping in ring seals for compressible fluids
[p557 A80-29716
Reduction in swing of a somber body washed from the sea by a helicopter
[ARL/RESEARCH-395] p0608 A80-31668

DAMPING FACTOR
U DAMPING
DAMPING IN PITCH
U DAMPING
U PITCH (INCLINATION)
DAMPING IN ROLL
U DAMPING
U ROLL
DAMPING IN YAW
U DAMPING
U YAW
DAMPING TESTS
Damping effects in joints and experimental tests on rivoted specimens
p0253 A80-19584

DAMPRESS
U MOISTURE CONTENT
DANGER
U HAZARDS
DARK ADAPTATION
Helicopter electro-optical system display requirements. 3: The effects of CBT display size and luminance on dark adaptation of helicopter pilots
[AD-A088527] p0635 A80-32391
DARK TURBOPROP ENGINES
U TURBOPROP ENGINES
DASSAULT AIRCRAFT
U MIRAGE AIRCRAFT
U MIRAGE 3 AIRCRAFT
The development of the world's first triengine business jet, the Myster Falcon 50
p0200 A80-27386
The avionics computer program: Practical experiences with a methodology --- Mirage F1 and Mirage 200 aircraft
p0112 A80-14037
The development of the world's first triengine business jet, the Myster Falcon 50
p0594 A80-31316
DASSAULT AIRCRAFT
U MIRAGE 3 AIRCRAFT
D DATA ACQUISITION
Real-time data acquisition system for the NASA Langley transonic dynamics tunnel
p0013 A80-12621
Use of an 'off-the-shelf' data acquisition system for wind tunnel data processing
p0013 A80-12622
Experimental techniques developed at ONERA for advanced compressor testing
[pOB80-806207] p0115 A80-13060
Concerning the information efficiency of aerodynamic experiments
p0888 A80-17671
Control and data acquisition aircraft for ACM flight tests --- Air Launched Cruise Missile
[AIAA 80-0446] p0200 A80-26950
Are we spending too much on flight test instrumentation
p0205 A80-27229
A low cost airborne data acquisition system
p0205 A80-27231
A second generation instrumentation system for measuring cross coupling derivatives --- from wind tunnel data
p0265 A80-29502
Experiences of a 50 MBPS video recording and processing system for FLIR images
p0323 A80-38413
Unsteady pressure measurements and data analysis techniques in axial-flow compressors
p0342 A80-36143
Processing and analysis of the data from a two spool gas turbine engine
p0343 A80-36149
Determination of instrumentation errors from measured data using maximum likelihood method
[UNA 80-1602] p0518 A80-48593
ATC separation standards
p0570 A80-48190
Navy combat Search and Rescue
p0580 A80-50224
Analysis of low-speed helicopter flight test data
[AD-A074141] p0130 A80-15079
Maximum likelihood identification of aircraft parameters with unsteady aerodynamic modelling
[AD-A075226] p0167 A80-17066
The accelerometer methods of obtaining aircraft performance from flight test data dynamic performance testing
[AD-A075226] p0178 A80-17066
Wind tunnel and free flight model identification experience
p0291 A80-19103
Evaluation of an improved parachute test data acquisition system
[AD-A080240] p0365 A80-22268
Wind tunnel investigation of an all flaps orifice air data system for a large subsonic aircraft
--- conducted in a langley 6 foot subsonic pressure tunnel
[NASA-TP-1642] p0364 A80-23304

A-139
An approach to DABS data link avionics for general aviation --- Discrete Address Beacon System

The Discrete Address Beacon System data link --- surveillance and communication system for ATC

DABS data link avionics terminal

Potential use of high frequency data transmission for oceanic air traffic control improvement

Enhanced Terminal Information Services (ETIS) utilizing the Discrete Address Beacon System [DABS] data link-concept description. [AD-A073205]

Data link: The key to improvements in civil/military air traffic management?

Discrete Address Beacon System (DABS) baseline demand evaluation

Feasibility study for integrated flight trajectory control

Cooperative estimation of targets by multiple aircraft

Discrete Address Beacon System (DABS) front end processor on route computer complex protocol

DATA MANAGEMENT

ASFT Test Instrumentation System --- Aeropropulsion Systems Test Facility

Airborne integrated communications system

Discrete Address Beacon System (DABS) --- A flexible data handling system for P-15 software performance evaluation

Flight data management using the terminal information processing system

Improved gas turbine engine maintenance through management and analysis of engine performance data

Interferometer design and data handling in a high-vibration environment. I - Interferometer design

Interferometer design and data handling in a high-vibration environment. II - Data handling

Aircraft simulation data management - A prototype system

R-JA EMP evaluation program [AD-A081725]

DATA PROCESSING

MFG ELECTRONIC MANAGEMENT SYSTEM

MFG DATA CORRELATION

MFG DATA REDUCTION

MFG DATA SHOOTING

MFG DATA STORAGE

MFG MULTIPROCESSING

MFG PARALLEL PROCESSING

MFG PIPELINING

MFG SIGNAL ANALYSIS

MFG SIGNAL PROCESSING

MFG VOICE DATA PROCESSING

Processing noise and vibration data for gas turbine engine development

Use of an 'off-the-shelf' data acquisition system for wind tunnel data processing

Determination of the aerodynamic characteristics of a flight vehicle from onboard measurement data

A second generation instrumentation system for measuring cross coupling derivatives --- from wind tunnel data

Advanced digital data processing for onboard missile guidance and control

A-140
On supersonic flow with attached shock waves over delta wings

Delta wing of optimal configuration in supersonic flow

Steady flow over the pressure side of a piecewise-flat delta wing with supersonic leading edges

Analytical investigation of aerodynamic characteristics of highly swept wings with separated flow

Investigation of leading-edge devices for drag reduction of a 60-deg. delta wing at high angles of attack

Conical cambered delta wings in supersonic flow.

Streamwise development of the flow over a delta wing

Application of the variational-difference method of straight lines to the calculation of wing middle surface deformation

Hypersonic slipflow of a viscous gas over a slender delta wing

Delta wing of optimal configuration in supersonic flow

Calculation of the supersonic flow past a winged bielliptical body

The nonlinear supersonic potential flow over delta wings

Experimental investigation of the interference-free flow field around a lifting wing-body model to establish cross flow characteristics for ventilated wind tunnel walls at low supersonic Mach numbers

Analysis of the nonuniqueness of solutions to the problem of flow separation for small-aspect ratio delta wings

Numerical modeling of supersonic flow near a thin delta wing with discontinuous edge

Calculation of minimum-weight and maximum-rigidity structures in the presence of design constraints

Similarity of the aerodynamic characteristics of delta wings at supersonic speeds

The delta wing in oscillatory gusts

Conically cambered delta wings in supersonic flow, I - Basic solutions

Reflex cambered delta wings with leading edge separation

Conically cambered delta wings in supersonic flow, II - Optimal solutions

Types of leeside flow over delta wings

Stationary flow past the lower surface of a piecewise-planar delta wing with supersonic leading edges

Measurement of shock waves around a delta-wing sailplane

Careful numerical study of flowfields about asymmetric external conical corners

Non-equilibrium flow over delta wings with detached shock waves

Performance improvement of delta wings at subsonic speeds due to vortex flaps

A vortex-lattice method for the calculation of the nonsteady separated flow over delta wings

Calculation of the supersonic flow past a slender delta wing at angles of attack and sideslip

Contribution to the theory of supersonic flow past three-dimensional wings

Aerodynamic characteristics of configurations consisting of half-planes and flat delta wings with supersonic leading edges

Limiting values of the lift coefficient of lifting bodies with a flat surface at supersonic speeds

Contribution to the theory of the small-aspect-ratio wing in supersonic flow

Flow-around small-aspect-ratio delta wing with vortex "bursting"

Overall aerodynamic characteristics of caret and delta wings at supersonic speeds

Leading edge vortex-flags experiments on a 74 deg delta wing

Normal force derivative and center of pressure movement due to Mach number on wing-body combinations with triangular wings of the same span and different aspect ratios at supersonic speeds

Aerodynamic characteristics of a hypersonic research airplane concept having a 70 deg swept double-delta wing at Mach numbers from 0.80 to 1.20, with summary of data from 0.20 to 6.0 Langley 8-ft transonic wind tunnel

Summary of theoretical and experimental investigations of vortex lift at high angles of attack

Aerodynamics of the new generation of combat aircraft with delta wings

Lee side flow over slender delta wings of finite thickness

Calculations by a first order theory of supersonic flow around delta wings

Supersonic pitch damping of a delta wing aircraft determined from flight measurements

Density (mass/volume)

DTLXVEB

DELTA BODOLATIOB

DELTA DIBT AIBCBAFT

DELTA WIBGTS

DELTA DIIGSEB AIBCBAFI

0 p-102 AIBCBAFT '

0 NT HEiPOHS DEIIVEET

Delta multiplex system DI 15-60

DELTA MODULATION

Delta wing at supersonic speeds with leading-edge separation

Delta multiplex system DI 15-60

Stationary flow past the lower surface of a piecewise-planar delta wing with supersonic leading edges

Delta multiplex system DI 15-60

A vortex-lattice method for the calculation of the nonsteady separated flow over delta wings

Calculation of the supersonic flow past a slender delta wing at angles of attack and sideslip

Contribution to the theory of supersonic flow past three-dimensional wings

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Aerodynamic characteristics of configurations consisting of half-planes and flat delta wings with supersonic leading edges

Limiting values of the lift coefficient of lifting bodies with a flat surface at supersonic speeds

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Overall aerodynamic characteristics of caret and delta wings at supersonic speeds

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Normal force derivative and center of pressure movement due to Mach number on wing-body combinations with triangular wings of the same span and different aspect ratios at supersonic speeds

Aerodynamic characteristics of a hypersonic research airplane concept having a 70 deg swept double-delta wing at Mach numbers from 0.80 to 1.20, with summary of data from 0.20 to 6.0 --- Langley 8-ft transonic wind tunnel

Summary of theoretical and experimental investigations of vortex lift at high angles of attack

Aerodynamics of the new generation of combat aircraft with delta wings

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A vortex-lattice method for the calculation of the nonsteady separated flow over delta wings

Calculation of the supersonic flow past a slender delta wing at angles of attack and sideslip

Contribution to the theory of supersonic flow past three-dimensional wings

Contribution to the theory of supersonic flow past three-dimensional wings

Aerodynamic characteristics of configurations consisting of half-planes and flat delta wings with supersonic leading edges

Limiting values of the lift coefficient of lifting bodies with a flat surface at supersonic speeds

Contribution to the theory of the small-aspect-ratio wing in supersonic flow

Flow-around small-aspect-ratio delta wing with vortex "bursting"

Overall aerodynamic characteristics of caret and delta wings at supersonic speeds

Leading edge vortex-flags experiments on a 74 deg delta wing

Normal force derivative and center of pressure movement due to Mach number on wing-body combinations with triangular wings of the same span and different aspect ratios at supersonic speeds

Aerodynamic characteristics of a hypersonic research airplane concept having a 70 deg swept double-delta wing at Mach numbers from 0.80 to 1.20, with summary of data from 0.20 to 6.0 --- Langley 8-ft transonic wind tunnel

Summary of theoretical and experimental investigations of vortex lift at high angles of attack

Aerodynamics of the new generation of combat aircraft with delta wings

Lee side flow over slender delta wings of finite thickness

Calculations by a first order theory of supersonic flow around delta wings

Supersonic pitch damping of a delta wing aircraft determined from flight measurements

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DELTA DIIGSEB AIBCBAFI

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A vortex-lattice method for the calculation of the nonsteady separated flow over delta wings

Calculation of the supersonic flow past a slender delta wing at angles of attack and sideslip

Contribution to the theory of supersonic flow past three-dimensional wings

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Aerodynamic characteristics of configurations consisting of half-planes and flat delta wings with supersonic leading edges

Limiting values of the lift coefficient of lifting bodies with a flat surface at supersonic speeds

Contribution to the theory of the small-aspect-ratio wing in supersonic flow

Flow-around small-aspect-ratio delta wing with vortex "bursting"

Overall aerodynamic characteristics of caret and delta wings at supersonic speeds

Leading edge vortex-flags experiments on a 74 deg delta wing

Normal force derivative and center of pressure movement due to Mach number on wing-body combinations with triangular wings of the same span and different aspect ratios at supersonic speeds

Aerodynamic characteristics of a hypersonic research airplane concept having a 70 deg swept double-delta wing at Mach numbers from 0.80 to 1.20, with summary of data from 0.20 to 6.0 --- Langley 8-ft transonic wind tunnel

Summary of theoretical and experimental investigations of vortex lift at high angles of attack

Aerodynamics of the new generation of combat aircraft with delta wings

Lee side flow over slender delta wings of finite thickness

Calculations by a first order theory of supersonic flow around delta wings

Supersonic pitch damping of a delta wing aircraft determined from flight measurements

Density (mass/volume)
Investigations of an axial flow compressor with tandem cascades [AIAA PAPER 80-0739] p0450 A00-62172
Impact of aircraft vs logistics characteristics on operational readiness [AIAA PAPER 80-1820] p0469 A00-63933
Preliminary design of a very advanced technology light twin for the mid-80's [AIAA PAPER 80-1863] p0471 A00-63309
Economics - The performance parameter for large airplanes [AIAA PAPER 80-1863] p0471 A00-63309
Concerning the design of spherical bearings [AIAA PAPER 80-1863] p0471 A00-63309
The objective necessity of the fail-safe design philosophy [AIAA PAPER 80-1863] p0471 A00-63309
Design synthesis of an advanced technology agricultural aircraft for the 1979 AIAA/Remax design competition [AIAA PAPER 80-1048] p0513 A00-65743
Determination of aircraft take-off weight in the preliminary design stage [AIAA PAPER 80-1048] p0527 A00-67186
Analytic design of turbine blade airfoil [AIAA PAPER 80-1048] p0565 A00-67829
Air terminal design - Decentralization and shape [AIAA PAPER 80-1048] p0657 A00-66975
Air traffic density and distribution measurements [AIAA PAPER 80-1048] p0657 A00-66975
Analysis of fuel-conservative curved decelerating mechanism of turbine engine lubricant deposition [AIAA PAPER 80-1048] p0660 A00-67006
Air deployment of satellite-tracked drifters [AIAA PAPER 80-1048] p0660 A00-67006
Density and viscosity of jet fuels [AIAA PAPER 80-1048] p0660 A00-67006
New trends and possibilities of propeller [AIAA PAPER 80-1048] p0758 A00-69832
Parameter selection for aerodynamic design of propellers [AIAA PAPER 80-1048] p0758 A00-69832
Design considerations for high-lift and CTOL jet aircraft [AIAA PAPER 80-1048] p0758 A00-69832
Experimental evaluation of active and passive means of alleviating rotor impulse noise in descent flight [NASA-CR-159188] p0774 A00-16839
Design for the future - architecture of ATC systems [NASA-TM-80096] p0772 A00-16071
Design considerations for attaining 200-knot test velocities at the aircraft landing loads and traction facility [NASA-TM-80096] p0772 A00-16071
The A-10 and design-to-cost: How well did it work? [NASA-CR-159355] p0774 A00-15182
Development of mainshaft-high-speed cylinder roller bearings for gas turbine engines [NASA-CR-159355] p0780 A00-13028
Descriptive analysis of fuel-conservative curved decelerating approach trajectories for powered-lift and CTOL jet aircraft [NASA-TM-1650] p0231 A00-19022
Design analysis - Singular values and feedback - Design examples - For CH-47 helicopter [NASA-CR-159355] p0105 A00-12717
New trends and possibilities of propeller development [NASA-CR-159355] p0105 A00-12717
Parameter selection for aerodynamic design of propellers [NASA-CR-159355] p0105 A00-12717
Design solutions for highly loaded stages of radial compressors [NASA-CR-159355] p0105 A00-12717
The proposed Boeing Supersonic Wind Tunnel high Reynolds number insert [NASA-CR-159355] p0105 A00-12717
Solution of a problem of analytical design -- applied to aircraft and optical multiscattered dynamic systems [NASA-CR-159355] p0105 A00-12717
Economic life criteria for metallic airframes [NASA-CR-159355] p0105 A00-12717
The energy problem - Its effect on aircraft design. II - - Advances in aircraft design [NASA-CR-159355] p0386 A00-37429
The munition - The case for a solar powered aircraft [NASA-CR-159355] p0386 A00-37429
Design for the future - architecture of ATC systems [NASA-CR-159355] p0386 A00-37429
Design of air-cooled jet engine testing facilities [NASA-CR-159355] p0386 A00-37429
A-144
Influence of the heterogeneity of flow at the rotor outlet on the performance of the diffuser of a centrifugal compressor
[ONERA, TP NO. 1980-40] p0044 A80-406080
Performance variations in high aspect ratio subsonic diffusers due to geometrical constraints in supersonic tactical aircraft inlet installations
[ATAA PAPER 80-1106] p0047 A80-41180
The hybrid diffuser --- for gas turbine engines
[ASHE PAPER 80-CT-136] p0062 A80-42249
An investigation of vane-inlet diffusers at high swirl
[ASHE PAPER 80-CT-108] p0063 A80-42260
Study of combined operation of self-evacuating vortex tube with diffuser p0021 N80-10085

DIFFUSION

BY ATMOSPHERIC DIFFUSION

Diffusion of air in humid air into the adhesive layer of bonded metal joints [NAB-LIB-TRANS-1903] p0039 N80-028497

DIFFUSION BONDING

U DIFFUSION WELDING

DIFFUSION EFFECT

U DIFFUSION

DIFFUSION FLAMES

Local linearization in turbulent diffusion flames p0109 A80-26619

DIFFUSION WELDING

Diffusion bonding as a production process --- Book p0011 A80-12076
Diffusion bonding -- Aerospace applications p0011 A80-12081
Electron beam and diffusion welding as an economic procedure for building Airbus-fleet tracks p0061 A80-16970
NAVIST pushes SFP/DB for structures --- in naval aircraft design and construction p0189 N80-24739
Design concepts of laminar flow Control (LFC) wing concepts using superplastics forming and diffusion bonding (SFP/DB) [NASA-CR-159220] p0479 N80-26293

DIGITAL COMMAND SYSTEMS

Command- and stability systems for aircraft -- A new digital adaptive approach p0052 A80-14824
Roll control by digitally controlled segment spoilers p0140 A80-15156
Variable cycle engine multivariable control synthesis: Control structure definition [AD-1079670] p0243 N80-19117

DIGITAL COMMUNICATION

U POLICEMO COMMUNICATION

DIGITAL COMPUTERS

BY MICROCOMPUTERS

BY MICROCIMPUTERS

Microprocessors and small digital computers for avionics navigation systems p0396 A80-38840
An observer system for sensor failure detection and isolation in digital flight control systems p0111 N80-14023
Fire control for air-to-air gunnery in high performance fighter aircraft p0256 N80-19841

DIGITAL DATA

A fiber-optic link for high-speed, DDAS-to-computer data transmission --- Digital Data Acquisition System from ramjet engine test cell to base central data processing center p0014 A80-12637
DABS data link avionics terminal p0380 A80-37703
Reliability and maintainability improvement program for the A-6A/AV-8A V/STOL static display set. Volume I: Modifications to digital display indicator ID=1351/AQ=30(v) [AD-A185309] p0590 N80-30306

DIGITAL FILTERS

Advanced signal processing concepts for multi-function radio systems --- in airborne receiver design
DOSBIBSIOHAL STABILITY

DIGITAL TECHNIQUES

The digital control system as part of an integrated accessory fit for future engines

The USAF stability and control digital datcom

Volume 3: Plot module

[DOSBIBSIBS] p0350 H80-22321

Digital Avionics Information System (DAIS): Life cycle cost impact modeling - system reliability, maintainability, and cost model (BCMC): Users' guide

[DOSBIBSIBS] p0647 H80-33405

DIGITAL TECHNIQUES

Avionics software and equipment

Application of advanced digital techniques and displays to the L-1011 flight engineer's station

Air traffic control in a digital world

Integrated system design - DAIS --- Digital Avionics Information System

Digital Flight Control System /DFCS/ multiep mode development

Advanced digital avionics for the DC-9 Super 80

An Integrated Sensory Subsystem (ISS) for advanced VTOL aircraft

Aircraft landing digital control system

Flight flutter testing

Advances in Guidance and Control Systems Using Digital Techniques

[ADAB-GP-274] p0011 H80-14017

State of the art for digital avionics and controls, 1978

A flight control system using the DAIS architecture

[ADAB-GP-274] p0111 H80-14018

Architecture -- avionics applications

Recent advances in fibre optics for high-intensity digital control systems

[ADAB-GP-274] p0111 H80-14025

Technical evaluation report on the 28th Guidance and Control Panel Symposium on Advances in Guidance and Control Systems Using Digital Techniques

[ADAB-GP-274] p0136 H80-15140

Application of the concept of dynamic trio control to automatic landing of carrier aircraft --- utilizing digital feedforward control

[ADAB-GP-274] p0204 H80-19126

Deconvolution, mechanizing and testing of a digital active flutter suppression system for a modified B-52 wind-tunnel model

[ADAB-GP-274] p0252 H80-19566

Engineering of control systems and applications on control law design

p0308 H80-21341

Digital flight control research using microprocessor technology

[ADAB-GP-274] p0649 H80-33405

DIHYDROXIDES

p0053 A80-14950

The study of an RNF dipole antenna type simulator

[DOSBIBSIBS] p0311 H80-21679

DIRECT LIFT CONTROLS

In-flight measured characteristics of combined flap-spoiler direct lift controls

p0102 H80-15165

Direct force control and testing

p0106 H80-21348

In-flight handling qualities investigation of Airbuses A 310 DLC. Configurations on landing approach using the DYLR-FPS 320 variable stability aircraft

p0348 H80-22319

The design of an aircraft automatic ride-smoothing systems using direct-lift control

[RAP-TB-79045] p0422 H80-24332

DIRECT POWER GENERATORS

[p0211] H80-29594

MAGNETIC FIELD GENERATORS

HELIX CIRCUIT BATTERIES

DIRECTOR PANELS (RADAR)

U RADIO DIRECTION FINDERS

DIRECTIONAL ANTENNAS

BY DIPOLAR ANTENNAS

BY UPHONIC ANTENNAS

BY LOOPE ANTENNAS

BY LEVER ANTENNAS

BY LOOP ANTENNAS

BY SLOT ANTENNAS

BY STEERABLE ANTENNAS

DIRECTOR CONTROL

BY THRUST VECTOR CONTROL

Variable-sweep optimization --- for hodograph-vector-control concept in maneuvering flight

p0051 A80-14809

Pilot assessment of two computer-generated display formats for helicopter instrument approach

p0350 H80-22321

DIRECTOR SOLIDIFICATION (CRYSTALS)

Component evaluation and engine demonstration of quartz-gamma-prime-delta B.S. estetic solid turbine blades

p0003 A80-10289

DIRECTORIAL STABILITY

BY GYROSCOPIC STABILITY

Exploratory investigation of the effects of vortex bursting on the high angle-of-attack lateral-directional stability characteristics of highly-swept wings

[DOSBIBSIBS] p0201 A80-26960

Thrust vectoring to eliminate the vertical stabilizer --- to provide directional stability for f-111 aircraft while decreasing radar detectability

[AD-A079852] p0237 H80-19077

The flying qualities of aircraft with augmented longitudinal and directional stability

[AD-A079852] p0308 H80-21343

DIRECTIVES

U AIRSHIPS

DISCHARGE COEFFICIENT

Correlation of thrust and discharge losses for chemically nonequilibrium flows in jet-engine nozzles

p0525 A80-46857

DISCHARGERS

Experimental study of electrostatic dischargers for helicopters

[ADAB-GP-274] p0210 A80-28947

DISCORDANT DEVICES

Ice-release coating for disconnect switches

[ADAB-GP-274] p0556 H80-29594
DISPLAY SYSTEMS

Effects of varying visual display characteristics of the T-37, a T-37 flight simulator.
[AD-A0714010] p0144 N80-15180

Deforestation: High-resolution projection display for air traffic control purposes.
[AD-A0768023] p0177 N80-17051

Display impact evaluation report on the Electronic Tabular Display Subsystem (ETDS).
[AD-A0780488] p0185 N80-17357

Early flight test experience with Cockpit Displayed Traffic Information (CDTI).
[NASA-TM-80221] p0224 N80-18037

The effect of viewing time, time to encounter, and practice on perception of aircraft separation on a cockpit display of traffic information.
[AD-A0719173] p0224 N80-18038

Computer synthesis of flight simulation visuals with multicolor electrochromic dot-matrix display.
[ARL/STR/C-61] p0226 N80-18053

Simulation of a night vision system for low level helicopter operations using helmet mounted display device.
[AD-A0771817] p0255 N80-19832

Development of a color alphanumeric liquid crystal display -- suitable for aircraft command and control.
[AD-A0792689] p0292 N80-20266

The graphical display of multi-dimensional aerodynamic flow field data.
[AD-A0808559] p0303 N80-21288

Pilot assessment of two computer-generated display formats for helicopter instrument approach.
[NASA-TM-80151] p0350 N80-22321

Flight test evaluation of airborne tire pressure indicating systems.
[AD-A081598] p0364 N80-23305

Visualization dependent System: Computer Generated Imagery (CGI) engineering interface.
[AD-A080931] p0364 N80-23306

Hardware/Software dynamic flight simulator design and multipurpose crew station concept design and development plan.
[AD-A082750] p0368 N80-23335

Design of an improved weather contouring device.
[AD-A082750] p0428 N80-29495

Flight investigation of cockpit-displayed traffic information utilizing coded symbology in an advanced operational environment.
[AD-A091520] p0496 N80-27360

System description and analysis: Part 1: Feasibility study for helicopter/VTOL wide-angle simulation image generation display system.
[NAVY-77-15276] p0499 N80-27397

Flight evaluation of a radar cursor technique as an aid to airborne radar approaches.
[AD-A084015] p0531 N80-28331

Advanced subsystem status monitor.
[AD-A085135] p0534 N80-28351

A mathematical representation of an advanced helicopter for piloted simulator investigations of control system and display variations.
[NAVY-8120] p0536 N80-28371

A head-up display format for application to transport aircraft approach and landing.
[NAVY-81199] p0546 N80-29295

Multicolor electrochromic dot-matrix display investigation.
[AD-A085453] p0555 N80-29465

[AD-A0866167] p0556 N80-29568

Simulation development and evaluation of an improved longitudinal velocity vector control wheel steering mode and electronic display format.
[NAVY-TP-1664] p0590 N80-30305

Reliability and maintainability improvement program for the AV-8 A/FAT-8A barrier head-up display set. Volume 1: Modifications to digital display indicator IP-1351/AVQ-30-v.
[AD-A085590] p0590 N80-30306

Helicopter electro-optical systems display requirements, 2: Performance of helicopter pilots when using a low-light-level television system during simulated map-of-the-earth flight.
[AD-A0868555] p0590 N80-30308

A simulator study of control and display augmentations for helicopters.

Preliminary evaluation of time and distance spacing cues using a cockpit displayed target.
[NAVY-81794] p0630 N80-32362

U DISPLAY DEVICES

DISSIPATION

U ENERGY DISSIPATION

A numerical simulation of fog dissipation using passive burner lines. I - Model development and comparison with observations. II - Sensitivity experiments.
[AD-A059-16182] p0059 N80-16182

DISSIPATION

U DISSIPATION

DISSIMETRY

U DISTANCE

BT OPTICAL SLANT RANGE

BT RADAR RANGE

A computer program for estimating aircraft landing distance.
[AD-A077169] p0239 N80-19088

DISTANCE MEASURING EQUIPMENT

U RT ALTIMETERS

U OPTICAL RANGE FINDERS

U RADIO ALTIMETERS

U RANGE FINDERS

A pulse compression, precision DME system.

Method for increasing the accuracy of an airborne geodetic radio rangefinder.
[AD-A059-15176] p0054 N80-15176

Precision DME

[DEF PAPER 79 1203] p0259 N80-29041

Establishment criteria for Distance Measurement Equipment (DME) with instrument landing system and/or localizer approach.
[AD-A085100] p0077 N80-13016

A flight investigation of system accuracies and operational capabilities of a general aviation/air transport area navigation system (NAV).
[AD-A0861646] p0362 N80-23288

Havells calibration evaluation with a computer-controlled avionics-data acquisition system.
[AD-A085100] p0430 N80-25287

Precision L-band DME tests.
[AD-A08095] p0645 N80-33388

DISTANCE PERCEPTION

U SPACE PERCEPTION

DISTURBION

U FLUID DISTORTION

DISTRIBUTED PAMETER SYSTEMS

Optimal-control synthesis for systems with distributed parameters in the case of a local performance index.
[AD-A08095] p0617 N80-52008

DISTRIBUTION

U PROPERTY

U ANGULAR DISTRIBUTION

U ANTENNA RADIATION PATTERNS

U DIFFRACTION PATTERNS

U FLOW DISTRIBUTION

U FORCE DISTRIBUTION

U INTERFERENCE LIFT

U LOAD DISTRIBUTION (FORCES)

U MASS DISTRIBUTION

U PRESSURE DISTRIBUTION

U SPATIAL DISTRIBUTION

U STRESS CONCENTRATION

U TEMPERATURE DISTRIBUTION

U VELOCITY DISTRIBUTION

DISTRIBUTIONS

Pneumatic distributor for turbojet engine control system.
[AD-A059-10635] p0004 N80-10635

Pneumatic distributor for turbofan engine control system - T5-154 aircraft.
[AD-A021 N80-10991

DISTURBANCE THEORY

U PROBABILISTIC TREATMENT

Ditching (Landing)

A general statistical approach for using auxiliary information in the development of an impact acceleration injury prediction model.
[AD-A087810] p0019 N80-10828

DIVERGENCE

A weight-minimization problem for a
Some effects of using water as a test fluid in dispersion of sound in a combustion duct by fuel nozzle spray analysis

Study of size distribution of oil drops formed in GTE oil system lines [AD-A087490] p0599 H80-31350

Full-scale wind-tunnel investigation of the effects of wing leading-edge modifications on the high angle-of-attack aerodynamic characteristics of a low-wing general aviation airplane [AIAA PAPER 80-1948] p0470 A80-63302

Drop size Study of size distribution of oil drops formed in GTS oil [AD-A086704] p0587 H80-30284

Store separation testing techniques at the Arnold Engineering Development Center. Volume 4: Description of dynamic drop store separation testing [AD-A087890] p0599 H80-31350

Drop Tests: Study of size distribution of oil drops formed in GTS oil system lines p0000 A80-10632

Drop Weight Tests O Drop Tests: Study of size distribution of oil drops formed in GTS oil system lines p0000 A80-10632

Drop tests Store separation trajectory analysis p0211 A80-10088

Dispersion of sound in a combustion duct by fuel droplets and soot particles p108 A80-20953

Some effects of using water as a test fluid in fuel nozzle spray analysis [AIAA PAPER 80-0979] p0093 A80-18269


Dispersion of sound in a combustion duct by fuel droplets and soot particles p108 A80-20953

An analytical and experimental study of a short S-shaped supersonic diffuser of a supersonic inlet [AIAA PAPER 80-0386] p0108 A80-20970

Effect of non-rotating passages on performance of centrifugal pumps and supersonic compressors p0210 A80-27733

Evaluation of an analysis for axisymmetric internal flows in turboachinery ducts p0211 A80-27742

Numerical solution of the steady flow in turbine blade and ducts of arbitrary shape p0255 A80-38253

Some aspects of the thermodynamics of duct jet flows in turboachinery ducts p0211 A80-27742

Heat, mass and momentum transfer through sprays cross flow p0229 H80-18327

Duct Geometry Numerical prediction of compressible potential flow for arbitrary geometries in airliner intake systems p0229 H80-18327

Ducted Bodies Study for conceptual design of VEO, VTO exhaust nozzle [NASA CR-152338] p0646 A80-33397

Ducted Fan Engines Theory of by-pass ducted-fan engines --- Russian book p0193 A80-26349

New developments in US military fighter engines p0124 A80-34217

Advanced technology duct burner for variable cycle engines [AIAA PAPER 80-1201] p0400 A80-38966

Aero-acoustic tests of duct-burning turbofan exhaust nozzles [NASA CR-162204] p0228 A80-10204

The analysis of sound propagation in jet engine ducts using the finite difference method [AD-A074233] p0125 A80-14853

Experimental evaluation of a low emissions high performance duct burner for Variable Cycle Engines (VCE) [NASA CR-159694] p0180 A80-17074

Ducted Fans Fan noise source location from field measurements [AIAA PAPER 80-1054] p0394 A80-38648

Cross flow fan experiment development and finite element modeling p0210 A80-10098

Acoustic analysis of aft noise reduction techniques measured on a subsonic tip speed 50.8 cm (twenty inch) diameter fan --- quiet engine program [NASA CR-138891] p0133 A80-15102

Investigation of fan blades shroud mechanical damping [AD-A078439] p0248 A80-19120

On the sound field generated by a fan in a hard-walled baffled duct with uniform flow [BLD-TR-7604-8] p0470 A80-23106

High bypass turbofan component development. Amendment 1: Small fan redesign [AD-A089067] p0648 H80-33413

Ducted Flow Acoustic analysis of ducted-fan engines p0210 A80-27742

Acoustic analysis of aft noise reduction techniques measured on a subsonic tip speed 50.8 cm (twenty inch) diameter fan --- quiet engine program [NASA CR-138891] p0133 A80-15102

Investigation of fan blades shroud mechanical damping [AD-A078439] p0248 A80-19120

On the sound field generated by a fan in a hard-walled baffled duct with uniform flow [BLD-TR-7604-8] p0470 A80-23106

High bypass turbofan component development. Amendment 1: Small fan redesign [AD-A089067] p0648 H80-33413

Ducts ( Liquids) Study of size distribution of oil drops formed in GTS oil system lines p0000 A80-10632

Dispersion of sound in a combustion duct by fuel droplets and soot particles p108 A80-20953

Some effects of using water as a test fluid in fuel nozzle spray analysis [AIAA PAPER 80-0980] p0093 A80-18269

Investigation of critical burning of fuel droplets [NASA CR-159697] p0072 H80-12142

Aerodynamic investigation of C-16L leading edge modifications on cruise drag reduction, volume 1. [AD-A0776610] p0178 H80-17063

Aerodynamic investigation of C-16L leading edge modifications on cruise drag reduction, volume 2 [AD-A0776688] p0238 H80-19081

DROOPED WINGS Effects of discontinuous drooped wing leading-edge modifications on the spinning characteristics of a low-wing general aviation airplane [AIAA PAPER 80-1943] p0470 A80-63301

Full-scale wind-tunnel investigation of the effects of wing leading-edge modifications on the high angle-of-attack aerodynamic characteristics of a low-wing general aviation airplane [AIAA PAPER 80-1948] p0470 A80-63302

DROP SIZE Study of size distribution of oil drops formed in GTS oil p0021 H80-10088

DROP TESTS Store separation trajectory analysis [AD-A086704] p0587 H80-30284

Store separation testing techniques at the Arnold Engineering Development Center. Volume 4: Description of dynamic drop store separation testing [AD-A087890] p0599 H80-31350

DROP TRANSFER Study of size distribution of oil drops formed in GTS oil system lines p0000 A80-10632

DRAGULATORS --- conducted in langley 16 foot transonic tunnel [NASA TN-80129] p0022 H80-10106

The minimum induced drag of aerfoils [NASA-121] p0126 H80-15038

Direct side force and drag control with the aid of pylon split flaps [NASA-121] p0126 H80-15038

Wing flapping with minimum energy --- minimize the drag for a bending moment at the wing root [NASA-121] p0126 H80-15038

Aerodynamic investigation of C-16L leading edge modifications on cruise drag reduction, volume 1. [AD-A0776610] p0167 H80-16035

Aerodynamic investigation of C-16L leading edge modifications on cruise drag reduction, volume 2 [AD-A0776688] p0238 H80-19081

DRAGULATORS U HC DEVICES

DRAINAGE Environment-compatible and economic airport drainage p0505 A80-44116

DRAINING U DRAINAGE

DRAWINGS NT ENGINEERING DRAWINGS

DRILLING Drilling composites with gun drills p0329 A80-34609

Piston hole quality, volume 1: design analysis of fatigue life and drilling techniques for fasteners in aircraft production [AD-A077059] p0252 H80-19567

DROUGHERS O TOWED BODIES

DROON AIRCRAFT Study of the feasibility aspects of flight testing an aerodynamically tailored forward swept research wing on a BQM-34P drone vehicle [NASA CR-159149] p0027 H80-10195

Propulsion options for the NI SPOT long endrance drone airship [AD-A074595] p0121 H80-14132

DROONE HELICOPTERS U DRONE AIRCRAFT U HELICOPTERS

DROONE VEHICLES NT DRONE AIRCRAFT

DROOPED AIRFOILS Effects of discontinuous drooped wing leading-edge modifications on the spinning characteristics of a low-wing general aviation airplane [AIAA PAPER 80-1943] p0470 A80-63301

Full-scale wind-tunnel investigation of the effects of wing leading-edge modifications on the high angle-of-attack aerodynamic characteristics of a low-wing general aviation airplane [AIAA PAPER 80-1948] p0470 A80-63302

DROP SIZE Study of size distribution of oil drops formed in GTS oil p0021 H80-10088

DROP TESTS Store separation trajectory analysis [AD-A086704] p0587 H80-30284

Store separation testing techniques at the Arnold Engineering Development Center. Volume 4: Description of dynamic drop store separation testing [AD-A087890] p0599 H80-31350

DROP TRANSFER Study of size distribution of oil drops formed in GTS oil system lines p0000 A80-10632

DROP WEIGHTS O DROP TESTS: Study of size distribution of oil drops formed in GTS oil system lines p0000 A80-10632

DROPS ( LIQUIDS) Study of size distribution of oil drops formed in GTS oil system lines p0000 A80-10632

Dispersion of sound in a combustion duct by fuel droplets and soot particles p108 A80-20953

Some effects of using water as a test fluid in fuel nozzle spray analysis [AIAA PAPER 80-0979] p0093 A80-18269

Investigation of critical burning of fuel droplets [NASA CR-159697] p0072 H80-12142
Fracture mechanics in engineering application: Proceedings of the International Conference, Bangalore, India, March 26-30, 1974

Material considerations for gas turbine engines

Development of improved-durability plasma sprayed ceramic coatings for gas turbine engines [NASA-TP-81512]

Project filter holder. Tests on 25 mm dust filter holders

Possible methods for removing small airborne particles from the flow in the 5 meter pressurized low-speed wind tunnel [RAE-TR-80-1026]

Dynamic characteristics of aircraft and their flutter certification

Ducts

Acoustic Ducts
Air Ducts
Annular Ducts

Evaluation of seating and restraint systems conducted during fiscal year 1978 [AD-A074888]

Wind shear mechanism

Durability

Influence of burning on the structure and durability of elements operating under variable loads

Dynamic loads

Aerodynamic Ducts
Aircraft Stability
Attitude Stability
Boundary Layer Stability
Combustion Stability
Control Stability
Directional Stability
Drop Load
Dynamic Pressure
Dynamic Stability
Flame Stability
Flow Characteristics
Flow Distribution
Flow Stability
Flow Velocity
Frequency Stability
Friction Drag
Gyroscopic Stability
Hovering Stability
Interference Drag
Interference Lift
Jet Lift
Lateral Stability
Lift
Longitudinal Stability
Low Speed Stability
Machnumber Stability
Minimum Drag
Motion Stability
Pressure Drag
Rotary Stability
RRotor Lift
Supersonic Drag
Transient Response
Viscous Drag

Utilization of dynamic simulators of aircraft turbine engines

On the dynamics of compressor surge

Solution of a problem of analytical design --- applied to aircraft and optimal multicriterial dynamic systems

Bifurcation analysis of aircraft high angle-of-attack flight dynamics [AIAA 80-1599]

Analytical complexes and the analysis of the dynamics of objects

An application of system identification to flutter testing

Dynamic identification of light aircraft structures and their flutter certification

Dynamic Environmental Qualification Techniques

Application of MIL-STD-810C dynamic requirements to USAF avionics procurements

Dynamic environments and test simulation for qualification of aircraft equipment and external stores

Aircraft parameter identification methods and their applications: Survey and future aspects

Simulation for integration with dynamic tests of the logical elements of principal onboard computers

Wessex helicopter/sonar dynamic study NRL program description and operation [AHL/AERO-NOTE-385]

Dynamical control

Improvement of control system dynamics of means of additional hydraulic load feedback

Total aircraft flight-control system - Balanced open- and closed-loop control with dynamic trim

The promise of multicyclic control - for helicopter vibration reduction

The dynamics of helicopter flight in limiting conditions

Pseudo-steady state analysis of nonlinear aircraft maneuvers

Analytical investigation of the landing dynamics of a large airplane with a load-control system in the main landing gear [NASA-TP-1555]

Theoretical aerodynamic methods for active control devices

A survey of experimental data on the aerodynamics of controls, in the light of future needs

APFEL experience in active control technology

Pin design with ACT in the presence of strakes

Control integration technology impact - as a basis for improving the combat effectiveness of all tactical aircraft

Application of the concept of dynamic trim control to automatic landing of carrier aircraft --- utilizing digital feedforward control [NASA-TP-1512]

Interactive aided design system for aircraft dynamic control problems [RFB-PE-324/G/PBH/11]

Interactive design system for aircraft dynamic control problems

Active feedback control for stabilization of vibration in rotating machinery (26.034) [SNT/7-13151/T5]

Dynamic loads

Aerodynamic Loads
Blown Loads
Cyclical Loads
Cust Loads
Impact Loads
Landing Loads
Rolling Contact Loads
Shock Loads
Transient Loads
Vibratory Loads
Wing Loading

A dynamic vibration generator for full-scale structures

Dynamic vibration exciter for full-scale structures

Forced vibrations of turbine discs under nonuniform gas flow conditions
Validity of small scale tests for turret/fairing loads and cavity effects p0440 880-25611

Pavement evaluation and overlay design using vibratory nondestructive testing and layered elastic theory. Volume 1: Development procedure [AD-A087188] p0591 880-30808

DYNAMIC MODELS
A multiple transfer function model for air traffic control systems p0153 880-21687

Embracing dynamic model fidelity for improved prediction of turboshaft engine transient performance [AIAA PAPER 80-1083] p0397 880-38900

A computerized VSTOL/small platform landing dynamics investigation model [AD-A073507] p0709 880-13033

General aviation dynamics: The impact of cost recovery A dynamic model of the air transport industry p0488 880-27300

A multiple transfer function model for air traffic control systems p0488 880-27301

DYNAMIC MODULUS OF ELASTICITY
Shock loading on reinforced splice joints of ultra high modulus graphite/epoxy cone frustums --- advanced interconnector structures p0329 880-24011

DYNAMIC PRESSURE
Estimation of dynamic windblast pressure on aircrewman ejection systems [AD-A000575] p0304 880-21297

DYNAMIC PROGRAMMING
Differential games of interception and aerial combat: Solution by differential dynamic programming p0315 880-22232

DYNAMIC PROPERTIES
U DYNAMIC CHARACTERISTICS
DYNAMIC RESPONSE
ST TRANSIENT RESPONSE
Have Bounce --- validation of computer simulations of F-4 dynamic response to multiple runway repairs p0208 880-27202

Non-linear dynamic analysis of rotors by finite element method p0443 880-40730

The effects of inhomogeneities in atmospheric turbulence on the dynamic response of an aircraft [AIAA 80-1614] p0510 880-45904

Flapping response of lifting rotor blades to Spanwise uniform random excitation p0518 880-52221

Flying qualities research for highly augmented aircraft [REE-B-652] p0627 880-10194

A comparison of the pitching and plunging response of an oscillating airfoil [NASA-Cr-3172] p0304 880-11030


Unsteady flow and dynamic response analyses for helicopter rotor blades [NASA-Cr-195190] p0123 880-14355

Application of random time domain analysis to dynamic flight measurements --- B-7 aircraft p0713 880-16226

Initial study of the response of an aircraft to lateral gusts [AIAA-T-79-03] p0181 880-17008

Calculation of natural frequencies and mode shapes of mass loaded aircraft structures p0184 880-17278


Damping in tapered annular seals for an Incompressible fluid [NASA-Tp-1666] p0209 880-19465


Aircraft dynamic response to damaged runways [AAGBD-D-680] p0233 880-25252

UK approach to aircraft dynamic response on damaged and repaired runways [AAGBD-D-680] p0233 880-25252

DYNAMIC STABILITY
ST ATOMIC STABILITY
ST AIRCRAFT STABILITY
ST ATTITUDE STABILITY
ST BOUNDARY LAYER STABILITY
ST COMBUSTION STABILITY
ST CONTROL STABILITY
ST DIRECTIONAL STABILITY
ST PLANE STABILITY
ST FLOW STABILITY
ST FREQUENCY STABILITY
ST GYROSCOPIC STABILITY
ST HEATING STABILITY
ST LATERAL STABILITY
ST LONGITUDINAL STABILITY
ST LOW SPEED STABILITY
ST MAGNETOHYDRODYNAMIC STABILITY
ST MOTION STABILITY
ST ROTARY STABILITY

Stability derivatives of blunt slender cones at high Mach numbers p0408 880-13571

A new look at C sub n beta. ß always slender aircraft flight stability dynamic equilibrium p0504 880-15126

Conditions for exciting natural vibrations of a tricycle rolling along a straight line-latter p0499 880-61421

Influence of optimizing the strength of a structure on the node shapes and frequencies of the normal modes of flight vehicles p0526 880-65677

Research on the stability of an air cushion system [OMSA-238] p0219 880-17985

Dynamics stability derivatives of space shuttle orbiter obtained from wind tunnel and approach and landing flight tests [NASA-TP-1634] p0307 880-21336

Optimization of the mathematical model of a structure p0596 880-31327

Active feedback control for stabilization of vibration in rotating machinery [29,036] p0639 880-32725
Recent development of a jet-diffuser ejector
Integration of ejectors into high-speed aircraft
Some tests on small-scale rectangular throat ejector
Augmenting ejector endwall effects
Entrainment characteristics of unsteady subsonic jets
Principles of fluid-structure interactions
Optimal control of flight vehicle with elastic elements
Elastic waves
Strain energy function
Elastic stability
Elastic constants
High-speed fouling fuels on aircraft fuel system
Natural transonic facility
The use of strip theory in the dynamics of deformable aircraft
The equations of motion of an aircraft embracing its whole-body and deformational degrees of freedom
A suggestion as to a general derivation of the equations of motion for a deformable aircraft for small perturbations which will be most generally acceptable
Elastoelasticity
Elastodynamics
Elastoacoustics
Blister and crack growth
Design of elastomer dampers for a high-speed flexible rotor
Effect of oxidizing fuels on aircraft fuel system
Two-dimensional finite-element analyses of simulated rotor-fragments impacts against rings
Comparison of elastic and elastic-plastic structural analyses for cooled turbine blade airfoils
Free vibrations of a turbomachine rotor as a system of structural rotational symmetry
Symmetric variational formulation of harmonic vibrations problem by coupling primal and dual principles, Application to fluid-structure coupled systems
Study of a stereo electro-optical tracker system for the measurement of model deformations at the national transonic facility
The use of strip theory in the dynamics of deformable aircraft
The equations of motion of an aircraft embracing its whole-body and deformational degrees of freedom
A suggestion as to a general derivation of the equations of motion for a deformable aircraft for small perturbations which will be most generally acceptable
Recent development of a jet-diffuser ejector
Integration of ejectors into high-speed aircraft
Some tests on small-scale rectangular throat ejector
Augmenting ejector endwall effects
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Optimal control of flight vehicle with elastic elements
Elastic waves
Strain energy function
Elastic stability
Elastic constants
High-speed fouling fuels on aircraft fuel system
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A suggestion as to a general derivation of the equations of motion for a deformable aircraft for small perturbations which will be most generally acceptable
Elastoelasticity
Elastodynamics
Elastoacoustics
Blister and crack growth
Design of elastomer dampers for a high-speed flexible rotor
Effect of oxidizing fuels on aircraft fuel system
Two-dimensional finite-element analyses of simulated rotor-fragments impacts against rings
Comparison of elastic and elastic-plastic structural analyses for cooled turbine blade airfoils
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Symmetric variational formulation of harmonic vibrations problem by coupling primal and dual principles, Application to fluid-structure coupled systems
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A suggestion as to a general derivation of the equations of motion for a deformable aircraft for small perturbations which will be most generally acceptable
Elastoelasticity
Elastodynamics
Elastoacoustics
Blister and crack growth
Design of elastomer dampers for a high-speed flexible rotor
Effect of oxidizing fuels on aircraft fuel system
Two-dimensional finite-element analyses of simulated rotor-fragments impacts against rings
Comparison of elastic and elastic-plastic structural analyses for cooled turbine blade airfoils
Free vibrations of a turbomachine rotor as a system of structural rotational symmetry
Symmetric variational formulation of harmonic vibrations problem by coupling primal and dual principles, Application to fluid-structure coupled systems
Study of a stereo electro-optical tracker system for the measurement of model deformations at the national transonic facility
The use of strip theory in the dynamics of deformable aircraft
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A suggestion as to a general derivation of the equations of motion for a deformable aircraft for small perturbations which will be most generally acceptable
Elastoelasticity
Elastodynamics
Elastoacoustics
Blister and crack growth
Design of elastomer dampers for a high-speed flexible rotor
Effect of oxidizing fuels on aircraft fuel system
Two-dimensional finite-element analyses of simulated rotor-fragments impacts against rings
Comparison of elastic and elastic-plastic structural analyses for cooled turbine blade airfoils
Free vibrations of a turbomachine rotor as a system of structural rotational symmetry
Symmetric variational formulation of harmonic vibrations problem by coupling primal and dual principles, Application to fluid-structure coupled systems
Study of a stereo electro-optical tracker system for the measurement of model deformations at the national transonic facility
The use of strip theory in the dynamics of deformable aircraft
The equations of motion of an aircraft embracing its whole-body and deformational degrees of freedom
A suggestion as to a general derivation of the equations of motion for a deformable aircraft for small perturbations which will be most generally acceptable
Elastoelasticity
Elastodynamics
Elastoacoustics
Blister and crack growth
Design of elastomer dampers for a high-speed flexible rotor
Effect of oxidizing fuels on aircraft fuel system
Two-dimensional finite-element analyses of simulated rotor-fragments impacts against rings
Comparison of elastic and elastic-plastic structural analyses for cooled turbine blade airfoils
Free vibrations of a turbomachine rotor as a system of structural rotational symmetry
Symmetric variational formulation of harmonic vibrations problem by coupling primal and dual principles, Application to fluid-structure coupled systems
Study of a stereo electro-optical tracker system for the measurement of model deformations at the national transonic facility
The use of strip theory in the dynamics of deformable aircraft
The equations of motion of an aircraft embracing its whole-body and deformational degrees of freedom
A suggestion as to a general derivation of the equations of motion for a deformable aircraft for small perturbations which will be most generally acceptable
Elastoelasticity
Elastodynamics
Elastoacoustics
Blister and crack growth
Design of elastomer dampers for a high-speed flexible rotor
Effect of oxidizing fuels on aircraft fuel system
Two-dimensional finite-element analyses of simulated rotor-fragments impacts against rings
Comparison of elastic and elastic-plastic structural analyses for cooled turbine blade airfoils
Free vibrations of a turbomachine rotor as a system of structural rotational symmetry
Symmetric variational formulation of harmonic vibrations problem by coupling primal and dual principles, Application to fluid-structure coupled systems
Study of a stereo electro-optical tracker system for the measurement of model deformations at the national transonic facility
The use of strip theory in the dynamics of deformable aircraft
The equations of motion of an aircraft embracing its whole-body and deformational degrees of freedom
A suggestion as to a general derivation of the equations of motion for a deformable aircraft for small perturbations which will be most generally acceptable
Elastoelasticity
Elastodynamics
Elastoacoustics
Blister and crack growth
Design of elastomer dampers for a high-speed flexible rotor
Effect of oxidizing fuels on aircraft fuel system
Two-dimensional finite-element analyses of simulated rotor-fragments impacts against rings
Comparison of elastic and elastic-plastic structural analyses for cooled turbine blade airfoils
Free vibrations of a turbomachine rotor as a system of structural rotational symmetry
Symmetric variational formulation of harmonic vibrations problem by coupling primal and dual principles, Application to fluid-structure coupled systems
Study of a stereo electro-optical tracker system for the measurement of model deformations at the nationa
Evaluation of equipment vulnerability and potential shock hazards — carbon fiber composites. [p0247 H80-19197]

Large-scale fiber release and equipment exposure experiments — aircraft fires [p0247 H80-19198]

Surveys of facilities for the potential effects from the fallout of airborne graphite fibers [p0247 H80-19199]

An investigation of possible electrical hazards of carbon fiber composites [p0538 H80-28442]

Experimental and analytical studies for the NASA carbon fiber risk assessment [p0651 H80-33490]

**ELECTRIC FIELD STRENGTH**

Phenomenology of lighting/aircraft interaction [p0609 H80-31704]

**ELECTRIC FIELDS**

**ST ELECTRICAL SURFACE CURRENTS**

Calculations of lightning return stroke electric and magnetic fields above ground [p0312 H80-21929]

A survey of the high frequency effects associated with the lightning discharge [p0370 H80-22590]

Models for assessing hazards due to lightning [p0609 H80-31708]

**ELECTRIC FILTERS**

**ST DIGITAL FILTERS**

**ST RADAR FILTERS**

**ST TRACKING FILTERS**

**ELECTRICAL GENERATORS**

**ST AC GENERATORS**

**ST MAGNETIC FILTERS**

**ST TURBOGENERATORS**

**ST SOLAR GENERATORS**

**ST TURBINE GENERATORS**

**ELECTRIC FIELD STRENGTH**

Phenomenology of lightning/aircraft interaction [p0609 H80-31704]

**ELECTRIC FIELDS**

**ST ELECTRICAL SURFACE CURRENTS**

Calculations of lightning return stroke electric and magnetic fields above ground [p0312 H80-21929]

A survey of the high frequency effects associated with the lightning discharge [p0370 H80-22590]

Models for assessing hazards due to lightning [p0609 H80-31708]

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**ST DIGITAL FILTERS**

**ST RADAR FILTERS**

**ST TRACKING FILTERS**

**ELECTRICAL GENERATORS**

**ST AC GENERATORS**

**ST MAGNETIC FILTERS**

**ST TURBOGENERATORS**

**ST SOLAR GENERATORS**

**ST TURBINE GENERATORS**

**ELECTRIC FIELD STRENGTH**

Phenomenology of lightning/aircraft interaction [p0609 H80-31704]

**ELECTRIC FIELDS**

**ST ELECTRICAL SURFACE CURRENTS**

Calculations of lightning return stroke electric and magnetic fields above ground [p0312 H80-21929]

A survey of the high frequency effects associated with the lightning discharge [p0370 H80-22590]

Models for assessing hazards due to lightning [p0609 H80-31708]

**ELECTRIC FILTERS**

**ST DIGITAL FILTERS**

**ST RADAR FILTERS**

**ST TRACKING FILTERS**

**ELECTRICAL GENERATORS**

**ST AC GENERATORS**

**ST MAGNETIC FILTERS**

**ST TURBOGENERATORS**

**ST SOLAR GENERATORS**

**ST TURBINE GENERATORS**

**ELECTRIC FIELD STRENGTH**

Phenomenology of lightning/aircraft interaction [p0609 H80-31704]

**ELECTRIC FIELDS**

**ST ELECTRICAL SURFACE CURRENTS**

Calculations of lightning return stroke electric and magnetic fields above ground [p0312 H80-21929]

A survey of the high frequency effects associated with the lightning discharge [p0370 H80-22590]

Models for assessing hazards due to lightning [p0609 H80-31708]

**ELECTRIC FILTERS**

**ST DIGITAL FILTERS**

**ST RADAR FILTERS**

**ST TRACKING FILTERS**

**ELECTRICAL GENERATORS**

**ST AC GENERATORS**

**ST MAGNETIC FILTERS**

**ST TURBOGENERATORS**

**ST SOLAR GENERATORS**

**ST TURBINE GENERATORS**

**ELECTRIC FIELD STRENGTH**

Phenomenology of lightning/aircraft interaction [p0609 H80-31704]

**ELECTRIC FIELDS**

**ST ELECTRICAL SURFACE CURRENTS**

Calculations of lightning return stroke electric and magnetic fields above ground [p0312 H80-21929]

A survey of the high frequency effects associated with the lightning discharge [p0370 H80-22590]

Models for assessing hazards due to lightning [p0609 H80-31708]

**ELECTRIC FILTERS**

**ST DIGITAL FILTERS**

**ST RADAR FILTERS**

**ST TRACKING FILTERS**

**ELECTRICAL GENERATORS**

**ST AC GENERATORS**

**ST MAGNETIC FILTERS**

**ST TURBOGENERATORS**

**ST SOLAR GENERATORS**

**ST TURBINE GENERATORS**

**ELECTRIC FIELD STRENGTH**

Phenomenology of lightning/aircraft interaction [p0609 H80-31704]

**ELECTRIC FIELDS**

**ST ELECTRICAL SURFACE CURRENTS**

Calculations of lightning return stroke electric and magnetic fields above ground [p0312 H80-21929]

A survey of the high frequency effects associated with the lightning discharge [p0370 H80-22590]

Models for assessing hazards due to lightning [p0609 H80-31708]

**ELECTRIC FILTERS**

**ST DIGITAL FILTERS**

**ST RADAR FILTERS**

**ST TRACKING FILTERS**

**ELECTRICAL GENERATORS**

**ST AC GENERATORS**

**ST MAGNETIC FILTERS**

**ST TURBOGENERATORS**

**ST SOLAR GENERATORS**

**ST TURBINE GENERATORS**

**ELECTRIC FIELD STRENGTH**

Phenomenology of lightning/aircraft interaction [p0609 H80-31704]

**ELECTRIC FIELDS**

**ST ELECTRICAL SURFACE CURRENTS**

Calculations of lightning return stroke electric and magnetic fields above ground [p0312 H80-21929]

A survey of the high frequency effects associated with the lightning discharge [p0370 H80-22590]

Models for assessing hazards due to lightning [p0609 H80-31708]

**ELECTRIC FILTERS**

**ST DIGITAL FILTERS**

**ST RADAR FILTERS**

**ST TRACKING FILTERS**

**ELECTRICAL GENERATORS**

**ST AC GENERATORS**

**ST MAGNETIC FILTERS**

**ST TURBOGENERATORS**

**ST SOLAR GENERATORS**

**ST TURBINE GENERATORS**

**ELECTRIC FIELD STRENGTH**

Phenomenology of lightning/aircraft interaction [p0609 H80-31704]

**ELECTRIC FIELDS**

**ST ELECTRICAL SURFACE CURRENTS**

Calculations of lightning return stroke electric and magnetic fields above ground [p0312 H80-21929]

A survey of the high frequency effects associated with the lightning discharge [p0370 H80-22590]

Models for assessing hazards due to lightning [p0609 H80-31708]
Centralized group p—t systems conserve energy

Constant speed 400 R. aircraft electric generation system

[SAE PAPERS 791067] 

Effects of electric fluctuations in electric power systems of flight vehicles

[AD-A052481] 

Down to earth operations — centralized ground-based power distribution systems for aircraft fuel savings

[AD-A0316815] 

Integrated control techniques for advanced aircraft electrical power systems

[AD-A0570821] 

Power system design for an all electric airplane

[AD-A0570821] 

Power system design for an all electric airplane

[AD-A0570821] 

ELECTRIC POWER TRANSMISSION

Down to earth operations — centralized ground-based power distribution systems for aircraft fuel savings

[AD-A052481] 

Flat bus fault sensors

[AD-A0770760] 

Power system design for an all electric airplane

[AD-A0861666] 

ELECTRIC PROPULSION

LASER PROPULSION

ELECTRIC SPARKS

Electrical charging of fabric and film materials

[AD-A070808] 

High voltage spark carbon fiber detection system

[AD-A0570821] 

ELECTRIC WELDING

ELECTRON BEAM WELDING

ELECTRO GUN WELDING

ELECTRIC WIRE

Transient corona effects on a wire over the ground

[AD-A0313380] 

ELECTRIC WIRING

ELECTRICAL BREAKDOWN

ELECTRICAL FAULTS

ELECTRICAL CONDUCTIVITY

ELECTRICAL RESISTIVITY

ELECTRICAL ENGINEERING

Power system design for an all electric airplane

[AD-A0570821] 

Computer simulation model of the logistic support system for electrical engineering test equipment

[AD-A0570821] 

Using the computer to produce electric schemes --- Inertial navigation

[AD-A0570821] 

ELECTRICAL FAULTS

Effects of electric fluctuations in electric power systems of flight vehicles

[AD-A0570821] 

Evaluation of equipment vulnerability and potential shock hazards --- carbon fibers

[AD-A0570821] 

Surveys of facilities for the potential effects from the fallout of airborne graphite fibers

[AD-A0570821] 

An assessment of the risk arising from electrical effects associated with the release of carbon fibers from general aviation aircraft fires

[AD-A0570821] 

ELECTRICAL IMPEDANCE

ELECTRICAL RESISTANCE

ELECTRICAL INDUCTANCE

ELECTRICAL INSULATION

New approaches for alleviation of electrical hazards of graphite-fiber composites --- aircraft safety

[AD-A0570821] 

ELECTRICAL MEASUREMENT

Airborne lighting characterization

[AD-A0570821] 

ELECTRICAL PROPERTIES

ELECTRICAL RESISTANCE

ELECTRICAL RESISTIVITY

ELECTRICAL POLARIZATION CHARACTERISTICS

ELECTRICAL REACTANCE

ELECTRICAL RESISTANCE

Specification for the installation of electrical resistance strain gauges on strain pairs counter aircraft --- to monitor fatigue damage

[AD-A0771076] 

ELECTRICAL RESISTIVITY

Investigation of the wear debris content in oil by measurements of the reluctance and eddy current losses in an electric circuit

[AD-A0570821] 

ELECTRICAL CHARGING OF FABRIC AND FILM MATERIALS

ELECTRICAL CONDUCTIVITY

ELECTRICAL RESISTIVITY

ELECTRICAL ENGINEERING

Power system design for an all electric airplane

[AD-A0570821] 

Computer simulation model of the logistic support system for electrical engineering test equipment

[AD-A0570821] 

Using the computer to produce electric schemes --- Inertial navigation

[AD-A0570821] 

ELECTRICAL FAULTS

Effects of electric fluctuations in electric power systems of flight vehicles

[AD-A0570821] 

Evaluation of equipment vulnerability and potential shock hazards --- carbon fibers

[AD-A0570821] 

Surveys of facilities for the potential effects from the fallout of airborne graphite fibers

[AD-A0570821] 

An assessment of the risk arising from electrical effects associated with the release of carbon fibers from general aviation aircraft fires

[AD-A0570821] 

ELECTRICAL IMPEDANCE

ELECTRICAL RESISTANCE

ELECTRICAL INDUCTANCE

ELECTRICAL INSULATION

New approaches for alleviation of electrical hazards of graphite-fiber composites --- aircraft safety

[AD-A0570821] 

ELECTRICAL MEASUREMENT

Airborne lighting characterization

[AD-A0570821] 

ELECTRICAL PROPERTIES

ELECTRICAL RESISTANCE

ELECTRICAL RESISTIVITY

ELECTRICAL POLARIZATION CHARACTERISTICS

ELECTRICAL REACTANCE

ELECTRICAL RESISTANCE

Specification for the installation of electrical resistance strain gauges on strain pairs counter aircraft --- to monitor fatigue damage

[AD-A0771076] 

ELECTRICAL RESISTIVITY

Investigation of the wear debris content in oil by measurements of the reluctance and eddy current losses in an electric circuit

[AD-A0570821] 

ELECTRICAL CHARGING OF FABRIC AND FILM MATERIALS

ELECTRICAL CONDUCTIVITY

ELECTRICAL RESISTIVITY

ELECTRICAL ENGINEERING

Power system design for an all electric airplane

[AD-A0570821] 

Computer simulation model of the logistic support system for electrical engineering test equipment

[AD-A0570821] 

Using the computer to produce electric schemes --- Inertial navigation

[AD-A0570821] 

ELECTRICAL FAULTS

Effects of electric fluctuations in electric power systems of flight vehicles

[AD-A0570821] 

Evaluation of equipment vulnerability and potential shock hazards --- carbon fibers

[AD-A0570821] 

Surveys of facilities for the potential effects from the fallout of airborne graphite fibers

[AD-A0570821] 

An assessment of the risk arising from electrical effects associated with the release of carbon fibers from general aviation aircraft fires

[AD-A0570821] 

ELECTRICAL IMPEDANCE

ELECTRICAL RESISTANCE

ELECTRICAL INDUCTANCE

ELECTRICAL INSULATION

New approaches for alleviation of electrical hazards of graphite-fiber composites --- aircraft safety

[AD-A0570821] 

ELECTRICAL MEASUREMENT

Airborne lighting characterization

[AD-A0570821] 

ELECTRICAL PROPERTIES

ELECTRICAL RESISTANCE

ELECTRICAL RESISTIVITY

ELECTRICAL POLARIZATION CHARACTERISTICS

ELECTRICAL REACTANCE

ELECTRICAL RESISTANCE

Specification for the installation of electrical resistance strain gauges on strain pairs counter aircraft --- to monitor fatigue damage

[AD-A0771076] 

ELECTRICAL RESISTIVITY

Investigation of the wear debris content in oil by measurements of the reluctance and eddy current losses in an electric circuit

[AD-A0570821] 

ELECTRICAL CHARGING OF FABRIC AND FILM MATERIALS

ELECTRICAL CONDUCTIVITY

ELECTRICAL RESISTIVITY

ELECTRICAL ENGINEERING

Power system design for an all electric airplane

[AD-A0570821] 

Computer simulation model of the logistic support system for electrical engineering test equipment

[AD-A0570821] 

Using the computer to produce electric schemes --- Inertial navigation

[AD-A0570821] 

ELECTRICAL FAULTS

Effects of electric fluctuations in electric power systems of flight vehicles

[AD-A0570821] 

Evaluation of equipment vulnerability and potential shock hazards --- carbon fibers

[AD-A0570821] 

Surveys of facilities for the potential effects from the fallout of airborne graphite fibers

[AD-A0570821] 

An assessment of the risk arising from electrical effects associated with the release of carbon fibers from general aviation aircraft fires

[AD-A0570821] 

ELECTRICAL IMPEDANCE

ELECTRICAL RESISTANCE

ELECTRICAL INDUCTANCE

ELECTRICAL INSULATION

New approaches for alleviation of electrical hazards of graphite-fiber composites --- aircraft safety

[AD-A0570821] 

ELECTRICAL MEASUREMENT

Airborne lighting characterization

[AD-A0570821] 

ELECTRICAL PROPERTIES

ELECTRICAL RESISTANCE

ELECTRICAL RESISTIVITY

ELECTRICAL POLARIZATION CHARACTERISTICS

ELECTRICAL REACTANCE

ELECTRICAL RESISTANCE

Specification for the installation of electrical resistance strain gauges on strain pairs counter aircraft --- to monitor fatigue damage

[AD-A0771076]
ENGINE COOLANTS

On some realistic applications of identification methods
Analysis of programs for regulating helicopter turbine engines
Integrated circuit characteristics at 260 C for aircraft engine-control applications
Frequency dependent precopensation for dominance in a four-input/output test problem model
Design of a turbojet engine controller via eigenvector/eigenvalue assignment - A new sensitivity formulation
Multivariable synthesis with inverses
An application of model-following control
Optimal output feedback for systems having direct feedthrough of control - applied to turbofan engine regulator design
Full authority microprocessor digital control - for advanced technology engine
Flight test of all-electronic propulsion control system
Accelerating reliability growth of electronic propulsion controls in the 1980's
Evaluating potential VCS control modes with respect to performance, stability, and engine life utilization - Variable Cycle Engine
Flight test of all-electronic propulsion control system
Simplifying the development of programs for digital engine controllers
Software for flight critical digital engine controls
New tasks and progressive integration in the area of flight and power plant control
Control technology
Quiet Clean Short-haul Experimental Engine (QCSEE) under-the-wing engine digital control system design report
Quiet Clean Short-haul Experimental Engine (QCSEE) under-the-wing engine simulation report
Quiet Clean Short-haul Experimental Engine (QCSEE) over-the-wing control system design report
Alternatives for jet engine control
Data analysis of P sub T/P sub S noseboom probe testing on P100 engine P680072 at NASA Lewis Research Center
Technical evaluation report on the 54th (A) Propulsion and Energetics Panel Meeting on Advanced Control Systems for Aircraft Powerplants
Experimental full-authority digital engine control on Concorde
Transducers for engine control systems
The application of microprocessors to the regulation of military aircraft engines: The design of electronic regulators
Design, evaluation and test of an electronic, multivariable control for the P100 turbofan engine
Determining the optimal control laws for setting the rpm's of a turbojet engine
Mode control: A flexible control concept for military aircraft engines
Redundancy concepts in full authority electronic engine control, particularly dual redundancy

Subject Index

Control of the engines for the new Airbus family
A unified digital approach to the control of a diverse range of engines
Advantages of the digital technology for the realization of engine control systems
The digital control systems as part of an integrated accessory fit for future engines

ENGINE COOLANTS

Aerodynamic losses in a gas turbine stage with film cooling

ENGINE DESIGN

FT ROCKET ENGINE DESIGN

Computerized systems analysis and optimization of aircraft engine performance, weight, and life cycle costs
Computer calculation of stationary temperature fields in air-cooled turbine rotor blades
Selection of optimal parameters of heat-pipe heat exchanger for a gas turbine engine
Computer calculation of stationary temperature fields in cooled turbine discs
Systematization of simple detail parts of reglulatable nozzle of gas turbine engine
Development of an aircraft-derivative gas turbine with high performance and large output
Characteristics and operational conditions of aircraft turbojet engines - Russian book
New trends and possibilities of propeller development
Design solutions for highly loaded stages of radial compressors
Analytical modeling of the dynamics of aircraft powerplant subassembly units
Theory of aircraft gas turbines /3rd revised and enlarged edition/ - Russian book
Engine airframe commonality
Preparing aircraft propulsion for a new era in energy and the environment
Computer simulation of engine systems - for aircraft design
Multi-variable cycle optimization by gradient methods - for variable-cycle engines
Holographic techniques applied to parametric engine turbine engine simulations
Flow in transonic compressors
Technology of the Rolls-Royce RB211 engine
A pre-design code for predicting engine acquisition costs
Installation effects on cycle selection for small turbo-fan engines
Technologies conceived for the utilization of ceramics in turboengines
Research developments for aircraft safety
A cooled insulated radial turbine technology demonstration
Optimization methods in fine-finishing and designing gas-turbine engines - Russian book

A-160
Design of a turbojet engine controller via
frequency dependent precompensation for
dominance theory of by-pass ducted-fan engines

Prospects for computer modeling in ramjet combustors

The influence of prior engine usage data on the advanced component technologies for
long range very large aircraft supply system for

The future of civil turbo-fan engines

A study of light aircraft noise. I - Exhaust noise

Power units for mini-BPV's

The design and manufacture of a prototype cost-effective R.P.V. engine

Design and test of mini-BPV demonstrator engines

A study of light aircraft noise. II - Engine noise

The future of civil turbofan engines

Long range very large aircraft supply system for civil/military application with special emphasis on water-based aircraft

Big-fan engines - a new US generation

New developments in US military fighter engines

Damage tolerant design and test considerations in the engine structural integrity program - for aircraft turbines

Qualification of cooling systems design for high temperature on a turbine facility

New problems in materials and structures in aircraft engine technology

The development of the composite material engine nacelle

Rotor blade cooling in high pressure gas turbine engines

Oscillations in aircraft engines - a Russian book

Hydrogen fueled high bypass turbofans in subsonic aircraft

The energy problem - its effect on aircraft design. III - Advances in aircraft design

The influence of prior engine usage data on the selection of structural design criteria

Advanced component technologies for energy-efficient turbofan engines

The design and combustion performance of practical swirlers for integral rocket/ramjet engines

The importance of timely finite element modeling in jet engine design

Elementary considerations for ramjet modeling

Prospects for computer modeling in ramjet combustors

Turbopropulsion combustion - Trends and challenges

Advanced technology duct burner for variable cycle engines

Multifuel rotary aircraft engine

Life cycle cost as a tool in the detailed design of advanced propulsion systems

Combustion of gas turbine combustor stochiometry and expanded operating regime

Turboprop propulsion systems for military aircraft

Planning technology development to achieve consistent component technology and flexibility of application - for military airbreathing propulsion systems

Gas turbine combustor design considerations for the 1980's

Fuel conservation through active control of rotor clearances

Modeling techniques for the analysis of ramjet combustion processes

Exhaust system performance improvement for a long-duct nacelle installation for the DC-10

Protection and specification of clutches to be used with gas turbine generators

Time between overhaul vs premature removal rates as turbine design considerations

NASA Broad-Specification Fuels Combustion Technology Program - Status and description

Design study for a fuel efficient turbofan engine

The Energy Efficient Engine /E3/ - Advancing the state of the art

Cycle optimization for a 10,000 SHP high efficiency gas turbine system

CF6 fan performance improvement

New aircraft - Where are we heading in the 1980s and 1990s?

The Rolls-Royce Gem

Hydroxane nonpropellant reciprocating engine development

Influence of swirl chamber dimensions on the jet angle of an air nozzle
Quiet Clean Short-haul Experimental Engine (QCSEE) 

Organizing multistage energy conversion systems 

[NASA-CR-135627] 

p0526 880-47181 

On calculating gas turbine efficiency reduction 

under the influence of air cooling 

[NASA-CR-135628] 

p0526 880-47183 

Selection of parameters of axial power-driven 

centrifugal brother for gas turbine engine oil 

systems 

[NASA-CR-135629] 

p0564 880-47415 

On some properties of the bypass turbine engines 

[NASA-CR-135630] 

p0566 880-47439 

Methods for correcting the parameters of small gas 

[NASA-CR-135631] 

p0566 880-47440 

turbine engines 

[NASA-CR-135632] 

p0566 880-47461 

Jet engine integrated generator 

[NASA-CR-135633] 

p0570 880-88215 

The CFM56 - High bypass technology for standard 

body aircraft 

[SAS PAPR 000730] 

p0578 880-49682 

Aerodynamic development of the engine nacelle 

combination for the Boeing 767 airplane 

[SAS PAPR 000731] 

p0574 880-49683 

Advanced Olympus for the next generation 

supersonic transport aircraft 

[SAS PAPR 000728] 

p0574 880-49684 

Design of blade attachment in compressor rotor 

annular slot 

p0615 880-51879 

Basic problem of aircraft gas turbine engine 

analytic design, part 1 

p0018 880-10042 

Aeropropulsion 1979 --- conferences 

[NASA-CR-2092] 

p0028 880-10205 

VSCE technology definition study 

[NASA-CR-135738] 

p0030 880-10222 

Statistical diagnostics aircraft engines 

[NASA-CR-135739] 

p0033 880-11066 

Optimal thermodynamics design of gas turbine 

engines using element prototypes, 1 

p0033 880-11077 

On the development of the B 199 

[DETC-TRANS-5429] 

p0041 880-11096 

Fundamental characterization of alternate fuel 

effects in continuous combustion systems 

[SAR-1954-12] 

p0063 880-11240 

Design, durability and low cost processing 

technology for composite fan exit guide vanes 

[NASA-CR-135977] 

p0071 880-12091 

Quiet, Clean, Short-Haul, Experimental Engine 

(QCSEE) Under-The-Wing (OTW) engine acoustic 

design 

[NASA-CR-135267] 

p0119 880-11177 

Quiet, Clean, Short-Haul Experimental Engine 

(QCSEE) Over-The-Wing (OTW) engine acoustic 

design 

[NASA-CR-135268] 

p0119 880-11188 

Quiet, Clean Short-Haul Experimental Engine 

(QCSEE) Under-The-Wing (OTW) graphite/PHB 

cowl development 

[NASA-CR-135279] 

p0119 880-11199 

NASA broadband specification fuels combustion 

technology program: status and description 

[NASA-TM-79315] 

p0120 880-14126 

Oblique detonation wave ramjet 

[NASA-CR-135192] 

p0121 880-14131 

Quiet Short-Haul Experimental Engine (QCSEE) 

Over The Wing (OTW) design report 

[NASA-CR-134848] 

p0131 880-15066 

Quiet Clean Short-Haul Experimental Engine 

(QCSEE) Core engine noise measurements 

[NASA-CR-135160] 

p0132 880-15093 

Quiet Clean Short-Haul Experimental Engine 

(QCSEE) Under-The-Wing (OTW) engine composite nacelle 

test report, Volume I: Summary, analytic 

and mechanical performance 

[NASA-CR-1359471] 

p0132 880-15094 

Quiet Clean Short-Haul Experimental Engine (QCSEE) 

preliminary over-the-wing flight propulsion 

system analysis report 

[NASA-CR-135926] 

p0132 880-15095 

Quiet Clean Short-Haul Experimental Engine 

(QCSEE). Composite fan frame subsystem test 

report 

[NASA-CR-135010] 

p0133 880-15098 

Quiet Short-Haul Experimental Engine (QCSEE) 

main reduction gears test program 

[NASA-CR-134669] 

p0133 880-15103 

Quiet Clean Short-Haul Experimental Engine (QCSEE) 

clean compressor test report 

[NASA-CR-134916] 

p0133 880-15104
Acoustic pressures on a prop-fan aircraft fuselage surface

[AIAA PAPER 80-1002] p0338 A80-35965

Static tests at model scale indicating rear-fuselage installation effects on engine exhaust noise

[AIAA PAPER 80-1046] p0340 A80-35991

Model tests demonstrating under-wing installation effects on engine exhaust noise

[AIAA PAPER 80-1048] p0340 A80-35992

Fan noise reduction by single- and double-wall barriers --- for turbojet engine shielding

[AIAA PAPER 80-1026] p0393 A80-36614

The development of inflow control devices for improved simulation of flight noise levels during static testing of a BBF turbofan engine

[AIAA PAPER 80-1028] p0393 A80-38639

A measurement of forward-flight effects on the noise from a JT150-1 turbofan engine in the NASA- Ames 40- by 80-Foot Wind Tunnel

[AIAA PAPER 80-1026] p0393 A80-36614

Fan noise source location from field measurements

[AIAA PAPER 80-1056] p0380 A80-38648

Prediction of unsuppressed jet engine exhaust noise in flight from static data

[AIAA PAPER 80-1008] p0508 A80-44491

Infrasonic emission of the E-8 engine

[p0567 A80-47780

Discrete frequency noise reduction modeling for application to fanjet engines

[p0580 A80-50228

Noise reduction

[p029 A80-10208

A review of the research at NASA concerning the effects of flight on engine exhaust noise

[NASA-R-78007] p0064 A80-13887

Quiet, Clean, Short-Haul Experimental Engine (QCSEE) Under-The-Wing (UTW) engine acoustic design

[NASA-CR-135267] p0119 A80-14117

Quiet, Clean, Short-Haul Experimental Engine (QCSEE) Over-The-Wing (OTW) engine acoustic design

[NASA-CR-135268] p0119 A80-14118

Investigation of noise hazards in the engine test cell, CFB Baden-Collingen

[AD-0A74391] p024 A80-14147

Applications of diffraction theory to aeroacoustics --- aircraft noise

[p0125 A80-14870

Quiet Clean Short-haul Experimental Engine (QCSEE) Core engine noise measurements


Core noise investigation of the CF6-50 turbofan engine

[NASA-CR-135950] p0170 A80-16001

Core noise investigation of the CF6-50 turbofan engine

[NASA-CR-135964] p0170 A80-16002

Jet engine demonstrable test cell exhaust system phase: Noise/Coalescence/noise suppression concept, advanced development

[AD- A076253] p0181 A80-17090

Methods of sound simulation and applications in flight simulators


Air Research QCAT engine performance and emissions tests

[p0351 A80-22239

AirResearch QCAT engine: Acoustic test results

[p0351 A80-22330

Avco Lycoming quiet clean general aviation turbofan engine

[p0351 A80-22338

Noise generation by jet-engine exhaust deflection

[ESA-78-262] p0038 A80-23045

NASA bioenvironmental noise data handbook. Volume 124: F104D aircraft, near and far-field noise

[AD- A081845] p0427 A80-24883

Quiet Clean Short-haul Experimental Engine (QCSEE) Under-The-Wing (UTW) composite test report. Volume 2: Acoustic performance

[NASA-CR-135747] p0056 A80-29297

Acoustic performance of a 50.8-cm (20-inch) diameter variable-pitch fan and inlet. Volume 2: Acoustic data

[NASA-CR-135118] p0567 A80-29299

Noise suppression in jet inlets

[AD- A081900] p0551 A80-29334

A-168
Multiple pure tone elimination strut assembly
[AIAG-CASE-PGC-11062-1] p0635 B80-32393
Study of lateral excess sound attenuation as
determined from far part 36 aircraft noise
certification measurements
[AD-A088285] p0629 B80-33183
USAF bioenvironmental noise data handbook. Volume
1199: C-135B aircraft, near and far-field noise
[AD-A087951] p0640 B80-33184
Aircraft noise prediction program validation
[NASA-CP-159333] p0655 B80-34219

ENGINE PARTS
Experimental investigation of the strength of
rotor materials in the presence of surface cracks
p003 A80-10080
Systematization of simple detail parts of
regulable nozzle of gas turbine engine
p004 A80-100611
Runners of circumferential seals - Requirements
and performance
[ASLE PEPREP79-1C-3B-1] p0051 A80-14726
Maintenance of aircraft, helicopters, and aircraft
engines /2nd revised and enlarged edition/ Russian book
p0059 A80-16385
Evaluation of strength safety factors under
multicomponent loading with consideration of
material properties scatter
p0060 A80-16381
Fully mechanized circumferential welding for engines of
p0061 A80-16561
Thermal spraying of aircraft- engine components
p006A A80-16971
Engine component improvement program - Performance
improvement
[AIAA PAPER 80-0223] p0100 A80-19300
Thermal state of structural members of aircraft
engines -- Russian book
p0101 A80-19412
Advanced technology effects on V/STOL propulsive
system weight
[SAE PAPER 1300] p0105 A80-20640
Preliminary weight estimation of engine section
structure
[SAE PAPER 1311] p0105 A80-20645
Optimistic maintenance policies for economic
replacement of internal life-limited components
in modular aircraft engines
[SAE PAPER 79-1101] p0195 A80-26647
Wear of seal materials used in aircraft propulsion
systems
p0213 A80-28010
Reliability improvement on aircraft engine bearing
by discriminant analysis
p0271 A80-30299
Experimental investigation of the strength of
rotor materials with surface cracks
p0270 A80-32044
Investigation of the stress distribution in the
surface layer of aircraft engine components
p0325 A80-34235
Aircraft gas turbine materials and processes
p0327 A80-34631
Investigation of the strength of ceramics
used for circulating section components of gas
turbine engines
p0382 A80-37707
Airbreathing propulsion component technologies
p0385 A80-37482
Advanced component technologies for
energy-efficient turbofan engines
[AIAG PAPER 80-10861] p0387 A80-38002
Life cycle cost as a tool in the detail design of
advanced propulsion systems
[AIAG PAPER 80-1252] p0801 A80-38989
Plasma sprayed ceramic thermal barier coatings
for turbine vane platforms
p0808 A80-39636
Application of the method of exoelectron emission
to the quality control of gas-turbine engine components
p0809 A80-39917
Planning technology development to achieve
consistent component technology and flexibility of
application — for military airbreathing
propulsion systems
[AIAG PAPER 80-10811] p0407 A80-41176
Performance variations in high aspect ratio
subsonic diffusers due to geometric constraints

in supersonic tactical aircraft inlet
installations
[AIAG PAPER 80-11061] p0407 A80-41180
The compression moulding of composite aero engine
components with elevated thermal stability
p0527 A80-47202
A resin injection technique for the fabrication of
aero-engine composite components
p0527 A80-47206
Selection of assembly clearances for gas-turbine
engine seals
p0563 A80-47372
Generalized approach to aircraft gas turbine
engine equivalent test regime determination
p0564 A80-47413
Solution of the steady-state heat conduction
problem by a probability method — temperature
calculations for gas turbine engine components
p0565 A80-47810
HIF of Rene 95 -- Hot Isostatic Pressing
p0565 A80-47810
Hybrid bearings for aircraft engines
p0573 A80-49495
Materials and structures technology
p0616 A80-51897

Engine component improvement program: Performance
improvement- fuel consumption
[NASA-TN-79304] p0071 B80-12092
Build 2 of an accelerated mission test of a TP-41
with block 76 hardware — investigation of
structural reliability of engine part of a
turbofan engine
[AD-A073436] p0081 A80-13050
Quiet Clean Short-haul Experimental Engine (QCSEE)
der-under-the-wing engine composite fan blade design
report
[NASA-CH-135046] p0134 A80-15108
Gas path seal
Contribution of photoelastic analysis to the study of
turbo-engine components
[B771985] p0282 B80-19112
Development of improved high pressure turbine outer gas path seal components -- abradability
and thermal cycling test results
[NASA-CH-159501] p0307 B80-21332
Application of superalloy powder metallurgy for
aircraft engines
[NASA-TN-81466] p0310 B80-21480
Performance deterioration based on existing
(historical) data; JT5D jet engine diagnostics
program
[NASA-CH-135448] p0350 B80-22324
Property screening and evaluation of ceramic
turbine engine materials
[AD-A080963] p0366 B80-23232
Expansion of similarity test procedures to cooled
engine components with insulating ceramic coatings
[NASA-TP-1615] p0825 B80-24577
Engine component improvement: Performance
improvement, JT9D-7 3.8 IB fan
[NASA-CH-159506] p036A B80-25332
Development and evaluation of processes for
deposition of Ni/Co-Al/Il (MCrAlY) coatings for
gas turbine components
[AD-A085197] p0535 B80-28362
Materials for advanced turbine engines, Volume 1:
Power metallurgy Rene 95 rotating turbine engine
parts
[NASA-CH-159502] p0539 B80-28499
Benefits of ceramics to gas turbines
p0552 B80-29343
The fabrication and properties of EFFEL silicon
carbide in relation to gas turbine components
[NASA-TN-81977] p0553 B80-29352
Improved components for engine fuel savings
[NASA-TN-81577] p0604 B80-31402
Energy efficient engine
[NASA-CH-159505] p0646 B80-33409

ENGINE STARTERS
Measurement of liquid pump torque in the starting
engine
p0003 A80-10611
Determination of start-up pressure losses for
gas-turbine engine compressors
p0147 A80-21052
Power system control study. Phase 1: Integrated
control techniques
[AD-A07629] p0244 B80-19125
ENGINE TESTING LABORATORIES

Portable device for use in starting
air-start-units for aircraft and having cable
lead testing capability
[NASA-CSP-10113-1] p0885 A80-26599
An experimental evaluation of the performance
deficit of an aircraft engine starter turbine

ENGINE TESTING LABORATORIES

Transparent engines at Rolls-Royce - The
application of high energy 1-ray technology to
gas turbine development
p0191 A80-25497

ASTP Test Instrumentation System ---
Aercoprobes System Test Facility
p0263 A80-29486
Design of air-cooled jet engine testing facilities
[ASME PAPR 79-GT/ISE-5] p0456 A80-42057
OPENF ramjet test facilities
p0621 A80-52915
Aerol fuel filter loading data for a simulated jet
test cell aerosol
[AD-A078779] p0295 A80-20287

ENGINE TESTS

EVT COLD FLOW TESTS

Trial engine altitude chamber and flight testing
with liquid hydrogen
p0001 A80-10034
Application of the discrete-phase method to the study and control of aircraft turbine engine
blade vibrations. I
p0002 A80-10239
Component evaluation and engine demonstration of
aerospace-prime-delta D.S. eutectic solid
ification blades
p0003 A80-10289
On the influence of short shroud platforms on
turbine stage operation
p0004 A80-10627
An optical technique for the investigation of flow
in gas turbine combustors
p0009 A80-11759
Processing noise and vibration data for gas
turbine engine development
p0013 A80-12612
Turbine blade cooling in aero engines - Some new
results, future trends, and research requirements
p0051 A80-14656
Reliability and life of aircraft gas turbine engines
p0054 A80-15090
Technical diagnostics of aircraft gas-turbine
engines --- Russian book
p0059 A80-16275
Discontinuous registration of industrial
radiographs using profile analysis and piecewise
correlation techniques
p0067 A80-17521
Gas turbine cascase and accessory vibration -
Problems of measurement and analysis
p0090 A80-17730
A method of evaluation of gas turbine engines
p102 A80-20064
Scale model performance test investigation of
exhaust system mixers for an Energy Efficient
Engine /E3/ propulsion system
p108 A80-20968
Designing of the test units for aircraft engines
--- Russian book
p158 A80-23069
Investigation of engine performance degradation of
T93-P-7 engines
p205 A80-27233
Design and test of mini-BP demonstrator engines
p207 A80-29671
Model tests for the development of axial
compressors
p207 A80-30595
Selected methods of determining the range of
equipment operation in aircraft crash
investigations. I
p320 A80-33106
Damage tolerant design and test considerations in
the engine structural integrity program --- for
aircraft turhines
[ASME 80-GT-9] p0333 A80-35072
Status of NASA full-scale engine aeroelasticity
research
p336 A80-35906
Temperature and pressure measurement techniques
for an advanced turbine test facility

SUBJECT INDEX

Technical diagnosis and operation of engines
toing to technical condition
p0388 A80-36157
Aerodynamic assessment of methods to simulate
flight inflow characteristics during static
testing
[NASA PAPER 80-1023] p0393 A80-38628
A measurement of forward-flight effects on the noise from a J75-1 tuberculosis engine in the
NAS-Arm 80- by 80-Foot Wind Tunnel
[ASME PAPER 80-1026] p0393 A80-38641
Results from flight noise tests on a Viper
turbojet fitted with ejector/suppressor nozzle
systems
[ASME PAPER 80-1028] p0393 A80-38683
Gas turbine performance of a powered-lift acoustic performance
Quiet Clean Short-haul Experimental Engine
Under The Wing
p0394 A80-38651
Improved gas turbine engine maintenance through management and analysis of engine performance data
p0397 A80-38901
Experimental evaluation of exhaust mixers for an
Energy Efficient Engine
p0397 A80-38903
An experimental investigation of pressure
oscillations in a side dump ramjet combustor
p0398 A80-38922
A quick look at current results of accelerated
mission tests for gas turbine engines
[ASME PAPER 80-1029] p0399 A80-38941
Engine aircraft combustor casing life simulation
evaluation
[ASME PAPER 80-1157] p0399 A80-38943
Study of cooling air inlet and exit geometries for
horizontally opposed piston aircraft engines
[ASME PAPER 80-1244] p001 A80-38984
Effect of aircraft power plant usage on turbine-engine relative durabilitylife
[ASME PAPER 80-1115] p0468 A80-41183
Stability analysis of the YP91 engine in the
7V-12A aircraft
[ASME PAPER 80-1246] p0489 A80-41204
Investigation of infrared characteristics of three
generic nozzle concepts
[ASME PAPER 80-1160] p0450 A80-41508
CF-50 Short Core Exhaust Nozzle
[ASME PAPER 80-1196] p0450 A80-41514
Joint technology demonstrator engine - The initial
test
[ASME PAPER 80-GT-67] p0458 A80-42179
Experimental evaluation of catalytic flame
stabilization for aircraft afterburners
[ASME PAPER 80-GT-56] p0459 A80-42187
NASA Broad-Specification Fuels Combustion
Technology Program - Status and description
[ASME PAPER 80-GT-65] p0459 A80-42195
A review of current methods and problems in making
gas path measurements in aircraft gas turbine
engines
[ASME PAPER 80-GT-75] p0460 A80-42205
Engine condition monitoring using fiberoptic probes
[ASME PAPER 80-GT-118] p0461 A80-42234
Results from tests on a high work transonic
turbine for an energy efficient engine
[ASME PAPER 80-GT-146] p0463 A80-42258
CF-5 fan performance improvement
[ASME PAPER 80-GT-170] p0465 A80-42280
Operation of an all-cavity mainshaft roller
bearing in a J-402 gas-turbine engine
[ASTM PAPER 80-0084-3C-1] p0467 A80-43166
Noise suppressors for jet engine testing
[ASME PAPER 80-BMS-28] p0468 A80-43204
JT9A-7A /A/A / jet engine performance deterioration
trends
Dynamic tests of a test bed for piston engines
p0507 A80-44230
CF6-80A-2 engine time-lagging
p0512 A80-45705
Hydrazine monopropellant reciprocating engine
development
[ASME PAPER 78-WA/AMO-12] p0524 A80-46568
Determination of the residual life of gas turbine
engines by analyzing the safety factors of the
most heavily loaded elements
p0526 A80-47169
Generalized approach to aircraft gas turbine
engine equivalent test regime determination
p0564 A80-47413
Description of the war core turbine facility recently installed at NASA Lewis Research Center

Some examples of procedures used in UK for acceptance testing of aircraft produced by the aircraft industry under government contract

Performance testing production airlines

Performance deterioration of commercial high-bypass ratio turbofan engines

ENGINEERING DEVELOPMENT

ENGINEERING DRAWINGS

Design for quick reaction aircraft modification

ENGLISH LANGUAGE

UNIGR - Universal language of aviation

ENTHALL

UNTRALITY

Effects of nonconstant enthalpy addition on fan-nozzle combinations

ENTHALLMENT

Entrainment characteristics of unsteady subsonic jets --- for V/STOL aircraft

ENTHOT

Jet engine combustion noise - Pressure, entropy, and vorticity perturbations produced by unsteady combustion or heat addition

Influence of an entropy layer on boundary layer separation in hypersonic flow

Entropy analysis of feedback flight dynamic control systems

ENVIRONMENT EFFECTS

Structural design of transport airplanes for transient environments

Community annoyance with transportation noise

Airplane noise-induced building vibrations --- human annoyance responses

Toward more effective evaluation and control of airport noise

A-171
On the equations of motion about the mass centre of the jet aircraft considered as a variable mass system

Pseudosteady state analysis of nonlinear aircraft maneuvers

Linear analysis of poststall gyrations

An application of system identification to flutter testing

Coupled rotor and fuselage equations of motion

Modal analysis of aircraft structures

Airframe flutter and dynamic response

Formulation of the equations of motion of a deformable aircraft using Lagrange's equations in an arbitrary non-inertial frame of reference

The equations of motion of an aircraft embracing its whole-body and deformational degrees of freedom

A suggestion as to a general derivation of the equations of motion of a deformable aircraft for small perturbations which will be most generally acceptable

Example of performance analysis using data obtained concurrently in air-path, body and Earth axes

Equations for determining aircraft motions for accident data

Air to air helicopter fire control equations and software generation

Vibrations of a compressor blade with slip at the root

Determination of the character of the lateral-directional motion of an airborne towed vehicle

Wavenumber modernization: A preliminary simulation study

Calculation of the transient motion of elastic airfoils forced by control surface deflection and gusts

Longitudinal stability and control in wind shear with energy height rate feedback

The effect of equatorial ionospheric disturbance on aircraft-to-satellite communications

EQUILIBRIUM FLOW

Harmonic oscillations of annular wing in steady ideal fluid flow

EQUIPMENT SPECIFICATIONS

Protection and specification of clutches to be used with gas turbine generators

Design criteria for dry lubricated flight control bearings --- wear tests to make design analysis and check equipment specifications

Comparison of specifications for Head-Up Displays in the Navy A-5A, A-7E, AV-8A, and F-14A aircraft

Standard avionics packaging, mounting, and cooling baseline study

Materials for helicopter gears

An analysis of the future requirements for materials handling equipment in the military airlift command

Automatic test equipment

SOME Satellite time experiment --- global time synchronization using Cs clock transfer

Improvement of weapon system performance in air to air and air to ground operation with airborne radar

Borsight errors induced by missile radomes

Error analysis of an algorithm for magnetic compensation of aircraft --- microprocessor program for simulation

Navigation error using rate of change of signal time of arrival from space vehicles

Human factors in aircraft accidents

Error rate performance of N-ary DPSK systems in satellite/aerospace communications

System for measurement of Category II ILS

Objective control of piloting accuracy between H-ary DPSK systems in satellite/aerospace communications

An extended Kalman filter for the estimation of transfer alignment errors to an airborne vehicle

A test of the method of Fink and Soh for following vortex-sheet motion

Navigation and meteorological error equations for some aerodynamic parameters

Positional error analysis, A-10 aircraft on three-axis ground mount

Tactical analysis of conflicts in an air traffic control system: Design and implementation of a provisional model

Antireflection techniques for detecting false tracks in air traffic surveillance with secondary radar

Determination of the repeatability of PRC --- flight tests for position error calibrating

Locan digital phase-locked loop and IF front-end system error analysis

A flight investigation of system accuracies and operational capabilities of a general aviation/air transport area navigation system

Hybrid computer errors in engineering flight simulation

Locan-based busy position auditing systems: Analytical evaluation

Potential use of high frequency data transmission for oceanic air traffic control improvement

Correction procedures for aircraft noise data. Volume 1: Pseudotones

Correction procedures for aircraft noise data. Volume 2: Background noise considerations
A staple design synthesis method used to estimate attainable leading-edge thrust for comparing underwater helicopter-escape lights and its needs.

Component evaluation and engine demonstration of an angle of attack sensor and its influence on flight safety of air traffic.

Flight test results of the use of Ethylene Glycol (EGHE) as an anti-carburetor icing fuel additive.

Diether-base lubricating oils as a for-gas-turbine aircraft engines.

The superposition of two-dimensional error fields and its influence on flight safety of air traffic.

A computer program for estimating aircraft landing distance.

A comparison of underwater helicopter-escape lights and its needs.

A new fighter for Europe -- aircraft research and development.

Flight test results of the use of Ethylene Glycol (EGHE) as an anti-carburetor icing fuel additive.

Naval combat search and rescue.

Advanced design aircrew protective restraint systems for the Langley Research Center.

European turbines.

Data link: The key to improvements in civil/military air traffic management.

European Airbus A300 aircraft.

Component evaluation and engine demonstration of gamma/omega-prime-delta R.S. esthetic solid turbine blades.

European airbus A300 aircraft.

An extended Kalman filter for the estimation of transfer alignment errors to an airborne vehicle.

Comparison of stability and control parameters for a light, single-engine, high-winged aircraft using different flight test and parameter estimation techniques.

A computer program for estimating aircraft landing distance.
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXHAUST JETS</td>
<td>p0057</td>
</tr>
<tr>
<td>Remote sensing of turbine engine gases</td>
<td>[AD-A086544]</td>
</tr>
<tr>
<td>Effects of fuel additives on flame temperature</td>
<td>[AD-A085166]</td>
</tr>
<tr>
<td>Flow quality for Turbine Engine Loads Simulator (TELS) facility</td>
<td>[AD-A086064]</td>
</tr>
<tr>
<td>Advanced combustion systems for stationary gas turbine engine systems</td>
<td>Volume 1: Review and Preliminary Evaluation</td>
</tr>
<tr>
<td>Advanced combustion systems for stationary gas turbine engines. Volume 2: Bench scale evaluation</td>
<td>[FASB-80-175607]</td>
</tr>
<tr>
<td>Low-pressure performance of annular combustor</td>
<td>[NAA-1713]</td>
</tr>
<tr>
<td>Energy efficient engine</td>
<td>[NAA-CR-159695]</td>
</tr>
<tr>
<td>Scale model performance test investigation of exhaust nozzle systems for an Energy Efficient Engine</td>
<td>[NAA-80-20552]</td>
</tr>
<tr>
<td>Designing aircraft-engine air ducts for a 46.5 metric ton fuel/energy system</td>
<td>[NAA-80-20556]</td>
</tr>
<tr>
<td>Influence of the expansion on the effective thrust of jet engine exhaust nozzle</td>
<td>[NAA-80-23067]</td>
</tr>
<tr>
<td>Pressure rise of axial flow fans with whirling outflow</td>
<td>[NAA-80-27139]</td>
</tr>
<tr>
<td>Results from flight noise tests on a Viper turbojet fitted with ejector/suppressor nozzle systems</td>
<td>[FASB-80-2096]</td>
</tr>
<tr>
<td>Propulsive aerodynamics of an advanced nozzle/forward swept wing aircraft configuration</td>
<td>[FASB-80-1028]</td>
</tr>
<tr>
<td>Installation tests for axisymmetric and nonaxisymmetric nozzles</td>
<td>[FASB-80-1158]</td>
</tr>
<tr>
<td>Investigation of advanced thrust vectoring exhaust systems for high speed propulsion lift</td>
<td>[FASB-80-1190]</td>
</tr>
<tr>
<td>Investigation of nonaxisymmetric characteristics of three generic nozzle concepts</td>
<td>[FASB-80-1160]</td>
</tr>
<tr>
<td>CF6-50 Short Core Exhaust Nozzle</td>
<td>[FASB-80-1196]</td>
</tr>
<tr>
<td>Study of clamshell reverser operation downstream of nozzle</td>
<td>[FASB-80-1151]</td>
</tr>
<tr>
<td>Aero-acoustic tests of duct-burning turbofan exhaust nozzle</td>
<td>[NAA-CR-162254]</td>
</tr>
<tr>
<td>Flight effects on the aero/acoustic characteristics of inverted profile coaxial nozzles</td>
<td>[NAA-CR-162281]</td>
</tr>
<tr>
<td>Flowmeters and nozzle pressure distributions on a 1/12-scale P-15 propulsion model at transonic speeds --- conducted in langley 16 foot transonic tunnel</td>
<td>[NAA-TP-1521]</td>
</tr>
<tr>
<td>Studies of the acoustic transmission characteristics of coaxial nozzles with inverted velocity profiles, volume 1 --- jet engine noise radiation through annular exhaust nozzles</td>
<td>[NAA-CR-159695]</td>
</tr>
<tr>
<td>Assessment at full scale of exhaust nozzle-to-wing size on STOL-OTW acoustic characteristics</td>
<td>[NAA-TP-1527]</td>
</tr>
<tr>
<td>Turbogas-exhaust nozzle secondary-airflow pumping as an exit control of an inlet-stability bypass system for a Mach 2.5 axisymmetric mixed-compression inlet --- Lewis 10- by 10-ft. supersonic wind tunnel test</td>
<td>[NAA-TP-1532]</td>
</tr>
<tr>
<td>Quiet Clean Short-Haul Experimental Engine (QCSEE) Under-The-Wing (UTW) boiler plate nacelle and core exhaust nozzle design report</td>
<td>[NAA-CR-135008]</td>
</tr>
<tr>
<td>Separated and nonseparated turbulent flows about axisymmetric nozzle afterbodies. Part 1: Preliminary Assessment measurements</td>
<td>[NAA-771148]</td>
</tr>
<tr>
<td>Damping of an engine exhaust stack</td>
<td>[NAA-80-17032]</td>
</tr>
<tr>
<td>Atmospheric dispersion of high velocity jets</td>
<td>[NAA-80-17026]</td>
</tr>
<tr>
<td>First exhaust nozzle area control</td>
<td>[NAA-80-23321]</td>
</tr>
<tr>
<td>A preliminary assessment of the impact of 2-D exhaust-nozzle geometry on the cruise range of a high-speed axisymmetric aircraft with top-mounted ransjet propulsion</td>
<td>[NAA-80-23350]</td>
</tr>
<tr>
<td>Study for conceptual design of VSO, VTOL exhaust nozzle</td>
<td>[NAA-CR-152388]</td>
</tr>
<tr>
<td>EXHAUST SYSTEMS</td>
<td>p0046</td>
</tr>
<tr>
<td>Experimental evaluation of exhaust mixers for an Energy Efficient Engine</td>
<td>[NAA-80-1008]</td>
</tr>
<tr>
<td>Far-field radiation of APT turbofan engine</td>
<td>[NAA-80-39638]</td>
</tr>
<tr>
<td>Investigation of advanced thrust vectoring exhaust systems for high speed propulsion lift</td>
<td>[NAA-80-1192]</td>
</tr>
<tr>
<td>Exhaust system performance improvement for a long-duct nacelle installation for the PC-10</td>
<td>[NAA-80-41190]</td>
</tr>
<tr>
<td>Prediction of suppressed jet engine exhaust noise in flight from static data</td>
<td>[NAA-80-1000]</td>
</tr>
<tr>
<td>Static test-stand performance of the Ty-102 turbofan engine with several exhaust configurations for the Quiet Short-Haul Research Aircraft (QSRA)</td>
<td>[NAA-80-1709]</td>
</tr>
<tr>
<td>Jet engine class C test cell exhaust system phase. Quiet Clean Short-Haul Experimental Engine (QCSEE)</td>
<td>[NAA-80-1555]</td>
</tr>
<tr>
<td>Jet engine combustor test cell exhaust system phase. Coanda/refraction noise suppression concept-advanced development</td>
<td>[AD-A075277]</td>
</tr>
<tr>
<td>Experimental aerodynamic and acoustic model testing of the Variable Cycle Engine (VCE) testbed coaxial exhaust nozzle system</td>
<td>[NAA-CR-159710]</td>
</tr>
<tr>
<td>Experimental aerodynamic and acoustic model testing of the Variable Cycle Engine (VCE) testbed coaxial exhaust nozzle system</td>
<td>[NAA-80-26300]</td>
</tr>
<tr>
<td>Flensence response to simulated disturbances of the model and fan inlet guide vanes in a transonic tunnel</td>
<td>[NAA-80-18169]</td>
</tr>
<tr>
<td>HYDROTHERMIC REACTIONS</td>
<td>p0049</td>
</tr>
<tr>
<td>AFT B202: A FORTRAN program for two-dimensional chemically reacting, hypersonic, internal flows, Volume 1: Method of analysis</td>
<td>[AD-A085225]</td>
</tr>
<tr>
<td>HEATABLE STRUCTURES</td>
<td>p0057</td>
</tr>
<tr>
<td>HYDROTHERMIC REACTIONS</td>
<td>p0057</td>
</tr>
<tr>
<td>MT BALLOONS</td>
<td>p0057</td>
</tr>
<tr>
<td>MT GAS BAGS</td>
<td>p0057</td>
</tr>
<tr>
<td>MT INFLATABLE STRUCTURES</td>
<td>p0057</td>
</tr>
<tr>
<td>MT TETHERED BALLOONS</td>
<td>p0057</td>
</tr>
<tr>
<td>EXPANSION</td>
<td>p0057</td>
</tr>
<tr>
<td>MT GAS EXPANSION</td>
<td>p0057</td>
</tr>
<tr>
<td>MT SERIES EXPANSION</td>
<td>p0057</td>
</tr>
<tr>
<td>MT TUBULAR EXPANSION</td>
<td>p0057</td>
</tr>
</tbody>
</table>
EXTRAPOLATION

Development of a standard methodology for the correlation and extrapolation of elevated temperature creep and rupture data. Volume 2: A state-of-the-art review
[BEPH-FP-1062-VOL-2] p0172 N80-16152

EXTRAPOLATION INFLUENCES BY NASA ATOMSCIENCE

EXTRAPOLATION OUTSTANDING VALUES

Theory of correlation-extreme navigation systems
--- Russian book
p0060 A80-165597

F

EXT-4 AIRCRAFT

Tactical navigation system testing
p0206 A80-27327

Have Bounce --- validation of computer simulations of F-4 dynamic response to multiple runway repairs
p0208 A80-27392

Seven Kings the F-4 has flown
[AIAA 80-3042] p0276 A80-30100

F-4 radar altimeter aural warning
[AD-A077280] p0040 N80-11085

Combined vibration/temperature/nideol
environmental testing of UHF blade tenans
p0184 N80-17301

Wind tunnel test to investigate aerodynamic
hysterisis phenomena of the F-4 and F-11 aircraft models
[AD-A077196] p0233 N80-19004

[AD-A077386] p0241 N80-19105

F-5 Phantom aircrew survival equipment evaluation
[AD-A0767380] p0289 N80-20245

A singular perturbation analysis of minimum time
long range intercept
[NASA-CHR-162895] p0291 N80-20261

The redundancy of scheduled and unscheduled
maintenance
[AD-A076562] p0296 N80-21242

The impact of the global positioning system on
guidance and controls system design of military
aircraft. Volume 2A: Specific application
study no. 1, close air support
[AGARD-AR-147-VOL-2A] p0363 N80-23303

Runway surface roughness
p0332 N80-25326

Mutual interference of multiple bodies in the flow
field of the F-4C aircraft in the transonic
g speed range --- wind tunnel tests
[AD-A088704] p0880 N80-27296

The F-4 service life tracking program crack growth
codes
[AD-A083978] p0895 N80-27353

Store separation trajectory analysis
[AD-A086704] p0587 N80-30284

F-5 AIRCRAFT

Reliability pays off --- reliability program case
history for Lead Computing Optical Sight System
for Northrop F-5A aircraft
p0313 N80-21950

F-5P Shark Nose radome lightning test
p0809 A80-39922

F-9 AIRCRAFT

A number of an in-flight evaluation of control
system pulse-time delays during landing using the
F-9 DFW airplane
[AIAA 80-1626] p0520 A80-45914

Low order equivalent models of highly augmented
aircraft determined from flight data using
maximum likelihood estimation
[AD-A085167] p0520 A80-45915

Improved test methods for determining
lighting-induced voltages in aircraft
[NASA-CHR-3329] p0633 N80-32379

F-110 AIRCRAFT

F-110 AIRCRAFT

Advanced composite material applications to F-10A
structure
p0140 A80-21129

Measurement and correlation of structural response
to inlet hammersock phenomena on an F-10 airplane
p0330 A80-34975

Simulator results of an F-10A airplane utilizing
an aileron-rudder interconnect during carrier
approaches and landings
[NASA-TH-18333] p0558 N80-29368

Flow visualization study of the F-14 fighter
craft configuration
[NASA-CHR-163098] p0641 N80-33350

P-15 AIRCRAFT

Application of finite element analysis to
derivation of structural weight
[SAMPE PAPER 1271] p0100 A80-20627

All-Equipment Production Reliability Tests/EXPERT/
for the P-15
p0163 A80-23962

The P-15 wing development program
[AD-A079-3041] p0276 A80-31012

Data - A flexible data handling system for P-15
software performance evaluation
p0284 A80-32649

Repair of advanced composite structures — in
damaged aircraft
[AIAA 80-0776] p0333 A80-35066

FS/E100 engine diagnostic system
[AD-A079-79101] p0392 N80-38399

Evaluation of a statistical method for determining
peak inlet flow distortion using F-15 and P-16
data
[AD-A079-3040] p0488 A80-41182

Correlation of P-15 flight and wind tunnel test
cost effectiveness
p0140 N80-15152

Effect of service environment on F-15 boros/epoxy
stabilator
[AD-A076493] p0178 N80-17064

[AD-A077386] p0241 N80-19105

Evaluation of packaging for the CN-1325-ASM-100
ANS displacement gyro, P-15 aircraft
[AD-A078707] p0291 N80-20264

Improved packaging for the LN-31 inertial
measurement unit (F-15 aircraft)
[AD-A0811705] p0362 N80-23293

F-16 AIRCRAFT

F-16 co-production — An American point of view
p0012 A80-12315

F-16 European test and evaluation
p0207 A80-27380

Cost-drivers affecting the development of F-16
depot ITA/hardware/ and test software
--- Interface Test Adapter
p0269 A80-30004

F-16 avionics intermediate shop /AS/ user
involvement during development ---
technician/user evaluation of automated test
equipmen
p0270 A80-30029

Advanced fighter technology F-16
p0277 A80-31246

F-16 flutter suppression system investigation
[AIAA 80-0760] p0333 A80-35060

Finite element analysis of F-16 aircraft canopy
--- dynamic response to bird impact loading
[AIAA 80-0864] p0334 A80-35086

New 2.2 F-16 development under way
p0474 A80-43739

Simulator study of stall/post-stall
correlation of a fighter airplane with
relaxed longitudinal static stability ---
F-16
[NASA-TP-1530] p0121 N80-19136

An investigation of F-16 nozzle-afterbody forces
at transonic Mach numbers with emphasis on
support system interference
[AD-A078693] p0225 N80-18046

The F-16 wild systems: A feasibility study
[AD-A077050] p0237 N80-19071

[AD-A077386] p0291 N80-19105

An operating and support cost model for avionics
automatic test equipment --- F-16 aircraft
[AD-A075536] p0292 N80-20269

A 178
Damage tolerant design and test considerations in the engine structural integrity program — for aircraft turbines [AIAA 80-0780]
- Analysis of fault isolation criteria/techniques [p0333 A80-35072]
- Fault-tolerant system optimization [p0409 A80-40305]
- The objective necessity of the fail-safe design philosophy [p0511 A80-45697]
- Digital active controls for L-1011 [p0582 A80-50582]
- Failure detection, isolation and indication in highly integrated digital guidance and control system [p0112 B80-14027]
- Report on the FAA task force on aircraft separation assurance, Volume 2: Concept description [A-D-A077807] [p0177 B80-17050]

FAIBIHGS SUBJED INDEX

Failure analysis
- Reliability of aircraft disconnect joints — Russian book [p0660 A80-16594]
- Evaluation of the effectiveness of case-hardening gas-turbine-engine components on the basis of fatigue-failure similarity equations [p0192 A80-26193]
- Acceleration of multicycle fatigue testing on aluminum structural alloys [p0209 A80-27479]
- On determining the probabilities of the consequences of airplane system failures in evaluating the level of flight safety [p0376 A80-36794]
- Reliability pays off — reliability program case history for Lead Computing Optical Sight System for Northrop F-5A aircraft [p0409 A80-39922]
- Analysis of fault isolation criteria/techniques [p0409 A80-40305]
- Common Cause Failures — A dilemma in perspective [p0410 A80-40304]
- Some applications of the methods of fault mechanics in analyzing the strength and service life of aircraft structures [p0528 A80-47355]
- On turbine blade creep and fatigue analysis by special kinematic assumptions [p0623 A80-53293]
- Investigation of advanced prognostic analysis techniques — failure analysis and wear tests of mechanical drive gears [p0079 B80-13032]
- Ferrographic and spectrographic analysis of oil sampled before and after failure of a jet engine [NASA-TM-81430] [p0209 B80-19497]
- A simulation program for the determination of system reliability of complex avionic systems [p0250 B80-19523]
- Failure analysis in aviation [NLB-MP-78029-0] [p0362 B80-23288]
- Analysis of aircraft structures [NLB-MP-78040-0] [p0362 B80-23285]
- Radar approach control (RAPCON) primary input power supply study [AD-A076080] [p0416 B80-24289]
- Localization of faults in jet engines by calculation of component characteristics [p0429 B80-25279]

An Automatic Fault Identification System (AFIS) on board [p0430 B80-25289]
- Some experience in the design and evaluation of ceramic combustion chambers [p0530 B80-28516]
- Significance of a rotor blade failure for fleet operation, inspection, maintenance, design and certification [NASA-MP-79027-0] [p0603 B80-31392]
- Response of nonlinear panels to random loads [p0639 B80-32766]

FAILURE MODES
- Common Cause Failures — A dilemma in perspective [p0410 A80-40304]
- Software/Hardware Integrated Critical Path Analysis (ICPA) [p0411 A80-40352]
- Reliability prediction techniques for second generation marine and industrial gas turbines [NASA-Paper 79-67/ISB-3] [p0456 A80-40205]
- Incendescent lamp life under random vibration [p0228 B80-18221]
- Nonoperating failure rates for avionics study [p0590 B80-30309]

FAIRCHILD MILITARY AIRCRAFT
- U MILITARY AIRCRAFT

Prediction 'Fish-edge' fairing structure — of airships [p0404 A80-39297]
- Development of a Kevlar/PHB-15 reduced drag D-9 nacelle fairing [AIAA Paper 80-1194] [p0448 B80-41193]
- Fan blades
- Influence of mistuning on blade torsional flutter [NASA-CR-165137] [p0599 B80-31351] [p0406 A80-39895]
- Fan in wing aircraft
- Test of a high efficiency transverse fan [AIAA Paper 80-1243] [p0401 A80-38595] [p0410 A80-40344]
- Fanlift devices
- U lift fans

FANS
- Rotating stall in a vaneless diffuser of a centrifugal fan [p0210 A80-27734]
- Pressure losses in the inlet and outlet channels of high-pressure single- and two-stage axial-flow fans [p0261 A80-29133]
- Engine component improvement: Performance improvement, J990-7 3.8 AR fan [NASA-CR-159806] [p0434 A80-25332]
- Fan fields
- Rotational noise of helicopter rotors [p0069 A80-17718]
- Comparison of inlet suppressor data with approximate theory based on cutoff ratio [AIAA Paper 80-0100] [p0100 A80-20964]
- Fast field test data from field measurements [AIAA Paper 80-1054] [p0394 A80-38648]
- The study of an EMP dipole antenna type simulator [p0406 A80-39411]
- Far-field radiation of APT turbofan noise [p0408 A80-39638]
- Some calculated effects of non-uniform inflow on the radiated noise of a large wind turbine [p0279 B80-25104]
- Acquisition and application of transonic wing and far-field test data for three-dimensional computational method evaluation, volume 1 [AD-A0807808] [p0530 B80-28316]
- Far field monitor for instrument landing systems, phases 1 and 2 [p0454 B80-29275]

FASTENERS
- Nut bolts
- Nut screws
- Autocost-1 ultrasonic fatigue-crack detector — for military aircraft fastener sites [p0231 A80-37221]
- Fastener hole quality, volume I design [AD-A074080] [p0411 A80-35072]
- Some experience in the design and evaluation of ceramic combustion chambers [p0530 B80-28516]
- Significance of a rotor blade failure for fleet operation, inspection, maintenance, design and certification [NASA-MP-79027-0] [p0603 B80-31392]
- Response of nonlinear panels to random loads [p0639 B80-32766]
- Software/Hardware Integrated Critical Path Analysis (ICPA) [p0411 A80-40352]
- Reliability prediction techniques for second generation marine and industrial gas turbines [NASA-Paper 79-67/ISB-3] [p0456 A80-40205]
- Incendescent lamp life under random vibration [p0228 B80-18221]
- Nonoperating failure rates for avionics study [p0590 B80-30309]


FATIGUE (MATERILS)

WT METAL FATIGUE

WT STRUCTURAL STAIN

WT THERMAL FATIGUE

The use of the temporal summation of fatigue damage in order to examine the combined stress state of structures

Walking-gate spatial signal averaging signal processing for fatigue crack ultrasonic inspection system

Autoscan-1 ultrasonic fatigue-crack detector

for military aircraft fastener sites

The relevance of service experience data in the fatigue evaluation process of the P27

Improved methods for predicting spectra loading effects, phase 1 report, Volume 1: Results and discussion

Fracture and fatigue properties of 1Cr-Bo-V bainitic turbine rotor steels

Review of investigations into aeronautics related fatigue Federal Republic of Germany

Collection and analysis of in service flight histories of the initiation of fatigue damage

Specification for the installation of electrical resistance strain gauges on strain pairs counter aircraft --- to monitor fatigue damage

An investigation of residual stress in simulated wing panels of 7075-T6 aluminum

The Engine Usage Monitoring System (EUMS): An heuristic approach to cost effective flight data monitoring and analysis

Materials for helicopter gears

Analysis of ground calibration data from strain gauges attached to the airframe of CTV-8 airtrainer X9-031

Evaluation and comparison of nondestructive service inspection methods

Flight simulation fatigue crack propagation in 7010 and 7075 aluminum alloy plate

FATIGUE LIFE

Design and operation of multi-specimen fully reversed fatigue systems for advanced composite materials

Influence of burning on the structure and durability of elements operating under variable loads

Fatigue life prediction of a bonded splice joint

Practical method of fatigue crack growth analysis for damage tolerance assessment of aluminum structure in fighter type aircraft

Low cycle fatigue life model for gas turbine engine discs

Fiberglass rotor produced

Applying pressure ... Relieving stress --- stress coining aircraft structures

Acceleration of multicycle fatigue testing on aluminum structural alloys

The fatigue performance of service aircraft and the relevance of laboratory data

Avoiding divergent stall in control configured aircraft by using a canard arrangement

A quantitative assessment of the variables involved in crack propagation analysis for in-service aircraft

SUBLI

SUBJECT INDEX

FATIGUE TESTS

[IAA 80-0752] p0332 880-35047

Effect of some aircraft loading program modifications on the fatigue life of open hole specimens

Current developments in aircraft fatigue evaluation procedures

High pressure turbine blade life sensitivity

Endurance and failure characteristics of modified Vaseco X-2, CBS 600 and A1S 9310 spar gear

Some applications of the methods of failure analysis in the context of analyzing the strength and service life of aircraft structures

Fatigue strength of some materials used in airframe structures

Living with the aging structure --- aircraft inspection and maintenance

Material considerations for gas turbine engines

Long-lift GTE operation based on technical condition --- fatigue and service life monitoring of turbine blades in aircraft engines

On the fatigue life evaluation of jointed specimens undergoing load transfer with regard to stress concentration

A review of Australian investigations on aeronautical fatigue during the period April 1977 to March 1979 --- structural strain and fatigue life studies on aircraft structures and construction materials

Fatigue hole quality, volume 1 --- design analysis of fatigue life and drilling techniques for fasteners in aircraft production

Endurance of riveted lap joints (aluminum alloy sheet and rivets)

The failure of aircraft structures

Summary of 1979 independent research on risk analysis methods --- aluminum fatigue test data for reliable aircraft structures

Fatigue damage estimation for the Dassault aircraft fatigue data analysis system

Evaluation of the impact of towing the L-1011 airplane at Boston-Logan Airport

Reassessment of service life by comparative specimen tests --- fighter aircraft structures

FATIGUE TESTS

Microprocessors as aircraft fatigue monitors

Impression fatigue --- load level effects on crack propagation

Structural fatigue experiments

Life prediction of turbine blades under low-cycle fatigue and creep

Practical method of fatigue crack growth analysis for damage tolerance assessment of aluminum structure in fighter type aircraft

Fatigue data on a variety of nonwoven glass composites for helicopter rotor blades

Evaluation of the effectiveness of case-hardening gas-turbine-engine components on the basis of fatigue-failure similarity equations

Acceleration of multicycle fatigue testing on aluminum structural alloys

Cast aluminum primary aircraft structure
Application of a ground-based minicomputer system for real-time, closed-loop control of remotely piloted aircraft models used in short/long research.

Total aircraft flight-control system – Balanced open- and closed-loop control with dynamic maps

Minimum sensitivity controllers with application to TVGOL aircraft

Future of helicopter rotor control

Active flutter suppression control law definition via least order synthesis

Recent development of the YF-17 active flutter suppression system

Wind tunnel investigation of active controls technology applied to a B-70 derivative.

Output feedback non-linear decoupled synthesis and observer design for maneuvering aircraft

Tests of an improved rotating stall control system on a J-85 turbojet engine

Environmental control system concept study for a Navy Y/STOL aircraft

A model for helicopter guidance on spiral trajectories

A new approach to active control of rotorcraft vibration

An approximate feedback solution of a variable speed non-linear pursuit-evasion game-between two airplanes in a horizontal plane

A direct method for synthesizing low-order optimal feedback control laws with application to flutter suppression

A pilot modeling technique for handling-qualities research

Man-in-the-loop simulation system -- aircraft fire control using cockpit displays

Hardware-in-the-loop simulation of a digital autopilot

Aircraft trajectory optimization using singularity perturbation methods

Application of optimal constant output feedback to flight control system design

Entropy analysis of feedback flight control systems

Design criteria for optimal flight control systems -- study of optimal flight control systems engineering for feedback control

Closed loop models for analyzing engineering requirements for simulators

Closed loop aspects of aircraft identification

Tests of an improved rotating stall control system on a J-85 turbojet engine

Variable cycle engine multivariable control synthesis: Control structure definition

Active control technology

Research in advanced flight control design

The design of aircraft automatic ride-smoothing systems using direct-lift control

Inherent error in asynchronous digital flight controls

FIBER OPTICS

A fiber-optic link for high-speed, DDAS-to-computer data transmission — Digital Data Acquisition System from ramjet engine test cell to base central data processing center

Engine environmental effects on composite behavior

Selected NASA research in composite materials and structures

FIBER COMPOSITES

Current and projected use of carbon composites in aircraft manufacturing – An impressive rise in Western Europe

Non-destructive examination of fiber composite structures by thermal field techniques

Real life aging properties of composites

Fiber structures on the Mirage 2000 and Mirage 4000

Determination of stress intensity factors in composite structural elements

Elastic ribbons based on thermally stable low-modal fibers for the autoclavable forming of glass-plastic aircraft components

FIBER OPTICS

Application of the concept of dynamic trim control to automatic landing of carrier aircraft — utilizing digital feedforward control

Environmental control system concept study for a Navy Y/STOL aircraft

Rift tunnel investigation of active controls technology applied to a B-70 derivative.

Tests of an improved rotating stall control system on a J-85 turbojet engine

Environmental control system concept study for a Navy Y/STOL aircraft

A model for helicopter guidance on spiral trajectories

Active control technology

Variable cycle engine multivariable control synthesis: Control structure definition

Active control technology

Research in advanced flight control design

The design of aircraft automatic ride-smoothing systems using direct-lift control

Inherent error in asynchronous digital flight controls

FIBER OPTICS

A fiber-optic link for high-speed, DDAS-to-computer data transmission — Digital Data Acquisition System from ramjet engine test cell to base central data processing center

Engine environmental effects on composite behavior

Selected NASA research in composite materials and structures

FIBER COMPOSITES

Current and projected use of carbon composites in aircraft manufacturing – An impressive rise in Western Europe

Non-destructive examination of fiber composite structures by thermal field techniques

Real life aging properties of composites

Fiber structures on the Mirage 2000 and Mirage 4000

Determination of stress intensity factors in composite structural elements

Elastic ribbons based on thermally stable low-modal fibers for the autoclavable forming of glass-plastic aircraft components

FIBER OPTICS

Application of the concept of dynamic trim control to automatic landing of carrier aircraft — utilizing digital feedforward control

Environmental control system concept study for a Navy Y/STOL aircraft

Rift tunnel investigation of active controls technology applied to a B-70 derivative.

Tests of an improved rotating stall control system on a J-85 turbojet engine

Environmental control system concept study for a Navy Y/STOL aircraft

A model for helicopter guidance on spiral trajectories

Active control technology

Variable cycle engine multivariable control synthesis: Control structure definition

Active control technology

Research in advanced flight control design

The design of aircraft automatic ride-smoothing systems using direct-lift control

Inherent error in asynchronous digital flight controls

FIBER OPTICS

A fiber-optic link for high-speed, DDAS-to-computer data transmission — Digital Data Acquisition System from ramjet engine test cell to base central data processing center

Engine environmental effects on composite behavior

Selected NASA research in composite materials and structures

FIBER COMPOSITES

Current and projected use of carbon composites in aircraft manufacturing – An impressive rise in Western Europe

Non-destructive examination of fiber composite structures by thermal field techniques

Real life aging properties of composites

Fiber structures on the Mirage 2000 and Mirage 4000

Determination of stress intensity factors in composite structural elements

Elastic ribbons based on thermally stable low-modal fibers for the autoclavable forming of glass-plastic aircraft components

FIBER OPTICS

Application of the concept of dynamic trim control to automatic landing of carrier aircraft — utilizing digital feedforward control
FIBER REINFORCED COMPOSITES

Fiber optic sensors for measuring angular position and rotational speed -- air breathing engines

High integrity fiber optic data transmission

Advanced electric/electronic technology to conventional aircraft

Intercommunication in real time, redundant, distributed computer system

FIBER REINFORCED COMPOSITES
Progress report 3 of cooperative program for design, fabrication, and testing of high modulus composite helicopter shafting

FIBER RELEASE
Carbon/graphite composite material study -- risk and hazards of fiber release

Carbo graphene fiber risk analysis and assessment study: Assessment of the risk of bonded-to-metal L-1011 commercial transport aircraft

Experimental and analytical studies for the NASA carbon fiber risk assessment

Intermediate fiber phase sampling for large scale fire tests at Duck Proving Ground -- fiber release during aircraft fires

Process modifications for improved carbon fiber composites: Attenuation of the electrical hazard's problem

FIBER STRENGTH
High modulus/high strength organic fibers

FIBERGlasS
U GLASS FIBERS
NT CARBON FIBERS
NT GLASS FIBERS
NT REINFORCING FIBERS
NT SYNTHERIC FIBERS

FIELD INTENSITY EQUATIONS
Development of noisecheck technology for measuring aircraft noise exposure

FIELD STRENGTH
NT ELECTRIC FIELD STRENGTH
NT QUADRICETIC EQUATIONS
NT THOMTHY (AEGRA)

On disturbance fields of moving singularities in aerodynamics and aeroacoustics

FIGHTER AIRCRAFT
NT ALPHA JET AIRCRAFT
NT F-10 AIRCRAFT
NT F-15 AIRCRAFT
NT F-16 AIRCRAFT
NT F-18 AIRCRAFT
NT F-22 AIRCRAFT
NT F-35 AIRCRAFT
NT F-4E AIRCRAFT
NT F-100 AIRCRAFT
NT F-101 AIRCRAFT
NT F-102 AIRCRAFT
NT F-104 AIRCRAFT
NT F-111 AIRCRAFT
NT F-12A AIRCRAFT
NT F-14 AIRCRAFT
NT F-18 AIRCRAFT
NT F-27 AIRCRAFT
NT F-35 AIRCRAFT
NT F-36 AIRCRAFT
NT F-100 AIRCRAFT

FIBER OPTIC SENSORS FOR MEASURING ANGULAR POSITION AND ROTATIONAL SPEED -- AIR BREATHING ENGINES

HIGH INTEGRITY FIBER OPTIC DATA TRANSMISSION

APPLICATIONS OF ADVANCED ELECTRIC/ELECTRONIC TECHNOLOGY TO CONVENTIONAL AIRCRAFT

INTERCOMMUNICATIONS IN REAL TIME, REDUNDANT, DISTRIBUTED COMPUTER SYSTEM

FIBER REINFORCED COMPOSITES
PROGRESS REPORT 3 OF COOPERATIVE PROGRAM FOR DESIGN, FABRICATION, AND TESTING OF HIGH MODULUS COMPOSITE HELICOPTER SHAFTING

FIBER RELEASE
CARBON/GRAHPLITE COMPOSITE MATERIAL STUDY -- RISK AND HAZARDS OF FIBER RELEASE

CARBON/GLASS FIBER RISK ANALYSIS AND ASSESSMENT STUDY: ASSESSMENT OF THE RISK OF BONDED-TO-METAL L-1011 COMMERCIAL TRANSPORT AIRCRAFT

EXPERIMENTAL AND ANALYTICAL STUDIES FOR THE NASA CARBON FIBER RISK ASSESSMENT

CARBON/GLASS FIBER PHASE SAMPLING FOR LARGE SCALE FIRE TESTS AT DUCK PROVING GROUND -- FIBER RELEASE DURING AIRCRAFT FIRES

PROCESS MODIFICATIONS FOR IMPROVED CARBON FIBER COMPOSITES: ATTENUATION OF THE ELECTRICAL HAZARD'S PROBLEM

FIBER STRENGTH
HIGH MODULUS/HIGH STRENGTH ORGANIC FIBERS

FIBERGLASS
U GLASS FIBERS
NT CARBON FIBERS
NT GLASS FIBERS
NT REINFORCING FIBERS
NT SYNTHERIC FIBERS

FIELD INTENSITY EQUATIONS
DEVELOPMENT OF NOISECHECK TECHNOLOGY FOR MEASURING AIRCRAFT NOISE EXPOSURE

FIELD STRENGTH
NT ELECTRIC FIELD STRENGTH
NT QUADRICETIC EQUATIONS
NT THOMTHY (AEGRA)

ON DISTURBANCE FIELDS OF MOVING SINGULARITIES IN AERODYNAMICS AND AEROCOUSTICS

FIGHTER AIRCRAFT
NT ALPHA JET AIRCRAFT
NT F-10 AIRCRAFT
NT F-15 AIRCRAFT
NT F-16 AIRCRAFT
NT F-18 AIRCRAFT
NT F-22 AIRCRAFT
NT F-35 AIRCRAFT
NT F-36 AIRCRAFT
NT F-100 AIRCRAFT
NT F-101 AIRCRAFT
NT F-102 AIRCRAFT
NT F-104 AIRCRAFT
NT F-111 AIRCRAFT
NT F-12A AIRCRAFT
NT F-14 AIRCRAFT
NT F-18 AIRCRAFT
NT F-27 AIRCRAFT
NT F-35 AIRCRAFT
NT F-36 AIRCRAFT
NT F-100 AIRCRAFT

THE LIGHT FIGHTER MARKET... AND A EUROPEAN PROPOSAL

INDUCED EFFECTS OF LIGHTNING ON AN ALL COMPOSITE AIRCRAFT

EVOLUTION OF THE HYBRID WING -- YF-17/P-18 TYPE

THE CROW ADAPTIVE COCKPIT -- FIREFOX. NT GLASS FIBER COMPOSITE TECHNOLOGY ASSESSMENT OF AIRCRAFT/AIRCRAFT DIGITAL AVIONICS SYSTEMS IN MILITARY AIRCRAFT

A SOLID STATE /CCD/ COCKPIT TELEVISION SYSTEM

NEW DEVELOPMENTS IN US MILITARY FIGHTER ENGINES

UNSTEADY AIRLOADS ON A HARMONICALLY PITCHING WING WITH EXTERNAL STORE

ACTIVE FLUTTER SUPPRESSION CONTROL LAW DEFINITION VIA LEAST SQUARES SYNTHESIS

WING/STORE FLUTTER WITH NONLINEAR PYLON STIFFNESS

DEVELOPMENT AND APPLICATION CONCEPTS FOR TRAINER AND COMBAT-TRAINER VERSIONS OF COMBAT JET AIRCRAFT

FIRST RESULTS OBTAINED BY THE ABD-BA SOCIETY ON THE ROTATING ASSEMBLY OF THE LILIE -- FOR WIND TUNNEL AIRCRAFT SPIN TESTING

LIMITS OF APPLICATION OF THE DAMAGE TOLERANCE CONCEPT TO COMBAT AIRCRAFT

PROPULSION-SYSTEM INTEGRATION FOR TACTICAL AIRCRAFT

LOW CYCLE FATIGUE TESTING, A NECESSARY PART OF ADVANCED DEVELOPMENT -- FOR MILITARY FIGHTER AIRCRAFT GAS TURBINE ENGINES
### Subject Index

#### Fire Extinguishers

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[AD-A079584]</td>
<td>An assessment of the risk arising from electrical effects associated with carbon fibers released from commercial aircraft fires</td>
</tr>
<tr>
<td>[NASA-CR-195193]</td>
<td>Design concept for fuel fire facility scale-down</td>
</tr>
<tr>
<td>[NASA-TR-82219]</td>
<td>Electronic equipment vulnerability to fire released carbon fibers</td>
</tr>
</tbody>
</table>

#### Fire Fighting

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[AD-A079584]</td>
<td>Comparative evaluation of firefighting foam agents — extinguishing Jet A fuels fires</td>
</tr>
<tr>
<td>[AD-A079584]</td>
<td>Comparative evaluation of firefighting foam agents — extinguishing Jet A fuels fires</td>
</tr>
<tr>
<td>[NASA-CR-195205]</td>
<td>Advanced concept in aircraft crash firefighting using carbon tetrafluoride</td>
</tr>
<tr>
<td>[NASA-CR-195236]</td>
<td>Fire on board transport aircraft and passenger safety</td>
</tr>
</tbody>
</table>

#### Fire Prevention

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Hybrid composites that retain graphite fibers on burning</td>
</tr>
<tr>
<td>[NASA-CR-195205]</td>
<td>Large-scale and small-scale flammability tests for airplane cable materials</td>
</tr>
</tbody>
</table>

#### Fireproofing

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Propagation and energetic panel working group 2 on aircraft fire safety. Volume 1: Executive summary</td>
</tr>
<tr>
<td>[AGARD-AR-132-1981]</td>
<td>General aviation accidents: Postcrash fires and how to prevent or control them</td>
</tr>
</tbody>
</table>

#### Flakes

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Propagation and energetic panel working group 2 on aircraft fire safety. Volume 1: Executive summary</td>
</tr>
</tbody>
</table>

#### Flame Holders

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Conceptual model of turbulent flameholding for scramjet combustors</td>
</tr>
</tbody>
</table>

#### Flare Propagation

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
</table>

#### Flame Spread

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Influence of the thermal expansion of the gas on the rate of propagation of the flame front in a palomino-type combustion chamber</td>
</tr>
</tbody>
</table>

#### Flame Quenching

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
</table>

#### Flame Stability

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Local laminarization in turbulent diffusion flames</td>
</tr>
</tbody>
</table>

#### Flame Spectroscopy

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
</table>

#### Flame Stretching

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>sprayed coatings</td>
</tr>
</tbody>
</table>

#### Flame Stability

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Local laminarization in turbulent diffusion flames</td>
</tr>
</tbody>
</table>

#### Flammable Materials

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>筵火抑制剂</td>
</tr>
</tbody>
</table>

#### Flammability

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Inhibition of fitting jobs on the quality and prime coating of aircraft assembly</td>
</tr>
</tbody>
</table>

#### Fuel

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Jet fuel fire adjacent to an aircraft fuselage</td>
</tr>
</tbody>
</table>

#### Fuel Water

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Sprayed coatings</td>
</tr>
<tr>
<td>[NASA-CR-195205]</td>
<td>Inflame of the thermal expansion of the gas on the rate of propagation of the flame front in a palomino-type combustion chamber</td>
</tr>
</tbody>
</table>

#### Fuel Water

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Influence of the thermal expansion of the gas on the rate of propagation of the flame front in a palomino-type combustion chamber</td>
</tr>
</tbody>
</table>

#### Fuel Water

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Influence of the thermal expansion of the gas on the rate of propagation of the flame front in a palomino-type combustion chamber</td>
</tr>
</tbody>
</table>

#### Fuel Water

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-195205]</td>
<td>Influence of the thermal expansion of the gas on the rate of propagation of the flame front in a palomino-type combustion chamber</td>
</tr>
<tr>
<td>SUBJECT INDEX</td>
<td>FLEXIBLE WINGS</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Premixing quality and flame stability: A theoretical and experimental study</td>
<td>p0034 H80-11009</td>
</tr>
<tr>
<td>[NASA-CR-32163]</td>
<td>Leading edge vortex-flap experiments on a 74 deg delta wing</td>
</tr>
<tr>
<td>(Nasa-Tp-1543)</td>
<td>p0036 H80-11030</td>
</tr>
<tr>
<td>Seal-emirical correlations for gas turbine emissions, ignition, and flame stabilization</td>
<td>Leading edge vortex-flap experiments on a 74 deg delta wing</td>
</tr>
<tr>
<td>p0049 H80-27393</td>
<td>p0036 H80-11030</td>
</tr>
<tr>
<td>FLAPOUT</td>
<td>Direct side force and drag control with the aid of hydrogen split flaps</td>
</tr>
<tr>
<td>Conceptual model of turbulent flameholding for scramjet combustors</td>
<td>p0141 H80-15163</td>
</tr>
<tr>
<td>p0648 H80-33409</td>
<td>In-flight measured characteristics of combined flap-spoiler direct lift controls</td>
</tr>
<tr>
<td>FLAPES</td>
<td>Some investigations concerning the effects of gaps and vortex generators on elevator efficiency and of landing flap sweep on aerodynamic characteristics</td>
</tr>
<tr>
<td>St DIFFUSION FLAPES</td>
<td>p0142 H80-15165</td>
</tr>
<tr>
<td>St PREMIXED FLAPES</td>
<td>Large-scale wind-tunnel tests of inverting flaps on a STOL utility aircraft model</td>
</tr>
<tr>
<td>Pollutant emissions from 'partially' mixed turbulent flames</td>
<td>p0143 H80-15178</td>
</tr>
<tr>
<td>p010 H80-11793</td>
<td>Summary of data required for the AGARD SRP activity standard aeroelastic configurations - two-dimensional configurations</td>
</tr>
<tr>
<td>The structure ofeddies in turbulent flames, volume 1</td>
<td>[HLR-RP-79015-U]</td>
</tr>
<tr>
<td>[AD-407862B]</td>
<td>p0361 H80-23273</td>
</tr>
<tr>
<td>Soot formation and burnout in flames</td>
<td>Large-scale wind-tunnel tests of inverting flaps on a STOL utility aircraft model</td>
</tr>
<tr>
<td>p0295 H80-20341</td>
<td>p0142 H80-25316</td>
</tr>
<tr>
<td>FLAMABILITY</td>
<td>A summary of joint US-Canadian augmentor wing powered-lift STOL research programs at the NASA Research Center, NASA, 1975-1980</td>
</tr>
<tr>
<td>Full-scale flammability tests with experiments on animals in the aeronautical Test Center of Toulouse</td>
<td>[NASA-TH-81215]</td>
</tr>
<tr>
<td>p0047 H80-13321</td>
<td>p0536 H80-28373</td>
</tr>
<tr>
<td>Safety and comfort - The airliner cabin</td>
<td>FLAP LAMPS</td>
</tr>
<tr>
<td>p0160 H80-23799</td>
<td>A comparison of underwater helicopter-escape lights</td>
</tr>
<tr>
<td>Large-scale and small-scale flammability tests for airplane cabin materials</td>
<td>p0455 A80-42009</td>
</tr>
<tr>
<td>p0328 H80-34708</td>
<td>FLAMMABLE GASES</td>
</tr>
<tr>
<td>Aircraft fuel system simulator tests with antiicing kerosene (Jet A fuel with TH-9 additive) — flammability tests</td>
<td>p0047 H80-13321</td>
</tr>
<tr>
<td>[AD-4073287]</td>
<td>Safety and comfort - The airliner cabin</td>
</tr>
<tr>
<td>Assessment of the flammability of aircraft hydraulic fluids</td>
<td>p0123 H80-14256</td>
</tr>
<tr>
<td>p0183 H80-17227</td>
<td>Evaluation of existing flamemability test methods by comparison of the flammability characteristics of interior materials</td>
</tr>
<tr>
<td>Evaluation of existing flamemability test methods by comparison of the flammability characteristics of interior materials</td>
<td>p0437 H80-25393</td>
</tr>
<tr>
<td>[AD-4083137]</td>
<td>Anticipating kerosene — reduced flammability during aircraft accident circumstances</td>
</tr>
<tr>
<td>p0549 H80-29319</td>
<td>Hybridized polymer matrix composites</td>
</tr>
<tr>
<td>Electronic equipment vulnerability to fire released carbon fibers</td>
<td>[NASA-Cb-165146]</td>
</tr>
<tr>
<td>p0650 H80-33469</td>
<td>FLAPS (CONTROL SURFACES)</td>
</tr>
<tr>
<td>FLAPS</td>
<td>Electronic equipment vulnerability to fire released carbon fibers</td>
</tr>
<tr>
<td>FLAPPING</td>
<td>FLAPS (CONTROL SURFACES)</td>
</tr>
<tr>
<td>Propulsion characteristics of flapping wings</td>
<td>[NASA-Cb-165146]</td>
</tr>
<tr>
<td>p0050 H80-14415</td>
<td>Electronic equipment vulnerability to fire released carbon fibers</td>
</tr>
<tr>
<td>Experimental study of flapping wing lift and propulsion</td>
<td>p0651 H80-33491</td>
</tr>
<tr>
<td>p0273 H80-30680</td>
<td>FLAPPING WINGS</td>
</tr>
<tr>
<td>Flapping response of lifting rotor blades to spanwise nonuniform random excitation</td>
<td>FLAPPING WINGS</td>
</tr>
<tr>
<td>Works on theory of flapping wing — considering boundary layer</td>
<td>p0016 H80-52321</td>
</tr>
<tr>
<td>[NASA-Tb-75750]</td>
<td>p0015 H80-52625</td>
</tr>
<tr>
<td>Comparison of calculated and measured helicopter rotor lateral flapping angles</td>
<td>p0478 H80-26275</td>
</tr>
<tr>
<td>p0641 H80-33369</td>
<td>p0049 H80-11004</td>
</tr>
<tr>
<td>Examination of the flap-lag stability of rigid articulated rotor blades</td>
<td>Selection of geometric parameters and location of nose flap on swept wing root profile from tunnel test data, 1</td>
</tr>
<tr>
<td>p005a H80-15123</td>
<td>Selection of geometric parameters and location of nose flap on swept wing root profile from tunnel test data, 2</td>
</tr>
<tr>
<td>Effects of primary rotor parameters on flapping dynamics</td>
<td>p0137 H80-15130</td>
</tr>
<tr>
<td>FLAPS (CONTROL SURFACES)</td>
<td>p0143 H80-15130</td>
</tr>
<tr>
<td>ST EXTERNALLY BLOWN FLAPS</td>
<td>Surface conforming thermal/pressure seal — — for control devices in space vehicles</td>
</tr>
<tr>
<td>ST JET FLAPS</td>
<td>[NASA-CAS-BSG-18422-1]</td>
</tr>
<tr>
<td>ST LEADING EDGE SLOTS</td>
<td>p0124 H80-14400</td>
</tr>
<tr>
<td>ST TRAILING-EDGE FLAPS</td>
<td>Handling qualities of large flexible control-configured aircraft</td>
</tr>
<tr>
<td>WING FLAPS</td>
<td>[NASA-Cb-165206]</td>
</tr>
<tr>
<td>[NASA-Cb-144888]</td>
<td>Development of flexible rotor balancing criteria</td>
</tr>
<tr>
<td>p0049 H80-11004</td>
<td>[NASA-Cb-159505]</td>
</tr>
<tr>
<td>Selection of geometric parameters and location of nose flap on swept wing root profile from tunnel test data, 2</td>
<td>Development of flexible rotor balancing criteria</td>
</tr>
<tr>
<td>p0049 H80-11004</td>
<td>[NASA-Cb-159505]</td>
</tr>
<tr>
<td>Selection of geometric parameters and location of nose flap on swept wing root profile from tunnel test data, 1</td>
<td>Development of flexible rotor balancing criteria</td>
</tr>
</tbody>
</table>
Parameter identification of flexible flight vehicles assuming a low-reduced-frequency aerodynamic representation
Wing profile design of the world championship sailplane SB 11
In-flight parameters for the requirements of air traffic control - Systems currently in use and desirable evolutions
High-angle-of-attack flying qualities - An overview of current design considerations
Measurements of control stability characteristics of a wind-tunnel model using a transfer function method
Review of five years of flight testing the B-1
Implicit model following and parameter identification of unstable aircraft
Acoustic considerations of flight effects on jet noise suppressor nozzles
The structure-free thrust-doubling of insect-like aircraft - The possibility of using insect-flight/thrust-flight/ on a large technical scale
Flight performance of the TCV B-737 airplane at low speed and hover
Proceedings of a Workshop on V/STOL Aircraft Aerodynamics, Volume 2 - Conference proceedings
A compilation and analysis of helicopter handling qualities data, Volume 1: Data compilation
Measurements of control stability characteristics of a wind-tunnel model using a transfer function method
Identification evaluation methods
Active Control Technology, Volume 1
Analysis of the influence of the design parameters on the characteristics of an aircraft in spinning nose dive. I
Analysis of the influence of the design parameters on the characteristics of an aircraft in spinning nose dive. II
Aerodynamics and dynamics of aircraft flight - 2nd revised and enlarged edition/
Aerodynamics and dynamics of aircraft flight
Aerodynamics and dynamics of aircraft flight - 2nd revised and enlarged edition/
Aerodynamics of helicopters - Russian book
Aerodynamics and dynamics of the world championship sailplane SB 11
Wind tunnel and free flight model identification techniques applied to aircraft flight test data
Wind tunnel and free flight model identification methods and their applications: Survey and future aspects
Closed loop aspects of aircraft identification
Handling quality requirements for advanced aircraft design longitudinal mode
Aerodynamics, volume 2
Aerodynamics, volume 2 conferences
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>FLIGHT CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>The flying qualities of aircraft with augmented longitudinal and directional stability</td>
<td>FLIGHT COBTBOL</td>
</tr>
<tr>
<td>Flying qualities and piloting with respect to controls and displays</td>
<td>FLIGHT COBPDTBBS -</td>
</tr>
<tr>
<td>Flight testing of several control laws of a fly-by-wire system</td>
<td>BT AOTOHATIC FLIGHT COBTBOL</td>
</tr>
<tr>
<td>A model-based technique for predicting pilot opinion ratings for large commercial transports [NASA-CR-3257]</td>
<td>BT AOTORATIC 1ABDIBG COBTBOL</td>
</tr>
<tr>
<td>A practical method for predicting roughness effects on aircraft</td>
<td>[TPA-AD-1413]</td>
</tr>
<tr>
<td>Flight safety of Rogallo hang gliders. Theoretical and experimental study of the flight envelope</td>
<td>p0309 B80-22316</td>
</tr>
<tr>
<td>Influence of pitching moment characteristics on departure and coordinated roll reversal boundaries for fighter configurations [AD-A082335]</td>
<td>p0206 B80-24326</td>
</tr>
<tr>
<td>Atmospheric turbulence simulation techniques with application to flight</td>
<td>FLIGHT COBTBOL</td>
</tr>
<tr>
<td>Operational missions and conceptual design of the Mirage 2000</td>
<td>p0559 B80-29661</td>
</tr>
<tr>
<td>Crossing the channel in the Gossamer Albatross</td>
<td>p0560 B80-30021</td>
</tr>
<tr>
<td>Transonic pitch damping of a delta wing aircraft determined from flight measurements [AD-A087771]</td>
<td>p0633 B80-3281</td>
</tr>
<tr>
<td>The oblique wing-research aircraft</td>
<td>p0640 B80-33338</td>
</tr>
<tr>
<td>Flying qualities design criteria [AD-A088629]</td>
<td>p0647 B80-33402</td>
</tr>
<tr>
<td>Helicopter flight test instrumentation [AGARD-AG-160-VOL-10]</td>
<td>p0647 B80-33406</td>
</tr>
<tr>
<td>Advanced simulator for pilot training: Design of automated performance measurement systems [AD-A088855]</td>
<td>p0649 B80-33421</td>
</tr>
<tr>
<td>FLIGHT COMPUTERS</td>
<td>FLIGHT COBTBOL</td>
</tr>
<tr>
<td>FLIGHT COMPUTERS</td>
<td>AIRBORNE/SPACEBORNE COMPUTERS</td>
</tr>
<tr>
<td>FLIGHT CONDITIONS</td>
<td>FLIGHT COBTBOL</td>
</tr>
<tr>
<td>Gas cylinders in gas turbine engines</td>
<td>p0003 B80-10608</td>
</tr>
<tr>
<td>Strouhal number influence on flight effects on jet noise radiated from convector quadrupoles</td>
<td>p0215 B80-28418</td>
</tr>
<tr>
<td>Investigation of internal control laws for wing/store flutter suppression [AIAA-80-0764]</td>
<td>p0332 B80-35056</td>
</tr>
<tr>
<td>A measurement of forward-flight effects on the noise from a JT150/-1 turbofan engine in the NASA-Kenn 40- by 80-Foot Wind Tunnel [AIAA PAPER 80-1026]</td>
<td>p0393 B80-36641</td>
</tr>
<tr>
<td>Automation of aircraft control under unsteady flight conditions — Russian book</td>
<td>p0467 B80-83106</td>
</tr>
<tr>
<td>Energy conservation in terminal airspace through fuel consumption modeling</td>
<td>p0568 B80-37412</td>
</tr>
<tr>
<td>Application of the SRES concept to Navy helicopters — system analysis of flight data recorders of flight conditions of helicopters for structural analysis [AD-A078601]</td>
<td>p0575 B80-18965</td>
</tr>
<tr>
<td>Application of the SRES concept to Navy helicopters — system analysis of flight data recorders of flight conditions of helicopters for structural analysis [AD-A078601]</td>
<td>p0126 B80-15030</td>
</tr>
<tr>
<td>Flight icing during low-level flights [AD-A078643]</td>
<td>p0234 B80-19052</td>
</tr>
<tr>
<td>Minimising the sequenced delay time for escape from high-speed, low-level flight profiles</td>
<td>p0559 B80-30017</td>
</tr>
<tr>
<td>FLIGHT CONTROL</td>
<td>FLIGHT COBTBOL</td>
</tr>
<tr>
<td>FLIGHT CONTROL</td>
<td>AUTOMATIC FLIGHT CONTROL</td>
</tr>
<tr>
<td>FLIGHT CONTROL</td>
<td>AUTOMATIC LANDING CONTROL</td>
</tr>
<tr>
<td>ST FLY BY WIRE CONTROL</td>
<td>-</td>
</tr>
<tr>
<td>ST POINTING CONTROL SYSTEMS</td>
<td>-</td>
</tr>
<tr>
<td>ST THRUST VECTOR CONTROL</td>
<td>-</td>
</tr>
<tr>
<td>Numerical computation of neighboring optimum feedback control schemes in real-time [AD-A080-10519]</td>
<td>p0006 B80-10519</td>
</tr>
<tr>
<td>Technical concept for a strike-BPV flight guidance and weapon delivery system</td>
<td>p0007 B80-11174</td>
</tr>
<tr>
<td>Variable-sweep optimization --- for hodograph-vector-control concept in maneuvering flight</td>
<td>p0051 B80-14809</td>
</tr>
<tr>
<td>A new procedure for linear optimal flight control</td>
<td>p0052 B80-14823</td>
</tr>
<tr>
<td>A streamlined inertial reference system for commercial airline use in navigation and flight control</td>
<td>p0088 B80-17558</td>
</tr>
<tr>
<td>An integrated strapdown guidance and control system for launch vehicle application</td>
<td>p0088 B80-17559</td>
</tr>
<tr>
<td>Adaptive allocation of decisionmaking responsibility between human and computer in multitask situations</td>
<td>p0091 B80-18022</td>
</tr>
<tr>
<td>Fault-tolerant flight control avionics</td>
<td>p0153 B80-21750</td>
</tr>
<tr>
<td>High-angle-of-attack flying qualities - An overview of current design considerations [NASA PAPER 791085]</td>
<td>p0195 B80-26640</td>
</tr>
<tr>
<td>Flight control design based on nonlinear model with uncertain parameters</td>
<td>p0214 B80-28016</td>
</tr>
<tr>
<td>Optimal control of flight vehicle motion in a turbulent atmosphere</td>
<td>p0260 B80-29050</td>
</tr>
<tr>
<td>The effect of the law of control on the dynamics of the longitudinal motion of an airplane with a variable-geometry wing</td>
<td>p0272 B80-30504</td>
</tr>
<tr>
<td>Flight control systems. VII</td>
<td>p0319 B80-32693</td>
</tr>
<tr>
<td>Navigation for a group of aircraft /Automation of data processing and flight control procedures/ — Russian book</td>
<td>p0321 B80-33177</td>
</tr>
<tr>
<td>Collision danger and collision avoidance</td>
<td>p0375 B80-36769</td>
</tr>
<tr>
<td>The IMP Lille rotation balance and associated experimental techniques for wind tunnel control loss assessment during high angle of attack flight [AIAA PAPER 80-10-13]</td>
<td>p0377 B80-36484</td>
</tr>
<tr>
<td>Objective control of pilotage accuracy — Russian book</td>
<td>p0381 B80-37110</td>
</tr>
<tr>
<td>Flight data management using the terminal information processing system</td>
<td>p0391 B80-37699</td>
</tr>
<tr>
<td>Microprocessors and small digital computers for avionics navigation systems</td>
<td>p0396 B80-38041</td>
</tr>
<tr>
<td>Progress in airship flight control</td>
<td>p0405 B80-39303</td>
</tr>
<tr>
<td>Some problems involving the assurance of the controllability of an aircraft in the control-wheel region</td>
<td>p0465 B80-42350</td>
</tr>
<tr>
<td>Backup flight control system for a highly maneuverable remotely piloted research vehicle [AIAA 80-1761]</td>
<td>p0511 B80-85548</td>
</tr>
<tr>
<td>Stall/spin flight results for the remotely piloted spin research vehicle [AIAA 80-1563]</td>
<td>p0515 B80-45862</td>
</tr>
<tr>
<td>Spin prediction techniques [AIAA 80-1564]</td>
<td>p0515 B80-45863</td>
</tr>
<tr>
<td>Stability of asymmetric equilibrium flight states [AIAA 80-1567]</td>
<td>p0515 B80-45866</td>
</tr>
<tr>
<td>Application of existing roll response criteria to transport aircraft with advanced flight control systems [AIAA 80-1572]</td>
<td>p0516 B80-45871</td>
</tr>
<tr>
<td>New tasks and progressive integration in the area of flight and power plant control [DG1R PAPER 80-048]</td>
<td>p0523 B80-46298</td>
</tr>
<tr>
<td>The HUD optoelectronic projection indicator systems. II</td>
<td>p0569 B80-48124</td>
</tr>
</tbody>
</table>
FLIGHT CONTROL CONTD

Overview of stall/spin technology
[AIAA PAPES 80-1580] p0579 880-50099
Deficiencies in flight safety -- using
minicomputer control of extracted radar data
[p0580 880-50991]
Analytic design of regulators for controlling
elastic flight vehicle rotation about the
longitudinal axis
[p0118 880-10035]
Optimal control of flight vehicle with elastic
elements
[p0118 880-10037]
On modeling sensitivity of a linear system to
reduction of its order by the infinitesimal
transformation method in the yaw motion control
problem
[p0119 880-10096]
Electromechanical flight control actuator
[NASA-CE-160368] p0030 880-10224
Multivariable digital control systems
[AD-A071662] p0030 880-10226
Method of conjugate gradients for optimal control
problems with state variable constraints
[AD-A072258] p0031 880-10227
Entropy analysis of feedback flight dynamic
control systems
[AD-A072259] p0042 880-11100
Validation Methods for Fault-Tolerant avionics and
control systems, working group meeting 1
[NASA-CE-2114] p0075 880-12741
Advances in Guidance and Control Systems Using
Digital Techniques
[AGARD-CP-272] p0111 880-14017
State of the art for digital avionics and
controls, 1978
[p0111 880-14018]
A flight control system using the DASS architecture
[p0111 880-14019]
An observer system for sensor failure detection
and isolation in digital flight control systems
[p0111 880-14023]
Automatic recovery after sensor failure onboard
[p0111 880-14024]
Recent advances in fibre optics for high integrity
digital control systems
[p0111 880-14025]
Integration of flight and fire control -- systems
analysis of digital controlled integrated flight
and fire control systems
[p0113 880-14063]
Design criteria for optimal flight control systems
-- study of optimal flight control systems
engineering for feedback control
[AD-A074092] p0138 880-15139
Flight control and configuration design
considerations for highly maneuverable aircraft
[p0140 880-15154]
Maxima likelihood identification of aircraft
parameters with unsteady aerodynamic modellings
[p0167 880-16027]
Digital adaptive controllers for V/STOL vehicles.
Volume 1: Concept evaluation
[NASA-CE-159154-VOL-1] p0171 880-16065
Digital flight control software validation study
[AD-A076021] p0180 880-17082
V/STOLAND avionics system flight-test data on a
OH-18 helicopter
[p0225 880-18047]
Closed loop models for analysing engineering
requirements for simulators
[NASA-CE-29265] p0235 880-19063
Handling quality requirements for advanced
aircraft designs longitudinal mode
study
[AD-A077858] p0295 880-19128
Microprocessor control of low speed V/STOL flight
[AD-A077661] p0295 880-19129
Manoeuverability aspects of avionics system reliability
-- actuation
[p0251 880-19535]
Air Force Flight Dynamics Laboratory fiscal year
1981. Technical objective document
[AD-A078973] p0258 880-20020
Advanced PIREP assessment generalized
mechanization requirements report
[AD-A079752] p0291 880-20263
Apparatus for damping operator induced
oscillations of a controlled system -- using
adaptive filters to damp oscillations in a
flight control system
[p0118 880-10035]

SUBJECT INDEX

Active Control Technology, volume 1
[p0307 880-21337]
Active control technology
[p0307, 880-21338]
Engineering for combat aircraft
[p0308 880-21339]
High integrity fiber optic data transmission
[p0308 880-21340]
The flying qualities of aircraft with augmented
longitudinal and directional stability
[p0308 880-21343]
Direct forces from flight testing
[p0309 880-21346]
Design of a nonlinear adaptive filter for
suppression of shuttle pilot-induced oscillation
tendencies
Optimal estimator applied to redundant stripped
down inertial sensors for navigation and flight
control
[p0347 880-22295]
Analysis of the effects of higher order control
systems on aircraft approach and landing
longitudinal handling qualities
[AD-A080519] p0354 880-22362
Practical optimal flight control system design for
[NASA-CE-3275] p0367 880-23320
Research in advanced flight control design
[AD-A082924] p0367 880-24236
Inherent error in asynchronous digital flight
controls
[AD-A083022] p0436 880-25396
Technical evaluation report on the 5th(A)
Propulsion and Energetics Panel Meeting on
Advanced Control Systems for Aircraft Powerplants
[AGARD-AB-152] p0436 880-25397
Optimization and simulation of flight control laws
under parameter uncertainty and external
disturbances
[NASA-CE-163292] p0483 880-26327
Development and flight test results of an
autotrottle control system at Mach 3 cruise
[NASA-TP-1621] p0483 880-26328
Digital Avionics Information System (DAIS):
Mission software
[AD-A085136] p0534 880-28350
A time response approach to equivalent aircraft
dynamics
[AD-A085873] p0546 880-29291
Results of a simulator investigation of control
design and display variations for an attack
helicopter mission
[AD-A085812] p0546 880-29370
Flight software requirements and design support
system
[NASA-CE-163425] p0560 880-30061
Feasibility study for integrated flight trajectory
control fighter
[AD-A084786] p0591 880-30314
The USN stability and control digital datcom.
Volume 1: User's manual
[AD-A0845577] p0591 880-30315
The USN stability and control digital datcom.
Volume 2: Implementation of datcom methods
[AD-A084558] p0592 880-30316
Aircraft wingtip coupling experiments
[p0595 880-31319]
Wenner modernization: A preliminary simulation
study
[AD-A087799] p0606 880-31410
Trends in the development of software for guidance
and control
[p0612 880-31217]
The logic of the electric flight control system
experiments on the Concorde -- achieving low
speed longitudinal stability by active control
[p0612 880-31217]
Azimuth observability enhancement during V-2
in-flight alignment
[TAB-NM-362] p0630 880-23260
Handling qualities of large flexible aircraft
[NASA-CE-163593] p0637 880-23240
Sea King Hk. 50 helicopter sonar dynamics study.
A simplified control systems mathematical model

A-192
FLIGHT SIMULATORS

Flight simulation data [NASA TP-1541] p0038 880-11069

Maneuver engineering flight simulation validation, part 2: Software user's guide [AD-A0771395] p0042 880-11105

Evaluation of transponder antennas configuration at C/NCB [AD-A0783547] p0043 880-11275

Flight simulation fatigue crack propagation evaluation of candidate lower wing skin materials with particular consideration of spectrum transmission [JWL-TH-77099-0] p0044 880-11520

VF/STOL flight simulation [NASA-ER-01156] p0072 880-12100

Deterioration in ground facilities of aerodynamic stability parameters of aircraft [AD-A07929] p0072 880-12102

Review and evaluation of national airspace system models [AD-A0798050] p0176 880-17047

Piloted flight simulation study of low-level wind shear, phase 4. All-weather landing systems, engineering services support project, task 2 [AD-A077166] p0180 880-17000


Evaluation of aircraft windshield materials in a simulated supersonic environment [AD-A078673] p0238 880-19082


Evaluation of a Central Data Entry System (CDES) for transport aircraft [AD-A0777345] p0300 880-21298

An improved prediction method for the noise generated in flight by circular jets [NASA-TH-81170] p0304 880-22049

Preliminary investigation of motion requirements for the simulation of helicopter hover tasks [NASA-TP-81101] p0307 880-22304

Rotocraft flight simulation, computer program C81. Volume 1: Engineer's manual [AD-A0796231] p0310 880-22312


Air combat maneuvering performance measurement [AD-A0777429] p0338 880-23336

Hybrid computer errors in engineering flight simulation [AD-A0801952] p0419 880-26307


Low cost simulation of piloting tasks [AD-A0800856] p0483 880-26332

Heat reclamation from flight simulators [AD-A0817548] p0483 880-26333

Application of flight simulator record/playback features [AIAA 80-1568] p0515 880-26367

A pilot's assessment of helicopter handling-quality factors common to both agility and instrument flying tasks [NASA-TH-81217] p0532 880-29341

An experimental evaluation of head-up display formats [NASA-TP-1550] p0533 880-29349

Wessex helicopter/monor dynamics study ARL program description and operation [AHRLA/AMM-385] p0545 880-29280

A head-up display format for application to transport aircraft approach and landing [NASA-TH-81199] p0546 880-29295

Helicopter electro-optical system display requirements. 2. Performance of helicopter pilots when using a low-light-level television system during simulated nap-of-the-earth flight [AD-A0806455] p0590 880-30300

Store separation testing techniques at the Arnold Engineering Development Center. Volume 4: Description of dynamic drop store separation testing [AD-A0874930] p0599 880-31358

A simulation investigation on the feasibility of curved approaches under Microwave Landing System (MLS) guidance [JWL-TH-78035-0] p0601 880-31380

Effects of flight parameter variations on handling qualities of unaugmented helicopters in simulated terrain flight [NASA-Th-78030] p0605 880-31307

Flight simulation fatigue crack propagation in 7010 and 7075 aluminum alloy plate [JWL-TH-78037] p0611 880-31807

Development of high lift devices for application to advanced Navy aircraft [AD-A080249] p0633 880-32302

Experimental techniques in unstable aerodynamics [AD-A0813373] p0646 880-33373

Pilot/vehicle model analysis of visual and motion cue requirements in flight simulation --- helicopter hovering [NASA-CH-3312] p0646 880-33398

Validation of the rotorcraft flight simulation program (C81) using operational loads survey flight test data [AD-A0890098] p0650 880-33422

Effects of criteria on flight simulation study 1: Heading deviation tolerance [AD-A0889008] p0650 880-33423


FLIGHT SIMULATORS

By COTRIBUTORS

The impact of the limits of simulation in extending the use of simulators in training [AD-A080-2472] p0004 880-10763

Recent and future engineering developments in flight training simulators [AD-A080-2472] p0005 880-10776

The interrelationships between engineering development simulation and flight simulation --- aircraft design development simulator technology transfer to flight simulator and training program improvements [AD-A080-2472] p0005 880-10777

Controllers for aircraft motion simulator [AIAA PAPER-80-0050] p0092 880-18252

Airliner simulator census [NAS 880-2069] p0166 880-24872

New requirements, test techniques, and development methods for high fidelity simulation of commercial transports [AIAA 80-0465] p0200 880-26699

Instrumentation for a tactical aircraft air-to-ground full-mission simulation [AD-A080-2472] p0266 880-29999

High-resolution intensified vidicon for low light level applications -- in aircraft flight simulators [AIAA 80-1568] p0515 880-45667

A non-Gaussian atmospheric turbulence model for flight simulator studies of aircraft handling qualities [AIAA 80-1568] p0515 880-45667
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application of existing roll response criteria to transport aircraft with advanced flight control systems</td>
</tr>
<tr>
<td>Dynamic characteristics of flight simulator motion systems</td>
</tr>
<tr>
<td>Dynamic characteristics of flight simulator motion systems</td>
</tr>
<tr>
<td>Flight test vehicles</td>
</tr>
<tr>
<td>The use of simulators for training in-flight and emergency procedures</td>
</tr>
<tr>
<td>V/STOL equivalent systems analysis</td>
</tr>
<tr>
<td>Helicopter flight test instrumentation</td>
</tr>
<tr>
<td>Advanced simulator for pilot training: Design of automated performance measurement systems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLIGHT TESTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability of asymmetric equilibrium flight states</td>
</tr>
<tr>
<td>Helicopter stability and control test methodology</td>
</tr>
<tr>
<td>Comparison of stability and control parameters for a light, single-engine, high-winged aircraft using different flight test and parameter estimation techniques</td>
</tr>
<tr>
<td>Stability and control aspects of the C-V-104G</td>
</tr>
<tr>
<td>Open loop gust alleviation</td>
</tr>
<tr>
<td>Comparison of wind tunnel and flight test measurements of static aerodynamic loading of a captive store</td>
</tr>
<tr>
<td>A flight investigation of performance and loads for a helicopter with 10-64C main rotor blade sections</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLIGHT TECHNICAL ERROR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight test instruments</td>
</tr>
<tr>
<td>MIDS - The right tool for small test jobs --- Miniature Integrated Data Systems for Inflight testing</td>
</tr>
<tr>
<td>A low cost airborne data acquisition system</td>
</tr>
<tr>
<td>Airborne video instrumentation, data reduction</td>
</tr>
<tr>
<td>VSTOL test techniques utilizing laser tracking</td>
</tr>
<tr>
<td>Experience from testing the Viggen electronic systems utilizing existing computer capacity</td>
</tr>
<tr>
<td>Firebrand anti-ship missile target -- Flight test program objectives and vehicle instrumentation requirements</td>
</tr>
<tr>
<td>From tape measure to computer tape -- Development of flight recorders</td>
</tr>
<tr>
<td>Determination of instrumentation errors from measured data using maximum likelihood method</td>
</tr>
<tr>
<td>Airborne flight test instrumentation</td>
</tr>
<tr>
<td>Flight test vehicles</td>
</tr>
<tr>
<td>Flight research techniques utilizing remotely piloted research vehicles</td>
</tr>
<tr>
<td>Flight test stability tests</td>
</tr>
<tr>
<td>Flight vehicles</td>
</tr>
<tr>
<td>Flight research techniques utilizing remotely piloted research vehicles</td>
</tr>
<tr>
<td>Flight test stability tests</td>
</tr>
<tr>
<td>Flight vehicles</td>
</tr>
<tr>
<td>Flight research techniques utilizing remotely piloted research vehicles</td>
</tr>
</tbody>
</table>
STOCHASTIC RESPONSE SECONDARY SURVEILLANCE RADAR

SOME MEASUREMENTS OF GUN BLAST ON A LIGHTING AIRCRAFT

ESTIMATION OF THE ACCURACY OF DYNAMIC FLIGHT-DETERMINED COEFFICIENTS

FLIGHT CERTIFICATION OF THE CELESTRA D205G AMBIPOLAR FLOATPLANE

FLIGHT AND WIND TUNNEL TEST RESULTS OF THE MECHANICAL JET NOSE SUPPRESSOR NOZZLE

DEVELOPMENT AND FLIGHT TEST OF A TWO-PLACE NIGHT/ADVERSE WEATHER 1-10 FOR THE CLOSE-AIR SUPPORT AND BATTLEFIELD ATTACK MISSION

LOCAL SKIN FRICTION AND STATIC PRESSURE ON A SWEPT WING IN FLIGHT

NEW REQUIREMENTS, TEST TECHNIQUES, AND DEVELOPMENT METHODS FOR HIGH-FIDELITY FLIGHT SIMULATION OF COMMERCIAL TRANSPORTS

CONTROL AND DATA ACQUISITION AIRCRAFT FOR ALCM FLIGHT TESTS — AIR LAUNCHED CRUISE MISSILE

WIND TUNNEL AND FLIGHT TESTS FOR A GUIDED PROJECTILE WITH CRUCIFORM TAILS

ACQUIRING EFFECTIVE RADAR CROSS SECTION FLIGHT PROFILES ON THE B-1 AIRCRAFT

FIRST EXPERIENCE WITH TELEMETRY AND REAL-TIME DATA REDUCTION AT GATES LEARJET

TACTICAL NAVIGATION SYSTEM TESTING

TESTING THE 7-18 AT THE U.S. NAVAL AIR TEST CENTER

HELICOPTER CRASH POSITION INDICATOR FLIGHT TRIALS

AIRCRAFT MOTION ANALYSIS USING LIMITED FLIGHT AND RADAR DATA

P/18 STATUS REPORT

LIGHT/ADVERSE WEATHER A-10 EVALUATOR PROGRAM

F-16 EUROPEAN TEST AND EVALUATION

GENERAL AVIATION ICING FLIGHT TEST

THE DEVELOPMENT OF THE WORLD'S FIRST TRIANGULAR BUSINESS JET, THE MYSTERE PELICAN 50

CI-600 CHALLENGER

REVIEW OF FIVE YEARS OF FLIGHT TESTING THE B-1 AIRCRAFT

COMPOSITE COMPONENTS ON COMMERCIAL AIRCRAFT

INSTRUMENTATION AND TECHNIQUES FOR PARACHUTE WIND TUNNEL TESTING

COCKPIT DISPLAY OF TRAFFIC INFORMATION

AIRBORNE FLIR — EXPERIENCES FROM FLIGHT TESTS

PRACTICAL DESIGN CONSIDERATIONS FOR A FLIGHTWORTHY HIGHER HARMONIC CONTROL SYSTEM -- FOR FLIGHT TESTING ON OH-6A HELICOPTER

SYNTHESIS OF TEST RESULTS ON THE CONCORDE AT HIGH ANGLE OF ATTACK

RECOMMENDATIONS FOR OBTAINING NOZZLE/AFTBODY DRAG DATA BASED ON A COMPARISON OF WIND TUNNEL AND FLIGHT DATA

RESULTS FROM FLIGHT NOISE TESTS ON A Viper TURBOJET FITTED WITH EJECTOR/SUPPRESSOR NOZZLE SYSTEMS

FLIGHT TESTS FOR THE STUDY OF RADIOELECTRIC PERTURBATIONS OF ELECTROSTATIC ORIGIN

FLIGHT TESTS FOR THE STUDY OF ALL-ELECTRONIC PROPULSION CONTROL SYSTEM

FLIGHT TEST OF AN EXPERIMENTAL AIRCRAFT TO TEST NEW TECHNOLOGIES

EFFECTS OF DISCONTINUOUS DROPPED WING LEADING-EDGE MODIFICATIONS ON THE SPINNING CHARACTERISTICS OF A LOW-SPEED SHORT-HOP TRANSPORT AIRPLANE

DETERMINATION OF A NOSE CORRECTION FOR A GENERAL AVIATION AIRPLANE AT LARGE ANGLES OF ATTACK DETERMINED FROM WIND TUNNEL AND FLIGHT TESTS

CERTIFICATION OF AVIONICS SYSTEMS ON THE COMMERCIAL AIRPLANES OF THE 1980'S

PREDICTION OF UNSUPPRESSED JET ENGINE EXHAUST NOISE USING STATIC DATA

INVESTIGATION OF FLIGHT CHARACTERISTICS OF THE BAC-111 FOR THE FRAMEWORK OF THE OFFICIAL FLIGHT TESTING. II

INVESTIGATIONS OF THE BAC-111 FLIGHT CHARACTERISTICS WITHIN OFFICIAL FLIGHT TESTS. II

FLIGHT/ADVERSE WEATHER A-10 AT THE CROSSROADS

DEVELOPMENT AND FLIGHT EVALUATION OF AUTOMATIC FLARE LAWS WITH IMPROVED TOUCHDOWN DISPERSION

FORWARD SWEPT WING FLIGHT DEMONSTRATOR

A STUDY OF NOISE/HARMONIC SYSTEM DETERMINATION FOR GENERAL AVIATION AIRCRAFT

A DYNAMIC ANALYSIS OF THE NOISE OF A LOW-WING GENERAL AVIATION AIRCRAFT ABOUT ITS CALCULATED EQUILIBRIUM FLAT SPIN MODE

SPIN PROFILE TAILORING FOR THE IMPROVED 2.75-INCH ROCKET

A VARIATIONAL TECHNIQUE FOR SMOOTHING FLIGHT-TEST AND ACCIDENT DATA

A SUMMARY OF AN IN-FLIGHT EVALUATION OF CONTROL SYSTEM TIME DELAYS DURING LANDING USING THE P-8 DPBV AIRPLANE

LOW ORDER EQUIVALENT MODELS OF HIGHLY AUGMENTED AIRCRAFT DETERMINED FROM FLIGHT DATA USING MAXIMUM LIKELIHOOD ESTIMATION

DETERMINATION OF AN OBLOQUE WING AIRCRAFT'S AERODYNAMIC CHARACTERISTICS

IDENTIFICATION OF FLEXIBLE AIRCRAFT FLIGHT DATA

IDENTIFICATION OF AEROELASTIC PARAMETERS USING A RECURSIVE SEQUENTIAL LEAST SQUARES METHOD

PARAMETER IDENTIFICATION OF B-52E CCFT FLIGHT TEST DATA INCLUDING AEREOELASTIC EFFECTS

THE AGRICULTURAL AIRCRAFT FSL-106A AND ITS TESTING AT THE AGRICULTURAL AVIATION FACTORY OF INTERFLUG

APPLICATION OF HIGH-ALPHA CONTROL SYSTEM CONCEPTS TO A VARIABLE-SPEED FIGHTER AIRPLANE

STUDY OF THE FEASIBILITY ASPECTS OF FLIGHT TESTING AN AEREOELastically TAILORED FORWARD SWEPT RESEARCH WING ON A BGM-38F DRONE VEHICLE

FEASIBILITY TESTS OF USE OF THE TSTURBO-3 AIRCRAFT FOR ARCTIC AIRDROP OPERATIONS

FLIGHT FLUTTER TESTING

EVALUATION OF SETTING AND RESTRAINT SYSTEMS

BEAVER AIRCRAFT PARAMETER IDENTIFICATION

TECHNICAL PREPARATIONS AND PRELIMINARY RESULTS

FLIGHT TEST OF NAVIGATION AND GUIDANCE SENSOR ERRORS MEASURED ON STOL AIRCRAFT
FLOW EQUATIONS

An experimental study of two-dimensional supersonic jet impingement on a flat plate
[AD-A075536] p0220 N80-17996

Data report for a test program to study transonic flow fields about wing-body/pylon/store combinations. Volume 1: Tunnel empty flow survey data, wing body force/moment/surface pressure data, and pressure store force/moment/surface pressure data
[AD-A0777182] p0221 N80-18001

Viscous flowfields induced by two- and three-dimensional lift junctions in ground effect
[AD-A0787821] p0229 N80-18343

Laser-Based flow-field diagnostics of two large hypersonic test facilities
[AD-A078269] p0246 N80-19135

An investigation of the quality of the flow generated by three types of wind tunnel (Ludwig tube, Fanno clean tunnel and injector driven tunnel)
[AD-A078788] p0246 N80-19138

Wake flowfields for Jovian probe
[NASA-CR-159235] p0207 N80-20230

Operational implications of some NASA/BASA rotary wing induced velocity studies
[NASA-TP-80232] p0288 N80-20231

The development of rapid predictive methods for three-dimensional transonic flow fields about fighter bomber aircraft, part 1
[AD-A078683] p0288 N80-20234

The graphical display of multi-dimensional aerodynamic flow field data
[AD-A080355] p0303 N80-21288

Study of rotor wakes at very low advance ratio
[AD-A080711] p0303 N80-21291

Aerodynamic performances of three fan stator designs operating with rotor having tip speed of 337 meters per second and pressure ratio of 1.54. Relation of analytical code calculations to experimental performance
[NASA-TP-1614] p0306 N80-21324

Leeuw's flow over delta wings at supersonic speeds

Lee side flow for slender delta wings of finite thickness
[NASA-TR-75755] p0329 N80-22353

[AD-A081675] p0360 N80-22360

Wind tunnel measurements of the mean flow in the turbulent boundary layer and wake in the region of the trailing edge of a swept wing at subsonic speeds

Flow visualization techniques in the Airborne Laser Laboratory program
[AD-A084871] p0400 N80-22568

Mutual interference of multiple bodies in the flow field of the F-16 aircraft in the transonic speed range - wind tunnel tests
[AD-A085704] p0468 N80-22726

Calculation of high speed inlet flows using the Navier-Stokes equations. Volume 2: User's manual and programmer's guide
[AD-A087307] p0530 N80-22831

Analysis and testing to improve the flow from the plenum of a subsonic cascade wind tunnel
[AD-A083471] p0537 N80-22832

The effects of ground wall-jet characteristics on turbulent open flow formation and development
[AD-A086127] p0546 N80-22929

Flow quality for Turbine Engine Loads Simulator (TELS) facility
[AD-A086084] p0551 N80-22938

Calculations by a first order theory of supersonic flow around delta wings
[TPA-TR-40-810] p0599 N80-31362

Flow visualization study of the NHAT RPN
[NASA-CR-163094] p0602 N80-31380

An experimental study of multiple jet mixing

Numerical method for predicting flow characteristics and performance of nonaxisymmetric nozzles. Part 2: Applications

FLOW EQUATIONS

Computation of steady inviscid transonic flows using pseudo-unsteady methods
[OMEGA, TP NO. 1979-156] p0260 A80-29083

ASYMPTOTIC INTEGRATION OF MULTICOMPONENT CHEMICAL-EQUILIBRlUM BOUNDARY LAYER EQUATIONS

FLOW IN A COMPRESSOR BLADE VORTEX SYSTEM

A method for assessing the impact of wake vortices of USAF operations
[AD-A072967] p0069 N80-12072

Viscous flow in the region of a rounded trailing edge
[AD-A078588] p0233 N80-19065

Transonic data memorandum: Numerical methods for solving the potential flow equations for two-dimensional aerfoils in subsonic and transonic flows, brief details, test cases and examples
[RSRD-70409] p0302 N80-21278

Linearized methods in supersonic flow
[AD-A079388] p0644 N80-33380

FLOW SYSTEMS

FLOW DISTRIBUTION

FLOW GEOMETRY

An experimental study of axial compressor blades with variable geometry when using blade cascade measurement data --- German thesis
[AD-A088-13455

An analytical and experimental study of a short S-shaped subsonic diffuser of a supersonic inlet
[AD-A0000-0366] p0060 N80-20470

Determination of the profile losses on the turbine blades
[AD-A081-29136

Calculation method of the turbine stages with cylindrical blades
[AD-A082-29140

Numerical solution of the steady flow in turbomachine blades and ducts of arbitrary shape
[AD-A080-32853

Studies of turbulent confined jet mixing
[AD-A080-32857

An experimental investigation of endwall profiling in a turbine vane cascade
[AD-A081-1089] p0357 N80-38904

Study of cooling air inlet and exit geometries for horizontally opposed piston aircraft engines
[AD-A082-1242] p0401 N80-38940

Compressor response to spatially repetitive and non-repetitive transients
[AD-A083-2022] p0455 N80-40504

Geometry of circulation zones downstream of bluff bodies and gasdynamic screws of various forms and blockage ratio
[AD-A084-21908

Determination of turning angle of a jet impinging on a bucket with visor
[AD-A084-31898

Computation of three-dimensional flow in turbosan mixed compressors and comparison with experimental data
[NASA-TP-81410] p0194 N80-15364

Hanger and critical values of advance ratio for blade/vortex intersection patterns of a helicopter rotor
[NPL-RP-7909-3] p0599 N80-31360

FLOW GRAPHS

The status of theoretical methods for calculation of detached flows
[AD-A080-32857

FLOW MEASUREMENTS

An optical technique for the investigation of flow by gas turbine combustors
[AD-A080-11769

A Laser Doppler Velocimeter system to investigate unsteady flow separation
[AD-A080-12634

A survey of Laser Doppler velocimeter applications at the Arnold Engineering Development Center
[AD-A080-12638

Photon correlation laser velocimeter measurements in highly turbulent flow fields
[AD-A080-0346] p0095 N80-18328

Some dynamic and time-averaged flow measurements in a turbine rig
[AD-A080-22110

Additional flow quality measurements at the Langley Research Center 8-Foot Transonic Pressure Tunnel
[AD-A080-3631] p0199 N80-26984

Laser anemometer measurements at the exit of a T63 combustor
[AD-A080-27737

SUBJECT INDEX
Coupled bending-torsion flutter in cascades with applications to fan and compressor blades

Non-synchronous whirling due to fluid-dynamic forces in axial turbo-machinery rotors

Fluid forces on rotating centrifugal impellers with whirling motion

A compendium of computational fluid dynamics at the Langley Research Center

Fluid forces on rotating centrifugal impellers with whirling motion

Transport phenomena in labyrinth seals of turbomachines — French thesis

Influence of working-fluid issuance through a nozzle on the rate of flame front propagation in a pulsating-type combustion chamber

Experimental and analytical studies of a true airspeed sensor

Preliminary evaluation of coal-fired fluid bed combustion-augmented compressed air energy storage power plants

Experimental and analytical studies of a true airspeed sensor

Noise from a vibrating propeller

Effect of adding structural damping on a wing/nacelle hump type flutter mode

Nonlinear aeroelastic vibration of interfering surfaces

Active flutter suppression using Linear Quadratic Gaussian theory

The basic models of mechanics of liquids and gases in the theory of the wing

Experimental and analytical studies of a true airspeed sensor

Fluid injection — Russian book

Aerodynamics of hypersonic flows with fluid injection — Russian book

Subjects Index

FLUID FILMS

FLUID FILTERS

Fluid filter loading data for a simulated jet engine test cell aerosol

FLUID JET AMPLIFIERS

FLUID JETS
FLUTTER ANALYSIS

A study of compressor blade stall flutter in a straight cascade wind tunnel
[OMEGA, TP NO. 1980-97] p0622 A80-53282
Aircraft flutter and dynamic response
p0065 H80-12010

Flight flutter testing
p0066 H80-12012
Aerodynamic response analysis of two dimensional, single and two degree of freedom airfoils in low-frequency, small-disturbance unsteady transonic flow
[AD-1073379] p0069 H80-12073
The development of the DAST 1 remotely piloted research vehicle for flight testing an active flutter suppression control system
p0070 H80-12083
Leading edge flutter of supercavitating hydrofoils
[AD-1073382] p0073 H80-12236
General theory of aerodynamic instability and the mechanics of flutter
[NASA-496] p0127 H80-15047
Comparison of international flutter requirements, tolerances for freedom substantiation of lift aircraft in the USA
p0138 H80-15142

Analysis of trunk flutter in an aircraft landing system
[AD-1079008] p0237 H80-19075
Developing, documenting and testing of digital active flutter suppression system for a modified N-52 wind-tunnel model
Some recent measurements of structural dynamic damping in aircraft structures
p0253 H80-19576

-Wing/store flutter with nonlinear pylon stiffness
[NASA-TM-81780] p0294 H80-20280
Analytical tools for active flutter suppression
p0309 H80-21350

External store flutter suppression with active controls
p0309 H80-21351

Model order reduction using the balanced state representation theory, application and interactive software implementation
[AD-1080371] p0309 H80-21356
Decoupler pylon: Wing/store flutter suppression
The application of output predictive digital control to wing flutter suppression and terrain following problems
[AD-1080419] p0354 H80-22361
Application of two design methods for active flutter suppression and wind-tunnel test results
[NASA-TP-1653] p0357 H80-22737
An aeroelastic analysis of the Sheriff wind tunnel
[BU-234] p0361 H80-23274
Status of NASA full-scale engine aeroelasticity research
[NASA-TP-81500] p0370 H80-23670
Minimum mass sizing of a large low-aspect ratio airframe for flutter-free performance
[NASA-TP-81818] p0370 H80-23683
Further investigation of a finite difference procedure for analyzing the transonic flow about harmonically oscillating airfoils and wings
[NASA-CR-3195] p0414 H80-24271
Flutter analysis of an airplane with multiple structural nonlinearities in the control system
[NASA-TP-1620] p0421 H80-24324
Initial development for a flutter analysis of damaged Y-36 horizontal stabilizers using WASTAN
[AD-1082160] p0421 H80-24325
Experimental determination of unsteady blade element aerodynamics in cascades. Volume 1: Vorticity mode cascade
[NASA-CS-159831] p0434 H80-25335
Wind-tunnel experiments on divergence of forward-swept wings
[NASA-TP-1685] p0585 H80-29287
Calculation of the transient motion of elastic airfoils forced by control surface motion and gusts

FLUTTER ANALYSIS
Evaluation of the intensity of heat-induced vibrations
p0090 A80-17565

Possibility of the onset of self-oscillations in cylindrical bodies situated in longitudinal liquid or gas flows in the case of crisis of drag and flutter
p0217 A80-28851
Investigation of internal control laws for wing/store flutter suppression
[AIAA 80-0764] p0322 A80-35056
Active flutter suppression control law definition via least squares synthesis
[AIAA 80-0766] p0322 A80-35057
Design for active flutter suppression and gust alleviation using state-space aeroelastic modeling
[AIAA 80-0768] p0322 A80-35058
F-16 flutter suppression system investigation
[AIAA 80-0760] p0333 A80-35060
Recent development of the TP-17 active flutter suppression system
[AIAA 80-0769] p0333 A80-35061
Wind tunnel investigation of active control technology applied to a DC-10 derivative
[AIAA 80-0771] p0333 A80-35062
Experimental investigation of flutter in mid-stage compressor designs -- for aircraft axial flow gas turbine engines
[AIAA 80-0786] p0333 A80-35073
An optimal flutter test method for the determination of the important flutter modes
[AIAA 80-0790] p0334 A80-35074
Wing/store flutter with nonlinear pylon stiffness
[AIAA 80-0792] p0339 A80-35075
System to measure the pressure distribution on fan aerofoil surfaces during flutter conditions
p0342 A80-36144
Theoretical and experimental parameter studies of oscillating turbine blades in a centrifugal force field
p0392 A80-38350
The effect of aerodynamic phase lag on the twin vibration mode model of aeromissile fan flutter
[ASMR PAPER 80-GT-166] p0464 A80-42275
Instantaneous airfoils on wings with an oscillating rudder
[DGLR PAPER 80-031] p0522 A80-46283
Fluid torsional vibrations of a wing
p0525 A80-46851
Investigation of the influence of the parameters of a wing/combustion system on the critical flutter speed
p0525 A80-46871
Passive control of wing/store flutter
p0579 A80-50100
An application of system identification to flutter testing
p0622 A80-53242
Aero-servo-elastic stability analysis
[AD-1072797] p0642 B80-11101
Aeroelastic Problems in Aircraft Design
[VKI-LEC-SBB-1979-8] p0655 B80-12000
Wind tunnel flutter investigations
p0655 B80-12011

Flutter testing
p0665 B80-12012

The development of active control and its application to flutter suppressors -- wind tunnel test results
[AIAA-496-79-02] p0802 B80-13056
Some recent trends in aircraft flutter research -- analysis of flutter for aircraft design and use of oblique wings in aircraft configurations
p0803 B80-13007
A computerized method for calculating flutter characteristics of a system characterized by two degrees of freedom
[NASA-TM-80153] p0114 B80-14055
Excitation and analysis technique for flight flutter tests
[HDB-DFE-1446(0)] p0122 B80-14140
Low cost aircraft flutter clearance --- conference
[AIAA-CP-278] p0138 B80-15141
The state-of-the-art of flutter substantiation procedures among US general aviation manufacturers
p0138 B80-15143
An empirical approach for checking flutter stability of gliders and light aircraft
p0139 B80-15149
Effects of free-stream turbulence on diffusion

Influence of the empennage on the effective thrust

Investigation of the optimal configuration of high-stability quartz oscillators for aircraft and missiles

Failure analysis

Laboratory studies of flight mechanics using a standard model in the vicinity of airports. Application to various airports: Orly and Bologna-on-France

Free vibrations of a turbomachine rotor as a free vibration system of structural rotational symmetry

Stability and time transfer analysis

Synchronization using Cs clock transfer

High stability quartz oscillators for aircraft and missiles

UHF air-ground technology and spectrum utilization

A cavity-type broadband antenna with a steerable cardioid pattern

Spectrum resource assessment in the 2.7-2.9 GHz band phase 2: Radar signal processing

A standard for RF modulation factor for instrument landing systems and VOR navigation systems

Frequency-domain control design for variable linear systems

Experimental and analytical studies of a true airborne sensor

Frequency-scaning particle size spectrometer

Investigations of the optimal configuration of high-stability quartz oscillators for aircraft and missiles

Novo satellite time experiment --- global time synchronization using Cs clock transfer

Applications of sprayed coatings

Aerospace drag

Aerodynamic drag

Skin friction

Sliding friction

UFO FIGHTER AIRCRAFT

U-5 AIRCRAFT

U-5 FREQUENCY

U-5 FREQUENCY Modulation

U-5 FREQUENCY MODULATION

U-5 FREQUENCY RESPONSE

U-5 FREQUENCY SPECIFICATIONS

U-5 FREQUENCY SCANNING

U-5 FREQUENCY STABILITY

U-5 FREQUENCY STANDARDS

U-5 FREQUENCY TESTING

U-5 FREQUENCY TESTING MODULATION

U-5 FREQUENCY TESTING RESPONSE

U-5 FREQUENCY TESTING SPECIFICATIONS

U-5 FREQUENCY TESTING SCANNING

U-5 FREQUENCY TESTING STABILITY

U-5 FREQUENCY TESTING STANDARDS

U-5 FREQUENCY TESTING TESTING
SUBJECT INDEX

<table>
<thead>
<tr>
<th>ASME PAPER 80-GT-171</th>
<th>p046a A80-42279</th>
</tr>
</thead>
<tbody>
<tr>
<td>The thermal impact of external pool fires on aircraft fuselages</td>
<td></td>
</tr>
<tr>
<td>p0509 A80-65496</td>
<td></td>
</tr>
<tr>
<td>Influence of the thermal expansion of the gas on the rate of propagation of the flame front in a pulsating-type combustion chamber</td>
<td></td>
</tr>
<tr>
<td>p0563 A80-47369</td>
<td></td>
</tr>
<tr>
<td>Comparative analysis of the basic combustion characteristics of some heavy hydrocarbon fuels in application to aircraft gas turbine engines</td>
<td></td>
</tr>
<tr>
<td>p0565 A80-47420</td>
<td></td>
</tr>
<tr>
<td>Development of gas turbine fuels and combustion; An overview</td>
<td></td>
</tr>
<tr>
<td>p0032 A80-10391</td>
<td></td>
</tr>
<tr>
<td>NASA broad-specification fuels combustion technology program: Status and description</td>
<td></td>
</tr>
<tr>
<td>p0120 A80-14126</td>
<td></td>
</tr>
<tr>
<td>Exhaust emission reduction for intermittent combustion aircraft engines</td>
<td></td>
</tr>
<tr>
<td>p0121 A80-14130</td>
<td></td>
</tr>
<tr>
<td>Air pollution from aircraft</td>
<td></td>
</tr>
<tr>
<td>p0170 A80-16060</td>
<td></td>
</tr>
<tr>
<td>Analysis of NASA JP-4 fire tests data and development of a simple fire model</td>
<td></td>
</tr>
<tr>
<td>p0356 A80-22432</td>
<td></td>
</tr>
<tr>
<td>Semi-empirical correlations for gas turbine emissions, ignition, and flame stabilization</td>
<td></td>
</tr>
<tr>
<td>p098 A80-27393</td>
<td></td>
</tr>
<tr>
<td>Combustion modelling within gas turbine engines, some applications and limitations</td>
<td></td>
</tr>
<tr>
<td>p098 A80-27394</td>
<td></td>
</tr>
<tr>
<td>Aircraft Research and Technology for Future Fuels</td>
<td></td>
</tr>
<tr>
<td>p0547 A80-29300</td>
<td></td>
</tr>
<tr>
<td>Combustion technology overview - the use of broadened property aircraft fuels</td>
<td></td>
</tr>
<tr>
<td>p0548 A80-29310</td>
<td></td>
</tr>
<tr>
<td>NASA/General Electric broad-specification fuels combustion technology program, phase 1</td>
<td></td>
</tr>
<tr>
<td>p0549 A80-29316</td>
<td></td>
</tr>
<tr>
<td>Fuels research: Combustion effects overview</td>
<td></td>
</tr>
<tr>
<td>p0549 A80-29317</td>
<td></td>
</tr>
<tr>
<td>Effect of fuel molecular structure on soot formation in gas turbine combustion</td>
<td></td>
</tr>
<tr>
<td>p0549 A80-29322</td>
<td></td>
</tr>
<tr>
<td>Preliminary studies of combuster sensitivity to alternative fuels</td>
<td></td>
</tr>
<tr>
<td>p0550 A80-29323</td>
<td></td>
</tr>
</tbody>
</table>

FUEL CONSUMPTION

An engine fuel chemistry solution to the problem of jet fuel supplies

The role of technology as air transportation faces the fuel situation

Preparing aircraft propulsion for a new era in energy and the environment

Technology of the Rolls-Royce RB211 engine

Engine component improvement program - Performance improvements

Fuel conservation benefits and critical technologies of recuperative and advanced conventional cycle turbofan engines

The next supersonic transport

Short haul transport for the 1990s

Looking ahead --- in aircraft design

Research developments for aircraft safety

Research programs in general aviation - Next generation aircraft

The Mitsubishi Diamond I - What are its chances on the current market

The potential for development of high performance light aircraft

p0157 A80-22983

p0158 A80-22984

p0159 A80-23307
Improved MPG for the Bae 146 feeder-jet
The energy problem: its effect on aircraft design
Fuel consumption per units of transport work in airliner operation
The energy problem - its effect on aircraft design
Fuel - a system problem of major proportions - fuel conservation in airline operations
Potential benefits for propfan technology on derivatives of future short- to medium-range transport aircraft
New Technology Transport for fuel critical economy
Fuel economy in the airlines
Reduced bleed air extraction for DC-10 cabin air conditioning
Fuel conservation through active control of rotor clearances
Design study for a fuel efficient turbofan engine
The Energy Efficient Engine /E3/ - Advancing the state of the art
New aircraft - where are we heading in the 1990s and 2000s
Aerodynamic design optimization of an efficient high-performance, single-engine, business airplane
Fuel efficiency of small aircraft
Minimum fuel flight paths for given range
A study of chattering cruise --- fuel optimal aircraft flight regime
The Lear Fan - A significant step toward fuel efficient airplanes
Down to earth operations --- centralized ground-to-air distribution system for aircraft fuel savings
Airbus airfoils cut fuel burn - High aspect ratio, thickness, low sweep contribute
Study of the nature of the working process of a gas turbine engine exhaust with staged heat rejection
Propfan propulsion for commercial air transports
Energy conservation in terminal airspace through fuel consumption modeling
Estimation of fuel consumption of commercial jet aircraft from path profile data
Fast and potential near term fuel savings in commercial aviation through modified operational strategies
Future aviation fuels - the petroleum industry responds to the challenge
How to get more out of your 747 - Pan Am and Qantas take different routes
The advanced flight deck
Aircraft Energy Efficiency (ACEE) status report

Fuel minimal take-off path of jet lift VTL aircraft, log no. C3558
Engine component improvement program: Performance improvement --- fuel consumption
Preliminary test results of a flight management algorithms for fuel conservative descents in a time based metered traffic environment
Analysis of fuel-conservative curved decelerating approach trajectories for powered-lift and CTOL jet aircraft
The role of technology on air transportation in the future
Effectiveness of advanced fuel-conservative procedures in the transitional ATC environment
Energy conservation potential of general aviation activity
CF6-6D engine performance deterioration
Investigation of performance deterioration of the CF6/JT9D, high-bypass ratio turbofan engines
Improved components for engine fuel savings
Application of advanced technologies to small, short-haul transport aircraft
The energy efficient engine project
FUEL CONSUMPTION
Investigation of the influence of contaminated fuel on turbine vane surface deposition
FUEL CONTROL
Influence of antiskimming polymer on aviation fuel breakup
Development of full authority digital fuel control for a gas turbine engine using a hybrid computer system as a design aid
Demonstration program for a flexible duct valve for ramjet engine fuel controls
A new fuel supply control system for small turboprop engines
The design concept and experimental results using the INTEL 8080/8085 microprocessor --- gas turbine engine fuel control

FUEL CORROSION
The chemical stability of hydro-treated fuels and...
<table>
<thead>
<tr>
<th>Subject Index</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuselage design and analysis of a stiffened composite fuselage panel</td>
<td>p0611 880-31820</td>
</tr>
<tr>
<td>Analysis of Aero Commander sidewall vibration and interior acoustic data: Static operations</td>
<td>p0645 880-33392</td>
</tr>
<tr>
<td>Development and analysis of the Learjet 54/55 fuselage NASTRAN model using substructure techniques</td>
<td>p0653 880-33790</td>
</tr>
<tr>
<td>FUSION (HEATING)</td>
<td></td>
</tr>
<tr>
<td>Problems with the use of chemicals on runways during winter use</td>
<td>p0375 880-36767</td>
</tr>
<tr>
<td>FUSION WELDING</td>
<td></td>
</tr>
<tr>
<td>ST ELECTRON BEAM WELDING</td>
<td></td>
</tr>
<tr>
<td>ST GAS TUNGSTEN ARC WELDING</td>
<td></td>
</tr>
<tr>
<td>ST GAS WELDING</td>
<td></td>
</tr>
<tr>
<td>FY-12A AIRCRAFT</td>
<td></td>
</tr>
<tr>
<td>The FY-12A Thrust-Augmented Wing (TAW) prototype aircraft</td>
<td>p0224 880-10133</td>
</tr>
<tr>
<td>PEB AIRCRAFT</td>
<td></td>
</tr>
<tr>
<td>U P-4 AIRCRAFT</td>
<td></td>
</tr>
<tr>
<td>U F-6 AIRCRAFT</td>
<td></td>
</tr>
<tr>
<td>U F-8 AIRCRAFT</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td></td>
</tr>
<tr>
<td>G FORCE</td>
<td></td>
</tr>
<tr>
<td>U ACCELERATION (PHYSICS)</td>
<td></td>
</tr>
<tr>
<td>U MEASURING INSTRUMENTS</td>
<td></td>
</tr>
<tr>
<td>GALAXY AIRCRAFT</td>
<td></td>
</tr>
<tr>
<td>U C-5 AIRCRAFT</td>
<td></td>
</tr>
<tr>
<td>GALLIUM</td>
<td></td>
</tr>
<tr>
<td>Wake flowfields for Jovian probe</td>
<td>p0287 880-20230</td>
</tr>
<tr>
<td>GALLIUM</td>
<td></td>
</tr>
<tr>
<td>Liquid metal slip ring --- aerospace environments</td>
<td>p0288 880-18300</td>
</tr>
<tr>
<td>GASES</td>
<td></td>
</tr>
<tr>
<td>An approximate feedback solution of a variable speed non-linear pursuit-evasion game between two airplanes in a horizontal plane</td>
<td>p0517 880-45890</td>
</tr>
<tr>
<td>GAPS</td>
<td></td>
</tr>
<tr>
<td>On the effects of gaps on control surface characteristics</td>
<td>p0163 880-15176</td>
</tr>
<tr>
<td>Some investigations concerning the effects of gaps and vortex generators on elevator efficiency and of landing flap sweep on aerodynamic characteristics</td>
<td>p0143 880-15178</td>
</tr>
<tr>
<td>GARB</td>
<td></td>
</tr>
<tr>
<td>U GLOBAL ATMOSPHERIC RESEARCH PROGRAM</td>
<td></td>
</tr>
<tr>
<td>GAS ANALYSIS</td>
<td></td>
</tr>
<tr>
<td>ST OXIDATION</td>
<td></td>
</tr>
<tr>
<td>GAS BARS</td>
<td>Project Helicostat A2 100 - Aerostatic performances of the keel-gas bag system and technological solutions retained</td>
</tr>
<tr>
<td>GAS CHROMATOGRAPHY</td>
<td></td>
</tr>
<tr>
<td>Analytical techniques for aromatic components in aircraft</td>
<td>p0592 880-30536</td>
</tr>
<tr>
<td>GAS COMPOSITION</td>
<td>Predictions of the flow field and local gas composition in gas turbine combustors</td>
</tr>
<tr>
<td>GAS COOLING</td>
<td>Modeling and control of transonic cryogenic wind tunnels</td>
</tr>
<tr>
<td>GAS DENSITY</td>
<td>Gladstone-Dale constant for CPA --- experimental design</td>
</tr>
<tr>
<td>GAS DYNAMICS</td>
<td>ST AERODYNAMICS</td>
</tr>
<tr>
<td>ST AEROTHERMODYNAMICS</td>
<td></td>
</tr>
<tr>
<td>ST HYPersonic</td>
<td></td>
</tr>
<tr>
<td>ST ROTOR AERODYNAMICS</td>
<td></td>
</tr>
<tr>
<td>ST SUPERSONICS</td>
<td>Calculation of vortex process in 'slow-compression' piston-type aerodynamic tube</td>
</tr>
</tbody>
</table>
Influence of turbine first stator row cooling on turbine inlet gas temperature

Gas Turbine Engines
- MT Bristol-Siddeley BS 53 engine
- MT Ducted Fan Engines
- MT Hydrogen Engines
- MT J-65 engine
- MT J-79 engine
- MT J-95 engine
- MT JEET engines
- MT RAJET engines
- MT Supersonic Combustion RAJET Engines
- MT T-63 engine
- MT T-67 engine
- MT T-81 engine
- MT T56/53 engines
- MT TURBOPROP engines

Application of the discrete-phase method /DPH/ to the study and control of aircraft turbine engine blade vibrations. I

Review of Superalloy Powder Metallurgy Processing for Aircraft Gas Turbine Applications

Gas Turbine Engine Design
- Study of homogeneous combustion chamber temperature field nonuniformity with primary zone parameter variation
- Selection of optimal parameters of heat-pipe heat exchanger for a gas turbine engine

Lubrication of Aircraft Gas-Turbine Engines
- Study of mass exchange between primary zone and secondary air jets in gas turbine engine combustion chambers
- On the influence of short shroud platform on turbine stage operation
- Study of size distribution of oil drops formed in GTB oil system lines
- Development of an aircraft-derivative gas turbine with high performance and large output
- Lubricants for the aircraft gas turbine
- Lubrication of aircraft gas-turbine engines

Gas Turbine Engine Materials
- An optical technique for the investigation of flow in gas turbine combustors
- Pollutant emissions from partially mixed turbulent flames
- Processing noise and vibration data for gas turbine engine development
- Measuring unsteady pressure on rotating compressor blades with semiconductor strain gages under gas turbine engine operating conditions
- Turbomecha - the 'Makula' is in production
- Gas turbine engine cooling in aero engines - Some new results, future trends, and research requirements
- Utilization of dynamic simulators of aircraft turbine engines

Gas Turbine Engine Performance
- Reliability and life of aircraft gas turbine engines
- Characteristics of a Laval nozzle with gasdynamic regulation
- Technical diagnostics of aircraft gas-turbine engines

Gas Turbine Engine Performance Analysis
- Theory of aircraft gas turbine engines (3rd revised and enlarged edition)
- Fully mechanized circumferential welding for engines
- Analysis of programs for regulating helicopter turbine engines
- Gas turbine case and accessory vibration problems - Measurement and analysis
- Evaluation of the intensity of heat-induced vibrations
- Estimation of noise source strengths in a gas turbine combustor
- Regression techniques applied to parametric turbine engine simulations
- Thermal barrier coatings for aircraft gas turbines
- Thermal state of structural members of aircraft engines
- A method of evaluation of gas turbine engines
- Unification of oils for aircraft gas-turbine engines
- Determination of start-up pressure losses for gas turbine engine compressors

Aircraft Gas Turbine Engine Components
- Some dynamic and time-averaged flow measurements in a turbine rig
- Application of the discrete-phase method /DPH/ to the investigation and monitoring of aircraft turbine engine blade vibrations. II
- A cooled laminted radial turbine technology demonstration
- Optimization methods in fine-finished and designing gas-turbine engines
- Low cycle fatigue life model for gas turbine engine disks
- Transparent engines at Rolls-Royce - The application of high energy X-ray technology to gas turbine development
- Source book on materials for elevated-temperature applications: A comprehensive collection of outstanding articles from the periodical and reference literature
- Effect of wake-type nonuniform inlet velocity profiles on first appreciable stall in plane-wall diffusers
- Wear of seal materials used in aircraft propulsion systems
- Model tests for the development of axial compressors
- Computer-aided designing of temperature fields for cooled gas-turbine blades
- The investigation of transient loads in gas turbine engine blades using spectral analysis methods
- Selective methods of determining the range of engine operation in aircraft crash investigations
- Combustion-gas temperature sensors for turbine and turboprop engines
- Aircraft gas turbine materials and processes
- Laser-optical blade tip clearance measurement system
- Fluid and structural measurements to advance gas turbine technology
- Vibration measurements on turboshaft engine blades with optical probes
GAS TURBINE ENGINES

Preliminary evaluation of coal-fired fluid bed combustion-augmented compressed air energy storage power plants
[ASME PAPER 80-GT-160] p0063 A80-42270

Thermodynamics of heavy fuels operation in gas turbine
[ASME PAPER 80-GT-117] p0064 A80-42279

Heat transfer phenomena in gas turbines
[ASME PAPER 80-GT-172] p0066 A80-42280

Experience in extending the life of gas turbine blades
[ASME PAPER 80-GT-181] p0065 A80-42285

Development of corrosion-inhibited lubricants for gas turbine engine and helicopter transmissions
[ASLE PREPRINT 80-AE-6C-3] p0067 A80-43160

Operation of an all-ceramic waistshaft roller bearing in a J-502 gas-turbine engine
[ASLE PREPRINT 80-AE-3C-1] p0067 A80-43166

Airline economic benefit through engine development
[AIAA PAPER 80-381D] p0060 A80-43299

Determination of the residual life of gas turbine engines by analyzing the safety factors of the most heavily loaded elements
p0526 A80-47169

The compression moulding of composite aero engine components with elevated thermal stability
p0527 A80-47202

A resin injection technique for the fabrication of aero-engine composite components
p0527 A80-47206

Method of studying the working-medium temperature of aircraft gas-turbine engines for transient modes
p0563 A80-49370

Selection of assembly clearances for gas-turbine engine seals
p0563 A80-49372

Calculation of the static characteristics of two-hole swirl injectors
p0564 A80-49395

Generalized approach to aircraft gas turbine engine equivalent test engine determination
p0564 A80-49713

On calculating gas turbine efficiency reduction under the influence of air cooling
p0564 A80-49715

Solution of the steady-state heat conduction problem by a probability method - temperature calculation for gas turbine engine components
p0565 A80-49748

Calculation of radial-axial turbine wheel thermal and stress states
p0565 A80-49749

Comparative analysis of the basic combustion characteristics of some heavy hydrocarbon fuels in application to aircraft gas turbine engines
p0565 A80-49748

Study of the nature of the working process of a gas turbine engine exhaust with staged heat rejection
p0565 A80-49743

Selection of parameters of axial power-driven centrifugal blowers for gas turbine engine oil systems
p0566 A80-49739

Methods for correcting the parameters of small gas turbine engines
p0566 A80-49741

Influence of surface longitudinal curvature on temperature of turbine blades with fins cooling
p0566 A80-49744

Influence of the profile geometry on the eigenfrequency and normal modes of high-pressure-turbine blades with allowance for conditions characteristic of aircraft gas turbine engines
p0566 A80-49760

Integral methods of solving thermal conduction problems and their application to heat exchange calculations in gas turbine engine components
p0568 A80-49715

Similarity tests of turbine vanes - Effects of ceramic thermal barrier coatings
[ASME PAPER 80-HT-24] p0569 A80-49813

Influence of angle of attack on profile losses in turbine cascade with porous cooling
p0615 A80-51894

Forced vibrations of turbine discs under nonuniform gas flow conditions
p0616 A80-51887

Account for working fluid compressibility in the gas turbine engine transient operating regimes
p0616 A80-51992

Hybrid bearings for aircraft engines
p0616 A80-51987

Optimal GTS regulation program design --- Gas Turbine Engine
p0616 A80-51999

Study of gas turbine engine autorotation regimes
p0616 A80-51901

Material considerations for gas turbine engines
p0618 A80-52127

Temperature field as a means of evaluating excitation intensity of aircraft gas turbine blade
p0618 A80-52193

Temperature distribution planning for a cooled gas-turbine blade using an electric computer
p0625 A80-53656

A study of alternating stresses in gas-turbine engine blades by spectral analysis
p0625 A80-53649

Influence of gas turbine engine combustion chambers geometric parameters on mixture formation characteristics
p0617 A80-10006

Study of heat-pipe heat exchanger in the small gas turbine engine system
p0617 A80-10022

Analytic representation of turbine characteristics in form convenient for computer calculation of GTS parameters
p0617 A80-10029

Basic problem of aircraft gas turbine engine analytic design, part 1
p0618 A80-10042

Gas curtains in gas turbine engines
p0620 A80-10063

Selection of optimal parameters of heat-pipe heat exchanger for a gas涡bine engine
p0620 A80-10068

Systematization of simple detail parts of the regulative nozzle of gas turbine engine
p0620 A80-10071

Dynamics of diesel fuel combustion in turbulent flow of gases
p0620 A80-10074

Study of mass exchange between primary zone and secondary air jets in gas turbine engine combustion chambers
p0620 A80-10075

On the influence of short shroud platforms on turbine stage operation --- performance tests for shrouded rotor blades on gas turbine engines
p0620 A80-10083

Study of size distribution of oil drops formed in GTS oil
p0621 A80-10088

Nonstationarity of heat transfer in axial turbine blading during engine startup
p0621 A80-10089

Control technology
p0629 A80-10215

Analysis of the response of a thermal barrier coating to sodium and vanadium doped combustion gases

Development of gas turbine fuels and combustion: An overview
[CONF-790337-4] p0032 A80-10391

Optimal thermodynamic design of gas turbine engines using elementary prototype, 1
p0033 A80-11007

Simulated Mission Endurance Test (SMET) for an aircraft engine to be used in a fighter/attack role
[AD-A0719078] p0040 A80-11089

Fundamental characterization of alternate fuel effects in continuous combustion systems
[SAN-1543-12] p0043 A80-11244

[NASA- CR-159691] p0080 A80-13063


An acoustic sensitivity study of general aviation propellers  
{NASA-PAPER 80–1071}  p0580 A80–50191  
Spinning for safety's sake  
{NASA-TP–1677}  p0580 A80–50225  
Light airplane crash tests at three roll angles  
{NASA-TP–1589}  p0708 B80–13026  
Exhaust emissions characteristics for a general aviation light airplane  
{NASA-CR–159176}  p0128 B80–15062  
The state-of-the-art of flutter substantiation procedures among US general aviation manufacturers  
{NASA-TP–1579}  p0130 B80–15143  
Transponder Performance Analysis (TPA)  
{AD–A077783}  p0168 B80–16088  
Accident data systems study requirements analysis for a FAA accident data system  
{AD–A076517}  p0176 B80–17083  
Exhaust emissions characteristics for a general aviation light aircraft  
{Avco Lycoming} TIO-360-A16D piston engine  
{AD–A075335}  p0179 B80–17070  
A consideration of general aviation in the United Kingdom  
{TT–7902}  p0219 B80–17982  
General aviation airplane structural crashworthiness programmer's manual  
{NASA-CR–159796}  p0221 B80–18008  
Study of research and development requirements of small gas-turbine co-busters  
{NASA-CR–159796}  p0224 B80–18040  
Acoustic wind-tunnel tests of a light twin–boom general-aviation airplane with free or shrouded-pusher propellers --- in the Langley fall–scale tunnel  
{NASA-TP–800203}  p0232 B80–19023  
Rotary balance data for a typical single-engine general aviation design for an angle–of–attack range of 8 deg to 90 deg. 1: Low-wing model A  
{NASA-CR–3100}  p0232 B80–19030  
Estimation of the endurance of civil aircraft wing structures --- life estimate method for wing loading on general aviation aircraft  
{NASA-CR–79026}  p0235 B80–19060  
Assessment of risk due to the use of carbon fiber composites in commercial and general aviation  
{NASA-TR–800205}  p0267 B80–19021  
A spin–recovery parachute system for light general-aviation airplanes  
{NASA-TP–800237}  p0267 B80–20027  
A 150 and 300 kw lightweight diesel aircraft engine design study  
{NASA-CR–3260}  p0292 B80–20071  
Development and evaluation of a general aviation real world noise simulator  
{NASA-CR–159237}  p0266 B80–21100  
High speed turboprops for executive aircraft, potential and recent test results  
{NASA-TP–800235}  p0302 B80–21285  
Emergency in-flight egress opening for general aviation aircraft  
{NASA-TP–800235}  p0303 B80–21293  
Nasa low– and medium–speed, airfoil development  
{NASA–TM–78079}  p0303 B80–21294  
Global positioning system for general aviation: Joint FAA–NASA Seminar --- conference  
{NASA–TM–81017}  p0304 B80–21299  
Designing low cost receivers for general aviation users  
{NASA–TP–800203}  p0304 B80–21307  
Design approaches for GPS receivers/processors  
{NASA–TP–800203}  p0304 B80–21308  
Aircraft noise assessment equipment: Quiet clean general aviation turboprop engines  
{NASA–TP–800208}  p0306 B80–21331  
General Aviation Propulsion  
{NASA–CP–21265}  p0350 B80–22327  
Aircraft noise assessment equipment: Quiet clean general aviation turboprop engine  
{NASA–CP–21265}  p0350 B80–22328  
Accident Investigation  
{NASA–CP–21265}  p0351 B80–22329  
Light airplane crash tests at three pitch angles  
{NASA–CP–21265}  p0351 B80–22330  
Light airplane crash tests at three roll angles  
{NASA–CP–21265}  p0351 B80–22331  
Light airplane crash tests at three pitch angles  
{NASA–CP–21265}  p0351 B80–22332  
Low speed propellers: Impact of advanced technologies  
{NASA–CP–21265}  p0352 B80–22333  
NASA balloon noise research  
{NASA–CP–21265}  p0353 B80–22347  
Ultrasonic combustion in general aviation piston engines  
{NASA–CP–163001}  p0356 B80–22430  
Emergency in-flight egress opening for general aviation aircraft --- pilot bailout  
{NASA–CP–163001}  p0356 B80–22431  
A spin–recovery parachute system for light general-aviation airplanes  
{NASA–CP–163001}  p0356 B80–22432  
Mathematical model for the separation of gust and manoeuvre loads of civil aircraft  
{NASA–CP–163001}  p0357 B80–22474  
Measurement of the handling characteristics of two light airplanes  
{NASA–CP–163001}  p0357 B80–22475  
Aircraft accident reports: Brief format, US civil aviation issue number 8, 1979 accidents  
{NASA–CP–163001}  p0370 B80–23674  
An assessment of the risk arising from electrical effects associated with the release of carbon fibers from general aviation aircraft fires  
{NASA–CP–163001}  p0386 B80–23691  
General aviation dynamics: The impact of cost recovery  
{NASA–CP–163001}  p0408 B80–23700  
Energy conservation potential of general aviation activity  
{AD–A071102}  p0409 B80–23755  
Transparent materials for civil aircraft  
{NASA–CP–163001}  p0533 B80–28346  
Exhaust emissions characteristics for a general aviation light aircraft  
{Avco Lycoming} O–320–J1–320–D1AD piston engine  
{NASA–CP–163001}  p0535 B80–28364  
General aviation activity and avionics survey, 1978  
{AD–A076565}  p0627 B80–32225  
Rotary balance data for a typical single–engine general aviation design for an angle–of–attack range of 8 deg to 90 deg. 2: High-wing model C  
{NASA–CP–163001}  p0628 B80–32235  
General aviation accidents: Postersh fires and explosions  
{NASA–CP–163001}  p0629 B80–32354
Glass fibers

GLASS FIBERS: THEIR APPLICATIONS IN THE AIRCRAFT INDUSTRY

Introduction

Glass fibers have been used extensively in the aerospace industry due to their unique properties, such as high strength, lightweight, and excellent thermal stability. This chapter will explore the various applications of glass fibers in aircraft design and manufacturing, including fuselage components, wing structures, and engine parts.

Fuselage Components

Glass fibers are commonly used in the construction of fuselage components due to their ability to withstand high pressures and temperatures. They are often used in conjunction with other materials, such as carbon fibers, to create lightweight, yet strong structures.

Wing Structures

Glass fibers are also used in the manufacturing of wing structures. They provide the necessary stiffness and strength required for wings to support the weight of the aircraft and withstand the aerodynamic forces during flight.

Engine Parts

Glass fibers are used in the production of engine parts, such as turbine blades and compressor blades. They offer a combination of high temperature resistance and corrosion resistance, making them ideal for engine applications.

Conclusion

Glass fibers have proven to be a valuable material in the aerospace industry due to their unique properties. As technology continues to advance, the use of glass fibers will likely expand to include new applications and structures.

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GPS NAVSTAR-4 and NT-2 long term frequency stability and time transfer analysis

Alternate waveform for a low-cost civil global positioning system receiver

GLOSSARIES

Dictionaries

GLOW

GLOISENCE

GORDOLES

Design assessment of advanced technology lightweight, low-cost mission-configured gondola

GOVERNMENT PROCUREMENT

Criteria for applying commercial aircraft warranties in USAF aircraft purchases

GOVERNMENT/INDUSTRY RELATIONS

Problems of older jet aeroplanes - A regulatory authority view

Military adoption of a commercial VOR/ILS airborne radio with a reliability improvement warranty

GRADES

MT PRESSURE GRADIENTS

MT TEMPERATURE GRADIENTS

NAR Convair 580 aeromechanics program

GRAZIOTERES

MAGNETOTOMETERS

GRAZIOTERES

CALIBRATING

GRAPHITE

Minimum-base designs of stiffened graphite/polyimide compression panels

Carbon and graphite. Part 2. Carbon and graphite composites - excluding carbon fiber composites. A bibliography with abstracts

Carbon and graphite. Part 1: Carbon and graphite fibers and fiber composites, volume 4 A bibliography with abstracts

Evaluation of micron size carbon fibers released from burning graphite composites

Analysis and measurements of low frequency lightning component penetration through aerospace vehicle metal and graphite skins
A nonlinear unsteady one-dimensional theory for wings in extreme ground effect

Major results of the asymptotic theory of a low-flying wing - Method of matched asymptotic expansions

A technique for simulating the motion and ground effect of aircraft wake vortices

VTOL in-ground effect flows for closely spaced jets

The criticality of engine exhaust simulations on VTOL model-measured ground effects

Effect of sweep and aspect ratio on the longitudinal aerodynamics of a spallador wing in- and out-of-ground effect --- conducted in Langley VSTOL wind tunnel

Ground plane effects on a contoured surface at low subsonic velocities

The effects of ground wall-jet characteristics on a moving deck environment

Investigation of transient induced aerodynamics in a moving deck environment

Ground plane-in-ground effect flows for closely spaced jets

A simplified ground vibration test procedure for fullscale and light aircraft

Aircraft collisions

Present-day problems of air traffic control in ground-to-air communications

ATC flow management — Fuel is the spur and data links the key

The Discrete Address Beacon System data link surveillance and communication system for ATC

FAA lightning protection study: Report of investigations relative to providing lightning protection for the Remote Center Air-to-Ground (RCAG) station

Comparison of measured data with IP-77 propagation model predictions

HF communication to small low flying aircraft

Enhanced Terminal Information Services (ETIS)

Traffic Radio Channel Control (ATRCC) equipment

Aircraft collisions

Present-day problems of air traffic control in ground-to-air communications

ATC flow management — Fuel is the spur and data links the key

The Discrete Address Beacon System data link surveillance and communication system for ATC

FAA lightning protection study: Report of investigations relative to providing lightning protection for the Remote Center Air-to-Ground (RCAG) station

Comparison of measured data with IP-77 propagation model predictions

HF communication to small low flying aircraft

Enhanced Terminal Information Services (ETIS)

utilizing the Discrete Address Beacon System (DABS) data link concept description

VTIDS: An integrated communications navigation and identification system, and its potential for air traffic management
A simple system for helicopter individual-blade-control and its application to gust alleviation

Evaluation of trainable gun with director fire control system

Nuzzle blast overpressure levels on the AB-15 helicopter tow sight unit

Open loop gust alleviation

Design, development and implementation of an active control system for load alleviation for a commercial transport airplane

Some measurements of gun blast on a lightning aircraft

The design of aircraft automatic ride-smoothing systems using direct-lift control

Nuzzle blast overpressure levels on the AB-15 helicopter tow sight unit

Analysis of measured surface loads as a basis for the derivation of acceptable load limits for military aircraft components

A simple system for helicopter individual-blade-control and its application to gust alleviation

Guidance and Control Systems Using Digital and Control Panel Symposium on Advances in
as a contributor to aircraft interior noise ---
[NASA—CR—159000] p0420 B00—25100
Experimental unsteady aerodynamics of conventional and supercritical airfoils --- conducted in the 11 ft transonic wind tunnel
[NASA—TF—81221] p0691 B00—33345
HARMONIC OSCILLATION
Blade excitation by elliptical whirling in viscous-coupled jet engines
[ASA PAPER 80—GT—166] p0464 A00—22277
Harmonic and analysis technique for flight flutter tests
[HSN—DF—1046 (O)] p0122 B00—14140
HARMONIC MOTION
Coupled bending-torsion flutter in cascades with applications to fan and compressor blades
p0496 B00—27396
HARMONIC OSCILLATION
Analysis of transonic flow about harmonically oscillating airfoils and wings...
[AIAS PAPER 88—0149] p0047 A00—18367
A panel method for calculating the loads acting on a wing that performs harmonic oscillations in subsonic flow
p0149 B00—21272
Evaluation of the kernel of an integral equation for a wing performing harmonic oscillations in subsonic flow
p0150 A00—21296
Unsteady pressure measurements on wing-store combinations in incompressible flow
p0193 A00—26269
Practical design considerations for a flightworthy higher harmonic control system --- for flight testing on 00—6A helicopter
[AIAS 80—0668] p0335 A00—35100
Harmonic oscillations of annular wing in steady ideal fluid flow
p0314 B00—11019
An investigation of several factors involved in a fluid difference procedure for analyzing transonic flow about harmonically oscillating airfoils and wings
[NASA—CB—159143] p0174 B00—14076
Symmetric variational formulation of harmonic vibrations problems by coupling primal and dual principles. Application to fluid-structure coupled systems
p0376 B00—22245
The harmonically oscillating body in subsonic flow: Effect of compressibility
[ASA—TT—584] p0360 B00—23270
Further investigation of a finite difference procedure for analyzing the transonic flow about harmonically oscillating airfoils and wings
[NSA—CB—3195] p0414 B00—24271
HARMONICS
BT HARMONIC EXCITATION
BT HARMONIC OSCILLATION
BT HARMONIC RESONANCE
Inadequate harnesses as a cause of death in two light aircraft accidents
p0580 A00—50118
Evaluation of seating and restraint systems conducted during fiscal year 1978
[AD-A74869] p0077 B00—13018
Aircraft crash survival design guide. Volume 4: Aircraft seats, restraints, litters, and padding
[ASA PAPER 88—0668] p0630 B00—32358
HARRIER AIRCRAFT
AV—8B Advanced Harrier
Breaking VSTOL free of Catch 22 --- utilisation and assessment
p0662 A00—16997
AV—8B — A second generation VSTOL
[SAE PAPER 79—1070] p0198 B00—26633
VSTOL test techniques utilizing laser tracking
p0205 B00—27234
TAV—8B status report
p0208 B00—27381
Airplane skijump takeoff
p0376 A00—36788
VSTOL at the crossroads
p0385 A00—37550
Microprocessor control of low speed VSTOL flight
[AD—107766] p0245 B00—19129
Reliability and maintainability improvement program for the AV—8 A/TAV—8A barrier head-up display set. Volume 1: Modifications to digital display indicator IP—1351/A00—30
[AD—A05309] p0590 B00—30306
Reliability and maintainability improvement program for the AV—8 A/TAV—8A barrier head-up display set. Volume 2: Modifications to display set control, C10626/A00—30
[AD—A05310] p0590 B00—30307
TAV—8B status report
p0594 B00—31310
HAWKER SIDDELEY AIRCRAFT
MT HARRIER AIRCRAFT
HARMS
MT AIRCRAFT HAZARDS
MT FLIGHT HAZARDS
MT OPERATIONAL HAZARDS
MT TOXIC HAZARDS
Investigation of noise hazards in the engine test cell, CFB Baden—Sollingen
[AD—1074391] p0123 B00—14147
New approaches for alleviation of electrical hazards of graphite fiber composites --- aircraft safety
[NASA—CB—162663] p0172 B00—16100
Evaluation of equipment vulnerability and potential shock hazards --- carbon fibers
p0247 B00—19197
Study of optical techniques for indirect generation of runway approach lights
[AD—A060436] p0499 B00—27398
An investigation of possible electrical hazards of carbon fiber composites
p0336 B00—28462
Carbon/graphite composite material study --- risk and hazards of fiber release
[AD—107525] p0555 B00—29442
Experimental and analytical studies for the NASA carbon fiber risk assessment
[NASA—CB—159214] p0651 B00—33490
HC—1 HELICOPTER
U C—47 HELICOPTER
HEAD (ANATOMY)
A general statistical approach for using auxiliary information in the development of an impact acceleration injury prediction model
p0801 B00—31374
HEAD—UP DISPLAYS
A helmet—mounted sight using C.C.D. technology
p0006 A00—10888
The 'Viggen' multiscope radar
p0007 B00—11171
The EOD optoelectronic projection indicator system. II
p0569 A00—48124
Comparison of specifications for Head—Up Displays in the Navy A—4S, A—7E, AV—8A, and F—14A aircraft
[AD—1080047] p0241 B00—19106
The A—7 head—up display reliability program
p0241 B00—19539
Reliability of high—brightness CRTs for airborne displays
p0251 B00—19543
Head—up display in the non—precision approach
[NSA—TH—61167] p0279 B00—26296
An experimental evaluation of head—up display formats
[NSA—TP—1550] p0593 B00—28349
Reliability and maintainability improvement program for the AV—8 A/TAV—8A barrier head—up display set. Volume 1: Modifications to digital display indicator IP—1351/A00—30
[AD—A05309] p0590 B00—30306
Reliability and maintainability improvement program for the AV—8 A/TAV—8A barrier head—up display set. Volume 2: Modifications to display set control, C10626/A00—30
[AD—A05310] p0590 B00—30307
HEADSETS
U FASTPROPS
HEALTH
MT PUBLIC HEALTH
HEALTH PHYSICS
MT PUBLIC HEALTH
HEARING
MT ACOUSTIC FATIGUE
HEAT BALANCE
Method of studying the working—sedimentary temperature
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIP of Rene 95 --- Hot Isostatic Pressing</td>
<td>00573</td>
</tr>
<tr>
<td>Materials and structures technology</td>
<td>00292</td>
</tr>
<tr>
<td>Application of superalloy powder metallurgy for</td>
<td>00310</td>
</tr>
<tr>
<td>aircraft engines</td>
<td>00214</td>
</tr>
<tr>
<td>Effects of fine porosity on the fatigue behavior</td>
<td>00310</td>
</tr>
<tr>
<td>of a powder metallurgy superalloy</td>
<td>00214</td>
</tr>
<tr>
<td>Requirements for materials for land vehicle gas</td>
<td>00552</td>
</tr>
<tr>
<td>turbines</td>
<td>00293</td>
</tr>
<tr>
<td>Low cost process for manufacturing of Oxide</td>
<td>00366</td>
</tr>
<tr>
<td>Dispersion Strengthened (ODS) turbine nozzle</td>
<td>00329</td>
</tr>
<tr>
<td>components</td>
<td></td>
</tr>
<tr>
<td>Heat Shielding</td>
<td></td>
</tr>
<tr>
<td>SHIELDING</td>
<td></td>
</tr>
<tr>
<td>Heat Tests</td>
<td></td>
</tr>
<tr>
<td>HIGH TEMPERATURE TESTS</td>
<td></td>
</tr>
<tr>
<td>Heat Transfer</td>
<td></td>
</tr>
<tr>
<td>AERODYNAMIC HEAT TRANSFER</td>
<td></td>
</tr>
<tr>
<td>CONDUCTIVE HEAT TRANSFER</td>
<td></td>
</tr>
<tr>
<td>CONVECTIVE HEAT TRANSFER</td>
<td></td>
</tr>
<tr>
<td>LAMINAR HEAT TRANSFER</td>
<td></td>
</tr>
<tr>
<td>Effect of flow swirling on heat transfer in the</td>
<td></td>
</tr>
<tr>
<td>cylindrical part of the nozzle volume of a model</td>
<td></td>
</tr>
<tr>
<td>Chamber</td>
<td></td>
</tr>
<tr>
<td>Blade trailing edge heat transfer</td>
<td>00020</td>
</tr>
<tr>
<td>Heat transfer phenomena in gas turbine</td>
<td>00454</td>
</tr>
<tr>
<td>Heat transfer at a breaking point of the leading</td>
<td>00464</td>
</tr>
<tr>
<td>edge of a plate in hypersonic flight</td>
<td>00426</td>
</tr>
<tr>
<td>Protection against wing icing for airplanes A300</td>
<td>00502</td>
</tr>
<tr>
<td>and A310</td>
<td></td>
</tr>
<tr>
<td>Calorimetric sensor for measuring temperature</td>
<td>00523</td>
</tr>
<tr>
<td>fields generated by intense heat sources</td>
<td>00426</td>
</tr>
<tr>
<td>Influence of surface longitudinal curvature on</td>
<td>00476</td>
</tr>
<tr>
<td>temperature of turbine blades with film cooling</td>
<td>00465</td>
</tr>
<tr>
<td>Impact of new instrumentation on advanced turbine</td>
<td>00229</td>
</tr>
<tr>
<td>research</td>
<td>00412</td>
</tr>
<tr>
<td>CERAMIC THERMAL BARRIER COATINGS</td>
<td>00426</td>
</tr>
<tr>
<td>COATING COATINGS</td>
<td></td>
</tr>
<tr>
<td>Hypersonic heat transfer test program in the</td>
<td>00025</td>
</tr>
<tr>
<td>VKI longshot facility</td>
<td>00025</td>
</tr>
<tr>
<td>Extension of similarity tests to cooled engine</td>
<td>00025</td>
</tr>
<tr>
<td>components with insulating ceramic coatings</td>
<td></td>
</tr>
<tr>
<td>Nasa-TS-81473</td>
<td></td>
</tr>
<tr>
<td>Ceramic thermal barrier coatings</td>
<td></td>
</tr>
<tr>
<td>Ceramic combustion chambers</td>
<td>00554</td>
</tr>
<tr>
<td>Heat transfer coefficients</td>
<td>00809</td>
</tr>
<tr>
<td>Nonstationarity of heat transfer in axial turbine</td>
<td>00040</td>
</tr>
<tr>
<td>blading during engine startup</td>
<td>00163</td>
</tr>
<tr>
<td>Nonstationarity of heat transfer in axial turbine</td>
<td>00201</td>
</tr>
<tr>
<td>blading during engine startup</td>
<td>00188</td>
</tr>
<tr>
<td>Heat Transmission</td>
<td></td>
</tr>
<tr>
<td>AERODYNAMIC HEAT TRANSFER</td>
<td></td>
</tr>
<tr>
<td>CONDUCTIVE HEAT TRANSFER</td>
<td></td>
</tr>
<tr>
<td>CONVECTIVE HEAT TRANSFER</td>
<td></td>
</tr>
<tr>
<td>HEAT TRANSFER</td>
<td></td>
</tr>
<tr>
<td>LAMINAR HEAT TRANSFER</td>
<td></td>
</tr>
<tr>
<td>Heating</td>
<td></td>
</tr>
<tr>
<td>AERODYNAMIC HEATING</td>
<td></td>
</tr>
<tr>
<td>RADIANT HEATING</td>
<td></td>
</tr>
<tr>
<td>SOLAR HEATING</td>
<td></td>
</tr>
<tr>
<td>TRANSIENT HEATING</td>
<td></td>
</tr>
<tr>
<td>Heat reclamation from flight simulators: Summary</td>
<td>00606</td>
</tr>
<tr>
<td>AERODYNAMIC HEATING</td>
<td></td>
</tr>
<tr>
<td>RADIANT HEATING</td>
<td></td>
</tr>
<tr>
<td>SOLAR HEATING</td>
<td></td>
</tr>
<tr>
<td>TRANSIENT HEATING</td>
<td></td>
</tr>
<tr>
<td>Heat reclamation from flight simulators: Summary</td>
<td>00314</td>
</tr>
<tr>
<td>AERODYNAMIC HEATING</td>
<td></td>
</tr>
<tr>
<td>RADIANT HEATING</td>
<td></td>
</tr>
<tr>
<td>SOLAR HEATING</td>
<td></td>
</tr>
<tr>
<td>TRANSIENT HEATING</td>
<td></td>
</tr>
<tr>
<td>Heat reclamation from flight simulators: Summary</td>
<td>00314</td>
</tr>
<tr>
<td>HEAVY LIFT HELICOPTERS</td>
<td></td>
</tr>
<tr>
<td>The market for large civil helicopters</td>
<td>00009</td>
</tr>
<tr>
<td>HEL and beyond</td>
<td>00180</td>
</tr>
<tr>
<td>Heavy Lift Helicopter</td>
<td>00195</td>
</tr>
</tbody>
</table>

A-230
HECOPTERS
HELICOPTER WAKES
A study of wake behind a profile at variable incidence
[AIAA 80-0666] p0330 A80-34955
Comparison of calculated and measured model rotor
loading and wake geometry
Development and validation of a combined rotor
fuselage induced flow field computational method
--- Langley V/STOL tunnel
[AIAA-TP-1656] p0931 N80-25296
HELICOPTERS
WT AB-10 HELICOPTER
WT BO-105 HELICOPTER
WT CR-46 HELICOPTER
WT CR-47 HELICOPTER
WT CR-54 HELICOPTER
WT H-53 HELICOPTER
WT H-54 HELICOPTER
WT HEAVY LIFT HELICOPTERS
WT MILITARY HELICOPTERS
WT OH-6 HELICOPTER
WT OH-58 HELICOPTER
WT P-531 HELICOPTER
WT RIGID ROTOR HELICOPTERS
WT SH-3 HELICOPTER
WT TANDER HELICOPTERS
WT OH-1 HELICOPTER
WT HH-60A HELICOPTER
Helicopter vibrations
p0056 A80-15630
p0089 A80-17718
A phenomenological model of the dynamic stall of a
helicopter blade profile
[COMMA, TP NO. 1979-149] p0102 A80-20086
Fatigue data on a variety of nonwoven glass
composites for helicopter rotor blades
p0140 A80-21136
A scientific approach to defeating helicopter
vibration
p0191 A80-25446
Helicopter crash position indicator flight trials
p0206 A80-27240
A collection of formulas for calculation of
rotating blade noise - Compact and noncompact
source results
[AIAA PAPER 80-0996] p0330 A80-35959
New materials and helicopter certification
[AIAA PAPER 79-26] p0379 A80-36661
The Helicoutr, a hybrid helicopter-balloon craft
p0402 A80-39282
Theoretical and experimental determination of the
aerodynamic characteristics of a helicopter rotor
p0453 A80-41647
A comparison of underwater helicopter-escape lights
p0455 A80-42099
Experimental investigation of helicopter
aerodynamics /2nd revised and enlarged edition/
--- Russian book
p0467 A80-42937
Helicopters breaking the 200 km barrier - Three
systems could do it this decade
p0572 A80-48625
Corrosion fatigue behavior of coated 8340 steel
for blade retention bolts of the AH-1 helicopter
p0572 A80-48635
HELICOPTERS - A solution to urban commercial
transportation needs
[SAA PAPER 800739] p0575 A80-49669
 Mechanical components
p0209 N80-10213
Prediction of helicopter rotor downwash in hover
and vertical flight
[AER/AERO-HEPT-150] p0330 A80-11032
New aircraft technology: Report on the
Farnborough International Air Show
[FB-293045/0] p0303 A80-11078
Helicopter canopy internal reflection investigation
[p0376 N80-12607
Computer description of Black Hawk helicopter
[AD-A073444] p0379 A80-13031
Application of the SBS concept to Navy helicopters
--- systems analysis of flight data recorders of
flight conditions for helicopters for structural
analysis
[AD-A074081] p0126 N80-15030
Feasibility and concept study to convert the
NASA/ARMS vertical motion simulator to a
helicopter simulator
[NASA-CH-152193] p0171 A80-16070
Experimental study of the aerodynamics of a
helicopter rotor blade model in an unsteady flow
regime during wind tunnel tests
[AER/AF-79-22] p0175 N80-17036
Airborne evaluation of the production AH/ABN-133
Loran-C navigator --- HH-3 and HH-52 aircraft
flights
[AD-A074504] p0177 N80-17057
Design study of prestressed rotor spar concept
[NASA-CH-159086] p0178 N80-17062
Investigation of the crash-impact characteristics of
advanced airframe structures
[AD-A075165] p0179 N80-17067
Detailed design and fabrication of a Helicopter
Ground Mobility System (HGS)
[AD-A076932] p0181 N80-17087
A study of the canopy design for the advanced
attack helicopter by use of computer graphics
[AD-A076291] p0236 N80-19069
NASA ABC rotor maps
[AD-A078802] p0238 N80-19083
Simulation of a night vision system for low level
helicopter operations --- using helmet mounted
display device
p0255 N80-19832
Botentraft flight simulation, computer program CBT.
Volume 3: Programmer's manual
[AD-A077345] p0291 N80-20262
Cost analysis of a helicopter transmission and
drive train
[AD-A080518] p0305 N80-21322
Preliminary investigation of motion requirements for
the simulation of helicopter hover tasks
[NASA-TM-81801] p0347 N80-22305
Parametric study of helicopter aircraft systems
costs and weights
[NASA-CR-152315] p0347 N80-22305
The effect of shaft angle on performance of a
circulation control high-speed rotor at an
advance ratio of 0.7
[AD-A080953] p0349 N80-22314
Investigations into an active vibration isolation
system for helicopters with rigid and elastic
airframe modelling
[AD-A080473] p0359 N80-22412
The verification of a computer model of internal
light reflections for helicopter canopy design
[AD-A080473] p0359 N80-22412
Decision analysis of Advanced Scout Helicopter
candidates
[AD-A081483] p0361 N80-23298
Investigations of the design of active vibration
isolation systems for helicopters with rigid and
elastic modelling of the fuselage
[SAA-97-556] p0363 N80-23300

Lateral rollover protection concepts [AD-A084180] p0416 880-24284

Helicopter reserve wind sensor flight test [AD-A082770] p0420 880-24313


The design concept and experimental results using the IMP 8080/8085 microprocessor - gas turbine engine fuel control [AD-A081821] p0481 880-26315

Heat reclamation from flight simulators [AD-A087574] p0484 880-26334

Helicopter air traffic management systems with civil/military interoperability [AD-A084115] p0496 880-27359


Assessment of the environmental compatibility of differing helicopter noise certification standards [AD-A086525] p0503 880-28153

A comprehensive analytical model of rotorcraft aerodynamics and dynamics. Part 1: Analysis development [NASA-TP-8131] p0520 880-28296

Flight evaluation of a radar cursor technique as an aid to airborne radar approaches [AD-A086015] p0531 880-28331

A pilot's assessment of helicopter handling-quality factors common to both agility and instrument flying tasks [NASA-TH-81217] p0532 880-28341

Conceptual design of a helicopter composite trans tail boom [AD-A085132] p0532 880-28342


Advanced subsystems test monitor [AD-A085135] p0534 880-28351


Helicopter design concepts [Helicopter design concepts] [AD-A088708] p0652 880-33650


HELIPORTS

The Air Products/Prodata helium infrastructure at airship bases [AD-A089303] p0405 880-39305

HELIX TUBES

U TRAVELING WAVE TUBES

HELIXES

A belt-mounted sight using C.C.R. technology [AD-A085132] p0005 880-10880

Simulation of a night vision system for low level helicopter operations - using helmet mounted display device p0255 880-1932

Installation of C-6533(2E-2)/ABC ICS in OH-18 helicopter [AD-A087081] p0652 880-33650

HERCULES AIRCRAFT

U C-130 AIRCRAFT

HERMETIC SHELLS


Sealed lead acid batteries for aircraft applications p0571 880-68082

HERITIAN POLYNOMIAL

A mixed compact Heritian method for the numerical study of unsteady viscous flow around an oscillating airfoil p0391 880-30258

HETEROCYCLIC COMPOUNDS

ET PATRUCCHAR

HP-230 AIRCRAFT

In-flight handling qualities investigation of Airbus A 310 DCL. Configurations on landing approach using the DPLER-HPR 320 variable stability aircraft [DFVL-FR-79-18] p0349 880-22319

HNI HELICOPTER

U H-51 HELICOPTER

HIGH ACCELERATION

Ejection seat for high G escape [AD-A072444] p0437 880-11054

HIGH ALTITUDE BALLOONS

U SUPERBLOPE BALLOONS

HIGH ALTITUDE ENVIRONMENTS

Propulsion/airframe integration considerations for high altitude hypersonic cruise vehicles [AIAA PAPER 80-0111] p093 880-16272

HIGH ALTITUDE FLIGHT

U FLIGHT

A-234
A-237
PESSIBILTY TESTING OF A BODY INFLATABLE BLADDER (BIB) RESTRAINT DEVICE: A PRACTICAL AIRCRAFT HYDRAULIC TEST STAND

Early flight test experience with cockpit displayed traffic information (CDTI): NASA-TP-89221

Evaluation of a central data entry system (CDES) for transport aircraft: NASA-PR-79-23

NASA authorization, 1981: [GPO-59-526]

An investigation of factors affecting aircraft passenger attention to safety information presentations: [AD-A0822548]

A dynamic evaluation of the integrated avionics control system (IACS): [AD-A0826293]

Visual problems and sight landing guidance of the CH-47 (Chinook) helicopter: [AYL/GT-TM-TM-50]

System, airspace, and capacity requirements for future ATC-systems: NASA-PR-79-2328

An experimental evaluation of lead-up displays: [NASA-TP-1550]

Annoyance due to multiple airplane noise exposure: [NASA-TP-1706]

The strength of occupant restraint system in light aircraft: an experimental evaluation: AEL/STBC-REPT-375

The current role of alcohol as a factor in civil aircraft accidents: [AD-A0862611]

Operational missions and conceptual design of the Mirage 2000: NASA-PR-79-30021

Critical interfaces between environment and organisms in class A mishaps: A retrospective analysis: [AD-A087341]

HYDRAULIC SYSTEMS

A systematic technique for the identification of crash hazards in U.S. Army aircraft: NASA-PR-79-15013

Inadequate harnesses as a cause of death in two light aircraft accidents: NASA-PR-79-50113

Human factors in high-speed low-level accidents: A 15 year review: NASA-PR-79-50119

HYDRAULIC SHUTTERS

The effect of intermittent aircraft noise on sleep III: NASA-PR-79-15632

The evaluation of annoyance provoked by aircraft noise by means of opinion surveys: NASA-PR-79-32597

Evaluation of annoyance due to Concorde noise in the vicinity of Washington-Dulles International Airport: NASA-PR-79-32598

Annoyance caused by general aviation: NASA-PR-79-32601

Community annoyance with transportation noise: NASA-PR-79-37605


Effect of background levels on community responses to aircraft noise: NASA-PR-79-45805

On the noisiness of steady state and intermittent noises: NASA-PR-79-52820

Disturbance caused by aircraft noise: NASA-PR-79-75478

Reaction of the French population to the supersonic bang: NASA-PR-79-75487

Annoyance due to multiple airplane noise exposure: NASA-TP-1706

Human TOLLERANCES

Community noise measures: human reactions to noise pollution: NASA-PR-79-37602

Aircraft noise annoyance contours: human reactions to aircraft noise pollution: NASA-PR-79-37602

Effects of sound level fluctuations on annoyance caused by aircraft-flying noise: NASA-PR-1576

Investigation of noise hazards in the engine test cell, CFB Baden-Solingen: NASA-PR-79-25378


Disturbance caused by aircraft noise: NASA-PR-79-75478

HYDRODYNAMICS

Aircraft humidification system development: AASR-PAPER-79-EM-2

The nuclear thermal effects on humidity saturated composite materials: NASA-PR-77132

The diffusion of water vapour in humid air into the adhesive layer of bonded metal joints: NASA-PR-79-28497

HYDROMETEOROLOGY

A 94/163 GHz multichannel radiometer for Convair flights: NASA-PR-16032

HYDROMETEOROLOGY

A hybrid simulator for the BGM-36C multiaxis motion equipment: NASA-PR-99828

Modern controls and the hybrid computer revisited: simulation systems for aircraft development and design: NASA-PR-79-59831

Hybrid computer errors in engineering flight simulation: NASA-PR-79153

Processing of AIS flight recorder data for a quick-look with the aid of a hybrid system: NASA-PR-79-25290

HYDRAULIC CONTROL SYSTEMS

Navigation systems for modern aircraft: NASA-PR-79-21965

On the NASA application research in Japan: NASA navigation satellite system: NASA-PR-79-25164

New possibilities offered by a radio-thermal hybrid guidance system digital simulation study: NASA-PR-79-19836

HYDRAULIC ACTUATORS

The hybrid diffuser for gas turbine engines: NASA-PAPER-80-CT-136

HYDRAULIC ACTUATORS

U ACTUATORS

U HYDRAULIC EQUIPMENT

Improvement of control system dynamics of means of additional hydraulic load feedback: NASA-PR-79-21260

Digital electrohydraulic control surface actuators, positioned by means of quick-acting solenoid valves: NASA-PR-80-050

Research and development of control actuation systems for aircraft, volume 1: NASA-PR-80133

Aircraft hydraulic and electric systems: NASA-PR-80-21357

Aircraft hydraulic systems: The practical aircraft hydraulic test stand: NASA-PAPER-79079

The Reusenalter - a new concept in actuation for aerospace mechanisms: NASA-PAPER-80-26636

A-238
Computer simulation as a first step towards computer-aided design of fluid power systems

Aircraft fuel and hydraulic units

An analytical and experimental study of aircraft hydraulic lines including the effect of mean flow

Hydraulic diagnostic monitoring system

Research and development of control actuation systems for aircraft, volume 1

Development of hydraulic servo systems for acting on airflow valve with frequencies to 500 hertz

Evaluation of BC (hydrocarbon) control strategies

Energy efficient engine

Hydrocarbon fuels

Hydrocarbon engines

Hydrocarbon fuels

Hydrocarbon fuels

Hydrofoil self-propulsion reciprocating engine development

Hydrodynamics

Conceptual examination of gas phase particulate formation in gas turbine combustors

Production of synthetic hydrocarbon fuel, environmental aspects and comparison to hydrogen production from water

An engine fuel chemistry solution to the problem of jet fuel supplies

Effect of naphthenic aromatic hydrocarbons on the oxidizability of hydrocarbon jet fuel — jet engines fuels

Comparative analysis of the basic combustion characteristics of some heavy hydrocarbon fuels in application to aircraft gas turbine engines

Fundamental characterization of alternate fuel effects in continuous combustion systems

Research on diamantane and other high density hydrocarbon fuels

Fundamental characterization of alternative fuel effects in continuous combustion systems

Study of methane fuel for subsonic transport aircraft

Evaluation of BC (hydrocarbon) control strategies for general aviation piston engines

Performance, emissions, and physical characteristics of a rotating combustion aircraft engine, supplement A

Energy efficient engine

Hydrodynamic stability

Hydrofoil boats

Hydrofoil craft

New approaches to sailing

Leading edge flatter of supercavitating hydrofoils

Accuracy of hydrofoil loading predictions obtained from a lifting-surface computer program

The Shock and Vibration Bulletin. Part 3:

Hydrogen

Liquid hydrogen

Mechanical behavior of airframe materials

Hydrogen compounds

Hydrogen engines

Electronic fuel injection techniques for hydrogen powered I.C. engines

Liquid hydrogen engines

Turbine engine altitude chamber and flight testing with liquid hydrogen

Future large cargo aircraft technology

The changing horizons for technical progress. II

Hydrogen in air transportation; proceedings of the International Symposium, Stuttgart, West Germany, September 11-14, 1979, and Supplement

Hydrogen from fossil fuels
HYDROGEN PRODUCERS

Characteristics of liquid hydrogen-fueled aircraft

Safety of liquid hydrogen in air transportation

Preliminary studies of a turbofan engine and fuel system for use with liquid hydrogen

Liquid hydrogen engines

Design concept for LH2 aircraft facilities

A proposed liquid hydrogen development program for aircraft

Analysis and design of insulation systems for LH2-fueled aircraft

Hydrogen fueled high bypass turbofans in subsonic aircraft

Prospects for hydrogen aircraft

HYDROGEN PRODUCTION

A plan for active development of LH2 for use in aircraft

Production of synthetic hydrocarbon fuels, environmental aspects and comparison to hydrogen production from water

Hydrogen from fossil fuels

Future production of hydrogen from solar energy and water - A summary and assessment of U.S. developments

Economics of hydrogen production and liquefaction updated to 1980

HYDROGEN-BASED ENERGY

Hydrogen technology: Foreign, change 1

HYDROGENATION

The chemical stability of hydro-treated fuels and their stabilization by antioxidants

HYDROLYSIS

Production of synthetic hydrocarbon fuels, environmental aspects and comparison to production from water

Future production of hydrogen from solar energy and water - A summary and assessment of U.S. developments

HYDROMAGNETIC STABILITY

U MAGNETOHYDRODYNAMIC STABILITY

HYDROMECHANICS

HYDRODYNAMICS

HYDROSTATICS

HYDROSTATICS - Hybrid bearings for aircraft engines

HYDROTYL COMPOUNDS

ST ALCOHOLS

ST PRESELS

HYPERBOLIC NAVIGATION

ST DECCA NAVIGATION

ST LORAN

ST LORAN C

Optical receivers and discrete-signal processors for hyperbolic radar navigation systems
Interferometric measurements in a turbine cascade using image-plane holography
[ASME PAPER 80-GT-91] p0461 A80-42217

Image transmission
- A helmet-mounted sight using C.C.D. technology
p0005 A80-10884

Image tubes
Visual displays for air traffic control data
p0116 A80-14077

Image systems
- Holography
- Infrared imagery
- Infra-red photography
- Microwave imagery
- Neutron radiography
- Radar imagery
- Radiography
- Schlieren photography
- Shadowgraph photography
- Stereophotography
- Terography

Images
- Event images
Visual accommodation responses in a virtual image environment
p0131 A80-15082

Image techniques
- Image enhancement
- Radar imagery
The capability of C.GI in flight simulation
computer generated imagery
p0005 A80-10760

Visually Coupled System: Computer Generated Imagery (VCS-CGI) engineering interface
[A0800931] p0621 A80-23306

System description and analysis. Part 1:
Feasibility study for helicopter/VTOL wide-angle simulation image generation display system
[BASA-CR-152376] p0499 A80-27397

Impact
- Economic impact
Impact acceleration
A general statistical approach for using auxiliary information in the development of an impact acceleration injury prediction model
[A0-078710] p0601 A80-31374

Impact damage
- Blast impact damage
Atmospheric effects on Martian ejecta emplacement
p0103 A80-20192

Impact damage on titanium leading edges from small hard objects
in compressor blades in jet engines
p0618 A80-52297

Impact damage on titanium leading edges from small soft body objects
[A0-072700] p0771 A80-12095

Impact damage on titanium leading edges from small soft body objects in aircraft crash tests
[BASA-CR-159199] p0144 A80-15299

Two-dimensional finite-element analyses of simulated rotor-fragment impacts against rings and beams compared with experiments
[BASA-CR-159645] p350 A80-22323

The influence of ballistic damage on the aeroelastic characteristics of lifting surfaces
Fighter aircraft
[AD-A082536] p0433 A80-25322

Runway surface roughness
p0433 A80-25326

UK approach to aircraft dynamic response on damaged and repaired runways
p038 A80-25327

Parameters affecting aircraft performance on runways in bad condition
p038 A80-25328

Soft body impact of cantilever beams
gas turbine fan blades due to impact by birds
[AD-A085604] p0552 A80-29339

Fiberglass-reinforced plastic surfacing for rapid runway repair by naval construction
[AD-A085357] p0555 A80-29375

Crash tests of four identical high-wing single-engine airplanes
[BASA-TP-1699] p0588 A80-30296

Hare Bounce
p0594 A80-31311

Impact deceleration
- Impact acceleration
SUBJECT INDEX

IMPACT LOADS
The loads at landing impact — for aircraft
Analysis of the landing dynamics of a large airplane with a load-control system in the main landing gear
Orbiter landing loads with model description and correlation with ALT flight data
[NASA-FP-956] p0172 N80-16091
A comparison of load and effects of defects of aircraft and rigid body motion
[Alpha Jet tail assembly]
[NASA-TR-75551] p0172 N80-16104
The scaling of bird impact loads
[AD-A075215] p0176 N80-17045
Flightworthy active control landing gear for a supersonic aircraft
Combined linear theory/impact theory method for analysis and design of high speed configurations
Impact Protection
Analysis of aircraft impact problems
p037 N80-37650
A general statistical approach for using auxiliary information in the development of an impact acceleration injury prediction model
[AD-A0878110] p0601 N80-31378
Impact Pressures
Impact Resistance
Effect of damping on impact response of a two degrees of freedom system
p0270 A80-31817
NASA technical advances in aircraft occupant safety
— clear air turbulence detectors, fire resistant materials, and crashworthiness
Development and test of low-impact resistant towers
p0226 N80-18002
Impact Sensitivity
Impact Resistance
Hybridized polymer matrix composites
Impact Testing Machines
LOI/GOE mechanical impact tester assessment
[NASA-TR-79106] p0144 N80-15179
Impact Tests
Graphite-epoxy panel compression strength reduction due to local impact
p0209 N80-27598
Light airplane crash tests at three roll angles
Light airplane crash tests at three pitch angles
[NASA-TR-1478] p0046 N80-11505
The scaling of bird impact loads
[AD-A075215] p0176 N80-17045
Crash tests of four identical high-wing single-engine airplanes
[NASA-TR-1699] p0588 N80-30296
Impedance
Acoustic Impedance
Electrical Impedance
Mechanical Impedance
Reactance
Impact Matching
Radiation by sources on perfectly conducting convex cylinders with an impedance surface patch
[AD-A084365] p0500 N80-27573
Impeller Blades
Rotor Blades (Turbomachinery)
Impellers
A contribution to the design of radial compressor impellers with double-curved blades
p0261 A80-29113
Numerical strain and stress analysis of radial compressor impellers with riveted cover disks
p0221 A80-29114
Matching of turbocomponents described by the example of impeller and diffuser in a centrifugal compressor. I - Aerothermodynamic coupling of impeller and diffuser. II - Optimized stage efficiency of a centrifugal compressor
[ASME PAPER 79-GT/IAE-9] p0856 A80-42058
On the pressure losses due to the tip clearance of centrifugal blowers

INCOMPRESSIBLE FLOW
An investigation of vane-island diffusers at high swirl
[ASME PAPER 80-GT-139] p0862 A80-42252
Unsteady pressure measurements on wing-store combinations in incompressible flow
p0683 A80-26269
Optimal wing profile in the flow of an ideal incompressible fluid
p0268 A80-29936
The method of matched asymptotic expansions in the hydrodynamics of wings — Russian book
p0380 A80-37104
Plane unsteady flow of inviscid and incompressible fluid around a system of profiles
p0391 A80-38273

IN-FLIGHT MONITORING
Microprocessors as aircraft fatigue monitors
p0364 A80-12640
Instrumentation for the determination of aircraft performance from dynamic maneuvers
p0018 A80-12647
Determination of the aerodynamic characteristics of a flight vehicle from onboard measurement data
p0158 A80-21293
Flight recording in the UK. I - Evolution
p0212 A80-27751
General aviation altimeter errors for collision avoidance systems
p0363 A80-35408
Propeller light aircraft noise at disk frequencies
[ASME PAPER 80-0997] p0338 A80-35960
Objective control of pilotage accuracy — Russian book
p0381 A80-37110
P15/P100 engine diagnostic system
[ASME PAPER 79-1201] p0392 A80-38349
Engine condition monitoring using fibreoptic probes
[ASME PAPER 80-GT-118] p0661 A80-42294
Airborne integrated data systems
p0584 A80-50957
Flight-measured afterbody pressure coefficients from an airplane having twin side-by-side jet engines for Mach numbers from 0.6 to 1.4
[NASA-TR-1540] p0035 N80-11035
In-flight measured characteristics of combined flap-spoiler direct lift controls
p0142 N80-15165
Expanded study of feasibility of measuring in-flight 747/JJ790 loads, performance, clearance, and thermal data
p0170 N80-16063
Specification for the installation of electrical resistance strain gauges on struts pairs counter aircraft — to monitor fatigue damage
[AD-A071363] p0229 N80-18369
Aspects of flight test instrumentation — methods to derive aircraft performance and stability and control characteristics
p0240 A80-19098
System for use in conducting wake investigations for a wing in flight — differential pressure measurements for drag investigations
[NASA-CASE-PUC-11024-1] p0529 N80-28300
Azimuth observability enhancement during IRS
[p0603 N80-32360
Pressure and flow measurement — flight testing
Inboard Inboard Incidence
Incandescence lamp life under random vibration
p0228 N80-18221
INCIDENCE
In-Grazing Incidence
Incompressible Flow
Modelling low Mach number noise
p0161 A80-23902
Unsteady pressure measurements on wing-store combinations in incompressible flow
p0193 A80-26269
Optimal wing profile in the flow of an ideal incompressible fluid
p0268 A80-29936
The method of matched asymptotic expansions in the hydrodynamics of wings — Russian book
p0380 A80-37104
Plane unsteady flow of inviscid and incompressible fluid around a system of profiles
p0391 A80-38273

A-243
Numerical study of separated turbulent flow over airfoils
[AIAA PAPERS 80-1441] p0453 A80-41623

The combined effect of axial velocity density ratio and aspect ratio on compressor cascade performance

Calculation of the interaction between an exhaust jet and a high-lift wing
p0525 A80-46862

Analytic formula for wing profile aerodynamic characteristics in incompressible flow
p0038 B80-11010

Harmonic oscillations of annular wing in steady ideal fluid flow
p0038 B80-11019

Turbulence measurements in the boundary layer of a low-speed wind tunnel using laser velocimetry
[BASA-TM-61165] p0176 B80-16300

Velocity-split Baviere-Stokes solution procedure for incompressible high Reynolds number external Flows
[BASA-TP-1655] p0311 B80-21702

A general panel method for the analysis and design of arbitrary configurations in incompressible flows — boundary value problem
[BASA-CR-3293] p0418 B80-29268

Calculation of the transient motion of elastic airfoils forced by control surface motion and gusts
[BASA-TM-61351] p0627 B80-32329

A simple method for converting frequency domain aerodynamics to the time domain
[BASA-TM-61844] p0643 B80-33358

A rapid implicit-explicit solution to the two-dimensional time-dependent incompressible Baviere-Stokes equations
[BASA-CR-3330] p0653 B80-33718

INCOMPRESSIBLE FLOWS

Deposition in tapered annular seals for an incompressible fluid
[BASA-TP-1646] p0240 B80-19905

Dynamics of flexible rotors partially filled with a viscous incompressible fluid
p0297 B80-20513

Rotor-bearing dynamics technology design guide.
Part 5: Dynamic analysis of incompressible fluid bearings
[AD-A0851506] p0539 B80-28725

INDEPENDENT VARIABLES

A method of determining the degree of variation of a function, caused by a change in one of its arguments — contribution to the problems of factor analysis of the increment in the special-purpose efficiency of an aircraft
p0262 A80-29226

INDICATING INSTRUMENTS

NY ANEMOMETERS
NY APPROACH INDICATORS
NY ATTITUDE INDICATORS
NY CLOUD HEIGHT INDICATORS
NY FLOW DIRECTION INDICATORS
NY GEODOMES
NY GYRO HOBBLES
NY GYRO INERTIOSEIS
NY LASER ANEMOMETERS
NY POSITION INDICATORS
NY RADIO DIRECTION FINDERS
NY SPEED INDICATORS
NY STRAIN GAGE BALANCES
NY WEIGHT INDICATORS

Some practical aspects of the calibration of air data systems
p0098 A80-18865

INDUCED FLUID FLOW

U FLUID FLOW

INDUCTION SYSTEMS

U INTERFACE SYSTEMS

INDUSTRIAL ENERGY

Reliability prediction techniques for second generation marine and industrial gas turbines

INDUSTRIAL MANAGEMENT

U INVENTORY MANAGEMENT

The future development of air traffic as seen by airline companies
p0216 A80-28087

INDUSTRIES

NY AEROSPACE INDUSTRY
NY AIRCRAFT INDUSTRY
NY DEFENSE INDUSTRY
NY THETANIC INDUSTRY
NY RIGID STRUCTURES

INEQUALITIES

Inequalities and approximation with applications to VTOL aircraft — using control theory for optimal control approximations
[J-40-A071807] p0041 B80-11990

INERTIA

Isotria and electron beam welded turbine engine power shaft
p0579 A80-50048

INERTIA ROBOTS

U ROBOTS OF INERTIA

INERTIAL FORCES

U INERTIA

INERTIAL GUIDANCE

U STRAPDOWN INERTIAL GUIDANCE

Guidance system position update by multiple subarea correlation
p0087 A80-17518

Inertial navigation and guidance. Citations from the international aerospace abstracts data base
[RTIS/PS-79/0825/A] p0418 B80-11064

New possibilities offered by a radio-inertial hybrid guidance system digital simulation study
p0255 B80-19586

INERTIAL MEASURING UNITS

U INERTIAL PLATFORMS

INERTIAL NAVIGATION

Development aspects of a dynamically tuned gyro for strapdown — ARTS — Attitude and Heading Reference System
p0088 A80-17553

A strapdown inertial reference system for commercial airline use in navigation and flight control
p0088 A80-17558

An integrated strapdown guidance and control system for launch vehicle application
p0088 A80-17559

Navigation systems for modern aircraft
p153 A80-21965

The experimental strapdown system of DFVLR — for inertial guidance and navigation of civil aircraft
p0216 A80-26218

Optimal integrated inertial navigation: An actual example — The R.P.A. aircraft carrier reference system
p0325 A80-34227

An extended Kalman filter for the estimation of transfer alignment errors to an airborne vehicle
[AIAA 80-1720] p0510 A80-45522

The triple 850 nut: C-S aircraft conversion to inertial navigation
p0580 A80-50200

Integration of GPS with inertial navigation systems
p0206 B80-10173

Inertial navigation and guidance. Citations from the international aerospace abstracts data base
[RTIS/PS-79/0825/A] p0438 B80-11065

Development of aiding GPS/strapdown inertial navigation system
p0112 B80-19031

Methods for strap-down attitude estimation and navigation with accelerometers
p0112 B80-19034

A high accuracy flight profile determining system — system analysis of inertial navigation system for aircraft position determination
p0113 B80-19402

Cruise-missie-carrier navigation requirements
p0256 B80-19943

Inertially augmented approach couplers
[AD-A085400] p0290 B80-20248

Comparison of the minilir location system and the MLR Inertia measuring system STALIS
[BLF-MP-78026-A] p0347 B80-22303

Airworth observability enhancement during flight alignment (TAP-362)
p0630 B80-32360

Inertial navigation and guidance. Citations from the RTIS data base
[RTIS/PS-79/1228] p0645 B80-33389

INERTIAL PLATFORMS

Comparison of the minilir location system and the
IHEBTIU B8FBBEHCB STSTBBS
[14x515]IHFLATABLB DEVICES
[14x563]IBPIHin SUB BIBSS
[15x501]IBFLATABLE STBOCTOBES
[19x508]HT »IB B4G RESTRAINT DEVICES
[19x495]HT SiS B4GS
[20x336]HT.STBOCTOBAL IHPLDEHCE COEFFICIEHTS
[26x618]Optiaal integrated inertial navigation: in actual
A strapdown inertial reference system for
proven packaging for the LH-31 inertial
Laninar boundary layer on swept wings of infinite
Concerning the separated flow about an inflating
Recovery system preliminar design. &
Investigation of the influence of the parameters
Feasibility testing of a Body Inflatable Bladder
Economics and technology of airships:
In-flight performance evaluation of experimental
Aerodynamic data base users guide
Study of the mutual influence of combined
Investigation of the minilir location system and the
Comparison of the minilir location system and the
Flow quality for Turbine Engine Loads simulator
Acoustic fatigue failure of inlet guide vanes due
I N S T R U M E N T  O R I E N T AT I O N

US Army users outlook on air traffic management


I N S T R U M E N T  O R I E N T AT I O N


I N - F L I G H T  A L I G N M E N T

T H E  I N S P E C T A B L E  A E R O P L A N E

I N S T R U M E N T  S E T S  (C O M P O N E N T S)


I N S T R U M E N T  K E Y  ( C O M P O N E N T S)

S U B J E C T  I N D E X

I N S P E C T I O N

I N S T A L L A T I O N

I N S T R U M E N T  C O N S E R V A T I O N

I N S T R U M E N T  F L Y B A K E R  R U L E S

I N S T R U M E N T  O R I E N T AT I O N

I N S T R U M E N T  F L Y B A K E R  R U L E S

I N S T R U M E N T  F L Y B A K E R  R U L E S

I N S T R U M E N T  F L Y B A K E R  R U L E S
A preliminary assessment of the impact of 2-D exhaust-nozzle geometry on the cruise range of a hypersonic aircraft with top-mounted ramjet propulsion. 

J-65 ENGINE
Tests of an improved rotating stall control system on a J-65 turbojet engine

J-79 ENGINE
Fuel character effects on J79 and F101 engine combustor emissions

A-250
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
</tr>
<tr>
<td>Prediction of flyover noise from single and coannular jets</td>
</tr>
<tr>
<td>Static tests at model scale indicating rear-fuselage installation effects on engine exhaust noise</td>
</tr>
<tr>
<td>Model tests demonstrating under-wing installation effects on engine exhaust noise</td>
</tr>
<tr>
<td>Current problems and the future in advanced supersonic transport noise</td>
</tr>
<tr>
<td>Airframe self-noise studies on the Lockheed L 1011</td>
</tr>
<tr>
<td>Acoustic characteristics of the external upper surface blowing propulsive-lift configuration</td>
</tr>
<tr>
<td>Subsonic transport noise</td>
</tr>
<tr>
<td>Fan noise reduction by single- and double-wall barriers for jet-engine shielding</td>
</tr>
<tr>
<td>Pressure fields generated by instability waves and coherent structures in an impinging jet</td>
</tr>
<tr>
<td>A model for broadband jet noise amplification</td>
</tr>
<tr>
<td>Characteristics of internal and jet-noise radiation from a multi-lobe, multi-stage, suppressor nozzle tested statically and under flight simulation</td>
</tr>
<tr>
<td>Results from flight noise tests on a Viper jet turbojet fitted with ejector/suppressor nozzle systems</td>
</tr>
<tr>
<td>Equilibrium linearization of broadband jet noise</td>
</tr>
<tr>
<td>Wing effect on jet noise propagation</td>
</tr>
<tr>
<td>Passive noise source location from field measurements</td>
</tr>
<tr>
<td>Prediction of free-field noise levels from pole microphone measurements</td>
</tr>
<tr>
<td>Quiet Clean Short-haul Experimental Engine (QCSEE) UTW engine powered-lift acoustic performance</td>
</tr>
<tr>
<td>A linearized theory for swirling supersonic jets and its application to shock-cell noise</td>
</tr>
<tr>
<td>Noise suppressors for jet engine testing</td>
</tr>
<tr>
<td>Location and propagation of shock associated noise from supersonic jets</td>
</tr>
<tr>
<td>Prediction of unsuppressed jet engine exhaust noise in flight from static data</td>
</tr>
<tr>
<td>Preliminary analysis of minimum time and minimum noise landing approach trajectories</td>
</tr>
<tr>
<td>Intrinsic emission of the NK 6-4 engine</td>
</tr>
<tr>
<td>Discrete frequency noise reduction modeling for application to fanjet engines</td>
</tr>
<tr>
<td>Visualization of the acoustic excitation of a subsonic jet</td>
</tr>
<tr>
<td>Coannular jets - Are they really quiet and why</td>
</tr>
<tr>
<td>Contribution to the study of nonstationary signals</td>
</tr>
<tr>
<td>A method for predicting the noise levels of coannular jets with inverted velocity profiles</td>
</tr>
<tr>
<td>Aeroacoustic characterization of free jets</td>
</tr>
<tr>
<td>Experimental and numerical results on a shear layer excited by a sound pulse</td>
</tr>
<tr>
<td>A review of the research at NASA concerning the effects of flight on engine exhaust noise</td>
</tr>
<tr>
<td>Quiet Clean Short-haul Experimental Engine (QCSEE) acoustic and aerodynamic tests on a scale model over-the-wing thrust reverser and forward thrust nozzle</td>
</tr>
<tr>
<td>Quiet Clean Short-haul Experimental Engine (QCSEE) Over-The-Wing (OTW) propulsion systems test report - Volume 1: Acoustic performance</td>
</tr>
<tr>
<td>An experimental study of the structure and acoustic field of a jet in a cross stream --- Ames 7-ft by 10-ft wind tunnel tests</td>
</tr>
<tr>
<td>Jet engine demonstrable test cell exhaust systems phase: Coanda/refraction noise suppression concept, advanced development</td>
</tr>
<tr>
<td>Jet engine Class C test cell exhaust systems phase. Coanda/refraction noise suppression concept, advanced development</td>
</tr>
<tr>
<td>Publications in acoustic and noise control from NASA Langley Research Center during 1980-1979 - Philosophies</td>
</tr>
<tr>
<td>Experimental evaluation of a spinning-noise acoustic-treatment design concept for aircraft inlet noise suppression of TF-102 engine fan noise</td>
</tr>
<tr>
<td>Noise propagation due to annulus shaping of conventional coaxial nozzle</td>
</tr>
<tr>
<td>An improved prediction method for the noise generated in flight by circular jets</td>
</tr>
<tr>
<td>USP bioenvironmental noise data handbook. Volume 117: F-16A in-flight crew noise</td>
</tr>
<tr>
<td>Quiet Clean Short-haul Experimental Engine (QCSEE) SCARE engine performance and emissions tests</td>
</tr>
<tr>
<td>Quiet Clean Short-haul Experimental Engine (QCSEE) SCARE engine: Acoustic test results</td>
</tr>
<tr>
<td>Noise generation by jet-engine exhaust deflection</td>
</tr>
<tr>
<td>USP bioenvironmental noise data handbook. Volume 124: F104D aircraft, near and far-field noise</td>
</tr>
<tr>
<td>Review of turbofan-engine combustion and jet-noise research and related topics</td>
</tr>
<tr>
<td>Reaction of the French population to the supersonic bang</td>
</tr>
<tr>
<td>Noise suppression in jet inlets</td>
</tr>
<tr>
<td>Analytical investigation of fan noise due to ingested atmospheric turbulence</td>
</tr>
<tr>
<td>A new theory for rapid calculation of the ground pattern of a jet impinging sound intensity produced by a maneuvering jet airplane</td>
</tr>
<tr>
<td>Study of lateral exhaust sound attenuation and its determination from far part 36 aircraft noise certification measurements</td>
</tr>
<tr>
<td>Detection and assessment of secondary sonic booms in New England</td>
</tr>
<tr>
<td>Washington National Airport flight extension test. Noise monitoring data report</td>
</tr>
</tbody>
</table>

**JET AMPLIFIERS**

Development of a nozzle to improve the turning of supersonic Coanda jets | p0876 80-37709 |

**JET AUGMENTED WING FLAPS**

Jet AFDING WING FLAPS

jet AFGING WING FLAPS

Jet AFDING

Jet AFGING PROPELLOR

Jet ENGINE FUELS

Jet JP-4 JET FUEL

Jet JP-5 JET FUEL

A-252
An engine fuel chemistry solution to the problem of jet fuel supplies

The chemical stability of hydro-treated fuels and their stabilization by antioxidants

Burning sprays of jet fuel vapor-emissions characteristics

Effect of napthenic aromatic hydrocarbons on the oxidizability of hydrocarbon jet fuel — jet engine fuels

Charging of jet fuel on polyurethane foams

Characteristics of burning Jet A fuel and Jet B fuel vapor-emissions sprays

Local laminarization in turbulent diffusion flames

Using sprays of Jet A fuel-water emulsions

Stability survey of hydrocarbon fuels

Comparative evaluation of firefighting foam agents

A new technique to evaluate performance of jet fuel filtration equipment

Alternative Jet aircraft fuels

Behavior of lightly confined high explosives in a jet-fuel fire

Airflow effects on fires, part 2

Comparative evaluation of firefighting foam agents

Aircraft fuel system simulator tests with anti-intermingling kerosene (Jet A fuel with PB-9 additives) — flammability tests

Thermal oxidative stability test methods for JPTS jet fuel

Initial characterization of an Experimental Referee Broadened-Specification (BBRS) aviation turbine fuel

Evaluation of fuel character effects on the P101 engine combustion system

The thermodynamics of organic compounds — jet fuel fuels

Stability survey of hydrocarbon fuels

Carburetor icing: A review

Carburetor icing: A review

The impact of fuels on aircraft technology through the year 2000

Future aviation fuels overview

Current jet fuel trends

Aviation fuels outlook

Fuel/engine/airframe tradeoff study, phase 1

Military jet fuel from shale oil

Future aviation fuels characteristics studies — jet fuels

Fuel characterization effects on the J79 and P101 engine combustion systems

Antimisting kerosene — reduced flammability during aircraft accident circumstances

Determination of jet fuel thermal deposit rate using a modified IGTOT

Some civil engineering and management aspects of conversion from JP-4 to JP-8 fuel by the United States Air Force in the continental United States

Aviation aircraft fuels, 1979

National Aviation Fuel Scenario Analysis Program

Hydroprocessing of light pyrolysis fuel oil for kerosene type jet fuel

JET ENGINES

BRISTOL-SIDDELY BS 53 ENGINE

DUCTED FAN ENGINES

J-65 ENGINE

JT-7 ENGINE

JT-8 ENGINE

RAMJET ENGINES

SUPersonic combustion ramjet engines

T-63 ENGINE

TP-41 ENGINE

TURBOFAN ENGINES

TURBOJET ENGINES

TURBOHIBBIT ENGINES

On some realistic applications of identification methods

Situation of welding in engine maintenance

On the influence of steady state temperature and pressure distortion on the flow characteristics in an installed multistage jet engine compressor

Acoustic radiation from axisymmetric ducts — a comparison of theory and experiment

Kerosene type jet fuel

Aircraft engine technology — a comparison of J79 and F101 engine combustion systems

Advanced propulsion systems: A comparison of theory and experiment

Advanced propulsion systems

Aircraft engine technology

Advanced propulsion systems: A comparison of theory and experiment

New problems in materials and structures in aircraft engine technology

The importance of timely finite element modelling in jet engine design

Life cycle cost as a tool in the detail design of advanced propulsion systems

European turbines

Design of air-cooled jet engine testing facilities

SLIDE excitation by elliptical whirling in viscous-damped jet engines

Noise suppression for jet engine testing

Jet engine performance deterioration trends
Correlation of thrust and discharge losses for chemically nonequilibrium flows in jet-engine nozzles.

A jet engine integrated generator.

Effect of swirl, wake parameter, and wake Reynolds' number on recirculation in combustion chambers of jet engines.

Impact damage on titanium leading edges from small hard objects --- in compressor blades in jet engines.

VSCZ technology definition study.

Computer simulation of engine systems.

Expanded study of feasibility of measuring in-flight 747/757/767 loads, performance, clearance, and thermal data.

Measurements of jet dispersions simulated in an aerostatic wind tunnel.

Fatigue strength testing employed for evaluation and acceptance of jet-engine instrumentation probes.

Structural analysis of hollow blades: Torsional-stress analysis of hollow fan blades for aircraft jet engines.

Perforographic and spectrographic analysis of oil.

Engine bleed air reclamation in DC-10.

Effect of oxidizing fuels on aircraft fuel system performance deterioration based on in-service engine data: JT9D jet engine diagnostics program.

Fatigue strength testing employed for evaluation and acceptance of jet-engine instrumentation probes.

Aerosol filter loading data for a simulated jet engine test cell aerosol.

Data analysis of P sub T/P sub S noseboom probe tech data.

Numerical investigation of the external flow over the after-body and the flow within the nozzle for different jet engines.

Performance deterioration based on in-service engine data: JT9D jet engine diagnostics program.

Vibrations of a compressor blade with slip at the root.

Effect of oxidizing fuels on aircraft fuel system elastomers and sealants.

Engine bleed air reduction in dc-10.

Measurement of turbine engine transient airflow in ground test facilities.

Implications of new production of older aircraft types (less than 75,000 pounds) to meet advanced noise standards.

The criticality of engine exhaust simulations on V/STOL model-measured ground effects.

Static tests at model scale indicating rear-fuselage installation effects on engine exhaust noise.

A comparison of jet temperature effects on afterbody drag with those from jet molecular weight and nozzle area ratio variations.

Prediction of unpressed jet engine exhaust noise in flight from static data.

Application of viscous analogues to the design of jet exhaust powered lift installations.

Calculation of the interaction between an exhaust jet and a high-lift wing.

Considerations of some critical ejector problems --- for the V/STOL aircraft.

Flight-measured afterbody pressure coefficients from an airplane having twin side-by-side jet engines for Mach numbers from 0.6 to 1.6.

Aeroacoustic characterization of free jets.

The criticality of engine exhaust simulations on V/STOL model-measured ground effects.

Air pollution from aircraft.

Noise generation by jet-engine exhaust deflection.

Analysis of experiments on the effects of jet plumes on pressure distribution over a cylindrical afterbody at transonic speeds.

Static calibration of a two-dimensional wedge nozzle with thrust vectoring and spanwise blowing.

Computational models for the viscos-inviscid analysis of jet aircraft exhaust plumes --- propulsive bypass drag.

Reduction of nitric oxide emissions from a combustor.

Jet flaps and flaps on a full-scale STOL engine-wing system.

Jet flight path prediction.

Jet flight path prediction.

Jet Flow.

Jet engines.

Jet engine test cell aerosol.

Data analysis of P sub T/P sub S noseboom probe tech data.

Numerical investigation of the external flow over the after-body and the flow within the nozzle for different jet engines.

Performance deterioration based on in-service engine data: JT9D jet engine diagnostics program.

Vibrations of a compressor blade with slip at the root.

Effect of oxidizing fuels on aircraft fuel system elastomers and sealants.

Engine bleed air reduction in dc-10.

Measurement of turbine engine transient airflow in ground test facilities.

Implications of new production of older aircraft types (less than 75,000 pounds) to meet advanced noise standards.

The criticality of engine exhaust simulations on V/STOL model-measured ground effects.

Static tests at model scale indicating rear-fuselage installation effects on engine exhaust noise.

A comparison of jet temperature effects on afterbody drag with those from jet molecular weight and nozzle area ratio variations.

Prediction of unpressed jet engine exhaust noise in flight from static data.

Application of viscous analogues to the design of jet exhaust powered lift installations.

Calculation of the interaction between an exhaust jet and a high-lift wing.

Considerations of some critical ejector problems --- for the V/STOL aircraft.

Flight-measured afterbody pressure coefficients from an airplane having twin side-by-side jet engines for Mach numbers from 0.6 to 1.6.

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The criticality of engine exhaust simulations on V/STOL model-measured ground effects.

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Analysis of experiments on the effects of jet plumes on pressure distribution over a cylindrical afterbody at transonic speeds.

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Jet flaps and flaps on a full-scale STOL engine-wing system.

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Jet flight path prediction.

Jet Flow.

Jet engines.

Jet engine test cell aerosol.

Data analysis of P sub T/P sub S noseboom probe tech data.

Numerical investigation of the external flow over the after-body and the flow within the nozzle for different jet engines.

Performance deterioration based on in-service engine data: JT9D jet engine diagnostics program.

Vibrations of a compressor blade with slip at the root.

Effect of oxidizing fuels on aircraft fuel system elastomers and sealants.

Engine bleed air reduction in dc-10.

Measurement of turbine engine transient airflow in ground test facilities.

Implications of new production of older aircraft types (less than 75,000 pounds) to meet advanced noise standards.

The criticality of engine exhaust simulations on V/STOL model-measured ground effects.

Static tests at model scale indicating rear-fuselage installation effects on engine exhaust noise.

A comparison of jet temperature effects on afterbody drag with those from jet molecular weight and nozzle area ratio variations.

Prediction of unpressed jet engine exhaust noise in flight from static data.

Application of viscous analogues to the design of jet exhaust powered lift installations.

Calculation of the interaction between an exhaust jet and a high-lift wing.

Considerations of some critical ejector problems --- for the V/STOL aircraft.

Flight-measured afterbody pressure coefficients from an airplane having twin side-by-side jet engines for Mach numbers from 0.6 to 1.6.

Aeroacoustic characterization of free jets.

The criticality of engine exhaust simulations on V/STOL model-measured ground effects.

Air pollution from aircraft.

Noise generation by jet-engine exhaust deflection.

Analysis of experiments on the effects of jet plumes on pressure distribution over a cylindrical afterbody at transonic speeds.

Static calibration of a two-dimensional wedge nozzle with thrust vectoring and spanwise blowing.

Computational models for the viscos-inviscid analysis of jet aircraft exhaust plumes --- propulsive bypass drag.

Reduction of nitric oxide emissions from a combustor.

Jet flaps and flaps on a full-scale STOL engine-wing system.
Pressure and velocity measurements in a three-dimensional wall jet

Aerodynamic interactions from reaction controls for lateral control of the M2-P2 lifting-body entry configuration at transonic and supersonic and supersonic Mach numbers — wind tunnel tests

Transonic aerodynamic characteristics of a supersonic cruise aircraft research model with the engines suspended above the wing

Viscous flowfields induced by two- and three-dimensional lift jets in ground effect

Vorticity associated with multiple jets in a crossflow — vertical takeoff aircraft

Alleviation of the side force and the yawing moment acting on a slender cone-cylinder body at high angles of attack, using small jet injection at subsonic and transonic speeds

Noise generated aerodynamically

Analysis of experiments on the effect of jet planes on pressure distribution over a cylindrical afterbody at transonic speeds

Peripherai jet-air cushion landing system — spanloader aircraft, volume 1

Peripherai jet-air cushion landing system — spanloader aircraft, volume 2

An experimental study of multiple jet mixing

Development of a nozzle to improve the turning of supersonic Coanda jets

Jet fuels

Jet engine fuels

Jet impingement

Numerical investigation of unstable interaction of a supersonic jet with a plane barrier

Jet flap impingement noise from a full-scale STOL SDB engine-wing system

Upper surface blowing noise of the NASA Ames quiet short-haul research aircraft

Pressure fields generated by instability waves and coherent structures in an impinging jet

Experimental study of the interaction between a rapid subsonic aircraft wing and an engine nozzle at high dilution rates

Upper surface blowing noise of the NASA Ames quiet short-haul research aircraft

Pressure fields generated by instability waves and coherent structures in an impinging jet

Experimental study of the interaction between a rapid subsonic aircraft wing and an engine nozzle at high dilution rates

Jet engines

Numerical investigation of unstable interaction of a supersonic jet with a plane barrier

Jet flap impingement noise from a full-scale STOL SDB engine-wing system

Upper surface blowing noise of the NASA Ames quiet short-haul research aircraft

Pressure fields generated by instability waves and coherent structures in an impinging jet

Experimental study of the interaction between a rapid subsonic aircraft wing and an engine nozzle at high dilution rates

Upper surface blowing noise of the NASA Ames quiet short-haul research aircraft

Pressure fields generated by instability waves and coherent structures in an impinging jet

Experimental study of the interaction between a rapid subsonic aircraft wing and an engine nozzle at high dilution rates

Jet stabilization by impinging jets in high-speed flow

A Navier-Stokes scheme for the calculation of three-dimensional impinging jets flow

An experimental study of two-dimensional supersonic jet impingement on a flat plate

Jet lift

An analytical solution of lift loss for a rounded planform with a central lifting jet

Jet mixing flow

Recent development of a jet-diffuser ejector

Photon correlation laser velocimeter measurements in highly turbulent flow fields

An experimental model investigation of turbulent engine internal exhaust gas mixer configurations

Scale model performance test investigation of exhaust system mixers for an Energy Efficient Engine /5 propulsion system
Shock loading on reinforced splice joints of ultra high modulus graphite/epoxy composites --- advanced interceptor structures

Collection and analysis of in service flight histories of the initiation of fatigue damage (NASA-PW-79-910)

Evaluation of the fatigue life of joined specimens undergoing load transfer with regard to stress concentration (NASA-PW-79-11)

Study of the influence of hole quality on composite materials (NASA-CR-159257)

Low-temperature solder for joining large cryogenic structures --- cooling tools for the National Transonic Facility (NASA-74-81836)

Durability and consistency of composite components (NASA-CR-159235)

Analysis of NASA JP-4 fire tests data and development of a simple fire model (NASA-CR-159209)

Service test of two fuel conductivity additives (NASA-CR-159246)

Rake flowfields for Jovian probe [BASA-CB-159242] p0026 A80-18102


Evaluation of new materials for rotor hub journal bearings --- self lubricating materials (NASA-CR-159244) p0026 A80-18103


A modeling technique for design and simulation of hydrostatic journal bearings (NASA-CR-159216) p0026 A80-18104

JP-4 JET FUEL

Charging of jet fuel on polyurethane foams (NASA-CR-159230)

Analysis of NASA JP-4 fire tests data and development of a simple fire model (NASA-CR-159209)

Service test of two fuel conductivity additives (NASA-CR-159246)


Effect of refining variables on the properties and composition of JP-5 (NASA-CR-159244) p0026 A80-18105

JUPITER PROBE

O CALLING PROBE

Woke flyfielders for Jovian probe (NASA-CR-159235)

KALAN FILTERS

The target tracking problem using airborne radar under ECM environment (NASA-CR-159244)

Kalan filter for terrain aided navigation (NASA-CR-159244)

An extended Kalman filter for the estimation of transfer alignment errors to an airborne vehicle (NASA-CR-159244)

The EMM system identification technique and its application to high alpha/beta modeling of aircraft (NASA-CR-159244)

Adaptive linear filtering in the presence of an evolution noise of poorly known variance (NASA-CR-159244) p0026 A80-18106

EC-130 AIRCRAFT

U C-130 AIRCRAFT

EC-135 AIRCRAFT

U C-135 AIRCRAFT

KERNEL FUNCTIONS

Evaluation of the kernel of an integral equation for a wing performing harmonic oscillations in low subsonic flow (NASA-CR-163069)

Lifting and nonsliding kernel functions for cascade and isolated airfoils (NASA-CR-162863)

Transonic kernel function method for unsteady flow calculations using a unified linear pressure panel procedure (NASA-CR-162862)

Viscous thin airfoil theory (NASA-CR-163069)

Low-temperature solder for joining large cryogenic structures --- cooling tools for the National Transonic Facility (NASA-74-81836)

Evaluation of new materials for rotor hub journal bearings --- self lubricating materials (NASA-CR-159246)


Effect of refining variables on the properties and composition of JP-5 (NASA-CR-159244)
An artificial viscosity method for the design of supercritical airfoils

A study of the prediction of cruise noise and laminar flow control noise criteria for subsonic air transports

Near-field noise prediction for aircraft in cruising flight: Methods manual --- laminar flow control noise effects analysis

Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests

Design studies of Laminar Flow Control (LFC) wing concepts using superplastic forming and diffusion bonding (SPF/DB)

Evaluations of laminar flow control system concepts for subsonic commercial transport aircraft

A rapid implicit-explicit solution to the two-dimensional time dependent incompressible Navier-Stokes equations

Laminar Flow Airfoils

Visualization of the laminar-turbulent transition in the flow over an airfoil using the smoke-wire technique

A parametric wing design study for a modern laminar flow wing

Stability analysis for laminar flow control, part 2 --- laminar flow wings

A rapid implicit-explicit solution to the two-dimensional time dependent incompressible Navier-Stokes equations

Laminar Flow Control

Unsteady compressible 3-dimensional boundary-layer flow near an asymmetric stagnation point with mass transfer

Laminar Jets

Laminar Flow

Laminar wakes

Investigations on vortex frequencies in wakes of cascade blades

Laminated Materials

Laminates

Determination of the stress intensity factor of composite structural members

Advanced materials and the Canadair Challenger

Characterization of graphite/epoxy laminates for aeroelastic tailoring

Failure mechanisms for advanced composite sandwich construction in hostile environments --- naval aircraft structures

Graphite-epoxy panel compression strength reduction due to local impact

Composite center fuselage --- Phase I

NDI policy and techniques for advanced composites --- nondestructive inspection

A hybrid composite helicopter main rotor blade employing pneumatic lift control

Release-rate calorimetry of multilayered materials for aircraft seats

Repair of advanced composite structures in damaged aircraft

Aerelastic tailoring of a forward swept wing and comparisons with three equivalent aft swept wings

[AD-A0069777]

Carbon/graphite fiber risk analysis and assessment study: Assessment of risk to the Lockheed model L-1011 commercial transport aircraft

Carbon/graphite composite laminates

Graphite-epoxy panel compression strength

AIA A-257
Technology of graphite-resin composite materials and their application in the aeronautical industry

New materials and helicopter certification

Optimal design studies on composite wings with static and dynamic constraints

Determining stress intensity factors in composite structural elements

An investigation into the feasibility of producing aircraft structural components using wet lay-up of carbon fibre fabric

On determining the temperatures at given points of cooled turbine blades made from multilayer perforated materials

Sound transmission into a laminated composite cylindrical shell.

The influence of bending-torsional coupling on the buckling load of general orthotropic, airplane symmetric and elastic plates

The viscoelastic behavior of a composite in a thermal environment

High temperature resin matrix composites for aerospace structures

The development and test of a tactical follow-up and final-value control of a special system

Estimation of wind shear and thrust loss during landing

The introduction of new systems in international civil aviation

Collision avoidance and communication system

Certification test procedures for aircraft approach control, ARSPEM-84, revision 2

Systems research and development service report of B and D activity --- National aviation system and air traffic control

A simulator study of control and display augmentations for helicopters

 Shuttle OFT level C navigation requirements

LANDING GEAR

Optimization of aircraft undercarriages

The loads at landing impact --- for aircraft

Have Bounce --- validation of computer simulations of F-4 dynamic response to multiple runway repairs

Emergency landings on a carpet of foam

Conditions for exciting natural vibrations in a tricycle rolling along a straight line

Investigation of Air Force BIL-H-5606 hydraulic system malfunctions induced by chlorinated solvent contamination

The linking of development problems with the loads at landing impact for aircraft

Evaluation of the impact of towing the L-1011 airplane at Boston-Logan Airport

High-speed T-38A landing gear extension loads

Evaluation of the impact of towing DC-9 transport airplane at Boston-Logan Airport

Optimization of aircraft undercarriages

Application of the factor interpolation method in flight vehicle landing gear analytic design

Analytical investigation of the landing dynamics of a large airplane with a load-control system in the main landing gear

Friction characteristic of steel skids equipped with skegs on a lakebed surface --- landing gear

The loads at landing impact --- for aircraft

The linking of development problems with the loads at landing impact for aircraft

Evaluation of the impact of towing the L-1011 airplane at Boston-Logan Airport

The loads at landing impact --- for aircraft

Have Bounce --- validation of computer simulations of F-4 dynamic response to multiple runway repairs

Results from O'Sear pavement deformation-validation study

Primary radar in 4TC flight vehicle landing gear analytic design

LANDING AIDS

Land use factors and airport operations safety

Friction characteristic of steel skids equipped with skegs on a lakebed surface --- landing gear

High-speed T-38A landing gear extension loads

Flightworthy active control landing gear for a supersonic aircraft

Evaluation of the impact of towing DC-9 transport airplanes at Boston-Logan Airport

Certification test procedures for aircraft approach control, ARSPEM-84, revision 2

Systems research and development service report of B and D activity --- National aviation system and air traffic control

A simulator study of control and display augmentations for helicopters

Shuttle OFT level C navigation requirements

LANDING RADAR

Primary radar in 4TC
A flight simulation investigation on the feasibility of curved approaches under MLS guidance

Modeling and flight simulation of an active configured aircraft under MLS guidance

Preliminary results of simulated vortex encounters by a twin-engine, commercial aircraft during final landing approach

Analytical methodology for determination of helicopter IFP precision approach requirements -- pilot workload and acceptance level

A piloted simulator analysis of the carrier landing capability of the quiet short-haul research aircraft

The modular survivable radar LSI and microwave optical advances in laser transit anemometry

Design considerations for attaining 200-knot test velocities at the aircraft landing loads and traction facility

Landing considerations for attaining 200-knot test velocities at the aircraft landing loads and traction facility

Landing systems

U landing aids

Landscape

U terrain

Laser Doppler Velocimeters

A review of propeller discrete frequency noise prediction technology with emphasis on two current methods for time domain calculations

Languages

MT assembly language

MT English language

MT FORTRAN

MT programming languages

Structures in aeronautical phraseology: From English to Spanish

Lap joints

Endurance of riveted lap joints (aluminum alloy sheet and rivets)

Large-scale integration

Applications of LSI to digital systems - an overview of expectations and reality -- signal processing in avionics

Single chip custom LSI microcomputers for avionics applications

An LSI digital signal processor for airborne applications -- onboard computer for radar systems

LSI radar signal processor

The modular survivable radar -- LSI and microwave circuit technologies for military avionics

VL/SI/VSAT device technology -- Very High Speed Integration for military signal processing applications

Laser anemometers

High-resolution LDA measurements of Reynolds stresses in boundary layers and wakes

A laser-two-focus /LDF/ velocimeter for automatic flow vector measurements in the rotating components of turbomachines

Optical advances in laser transit anemometry

Laser anemometer measurements in a transonic axial flow compressor rotor

Gravimetric investigation of the particle number density distribution function in the high speed cascade wind tunnel for laser-anemometry measurements -- optical distortions over airborne laser turrets

Experimental study of the particle-number concentration in the wind tunnel for use of the laser anemometry

Laser beacon system for aircraft collision hazard determination

Laser target designation

Design considerations for an active laser seeker

High-speed laser anemometry measurements in highly turbulent flow fields

A survey of laser Doppler velocimeter applications

An LSI digital signal processor for airborne applications -- onboard computer for radar systems

LSI radar signal processor

The modular survivable radar -- LSI and microwave circuit technologies for military avionics

VL/SI/VSAT device technology -- Very High Speed Integration for military signal processing applications

Laser anemometers

High-resolution LDA measurements of Reynolds stresses in boundary layers and wakes

A laser-two-focus /LDF/ velocimeter for automatic flow vector measurements in the rotating components of turbomachines

Optical advances in laser transit anemometry

Laser anemometer measurements in a transonic axial flow compressor rotor

Gravimetric investigation of the particle number density distribution function in the high speed cascade wind tunnel for laser-anemometry measurements -- optical distortions over airborne laser turrets

Experimental study of the particle-number concentration in the wind tunnel for use of the laser anemometry

LASER GUIDANCE

The laser gyro and its application to an helicopter navigation system

LASER GYROSCOPES

Applications of advanced electric/electronic technology to conventional aircraft

LASER PROPULSION

A comparison of interstellar propulsion methods

LASER RADAR

U optical radars

LASER RANGEFINDER/TRACKER

LASER TARGET DESIGNATORS

Laser Target Marker/designator/ and Range

Design considerations for an active laser seeker

OH-58C helicopter mast mounted sight/designator safety statement

LASER掛K

NT AERON LASEK

NT CARBON DIOXIDE LASERS

NT MODULATORS LASERS

NT POLARIZED LASERS

NT TAG LASERS

LASER APPLICATIONS

NT LASER PROPULSION

VSTOL test techniques utilizing laser tracking

Laser-optical blade tip clearance measurement system

Laser-optical blade tip clearance measurement system

Inviscid Flow Field Effects: Experimental results -- optical distortions over airborne laser turrets

Laser jet boundary layer/shear layer laser propagation experiments

Summary of aerodynamic vibration effects on Allt

Flow visualization techniques in the Airborne Laser Laboratory program

Laser-optics overview -- laser applications

A three-dimensional Laser Doppler Velocimeter /LDV/ for use in wind tunnels

The development of passive Doppler techniques in LSI/TL and their applications to ballistic and aerodynamic measurements

Turbulence measurements in the boundary layer of a low-speed wind tunnel using laser velocimetry

Helicopter remote wind sensor system description

Velocity profiles in a long inlet duct employing a photon correlating laser velocimeter without seeding

Laser anemometer measurements at the exit of a T63 combustor

Summary of aerodynamic vibration effects on ALL
LAOBCB VEHICLES

LATTICES (BATBBHiTICS)

LATBBALIXATIOI

LATEBA1 STABILITY

LJSf

LASV

BT AISCRIPT LAOBCHIB6 DEVICES

BT ASIA BE LAOBCB VEHICLE

BT GOB LAOBCBEBS

BT CATAPULTS

D LATBBAL COSTSOL

U LATEBAL STABILITY

0 F-111 AIBCBAPT

An integrated strapdown guidance and control
Prototype development passive, seat-mounted limb
The qnasi-vortex-lattice method for wings with
AH-16 lateral flight performance test
Exploratory investigation of the effects of vortex
BCAIB design philosophy for fighter aircraft
ind tunnel aeasurenent of lateral aerodynamic
Boll control of an attitude-controlled aerodynamic
Lateral rollover protection concepts
Flaperon control: The versatile surface for
Aerodynamic interactions from reaction controls
Plying qualities research for highly augmented
Application of existing roll response criteria to
Effects of the aerodynamic cross-coupling and
some vind tunnel measurements of the effectiveness
A-260

LALV

LAHBB AURCHING

LAHYocked LAURCHERS

LAHYing

New remotely piloted vehicle launch and recovery
concepts. Volume 1: Analysis, preliminary
design and performance/cost trade-studies.
[AD-4077475] p0236 ABO-19066

LAUL VURCHES

LAUL VURCHING

Investigation of flows in Laval nozzles at small
Reynolds numbers
p0467 ABO-42569

LAW (JURISPRODUCTIONS)

LAW (INTERNATIONAL LAW

LAUL VURCHES

Evidence in aircraft accident investigation and
its evaluation
p0277 ABO-31593

LAW

LAUL VURCHES

SEALED LEAD ACID BATTERIES

Sealed lead acid batteries for aircraft applications
p0571 ABO-04082

LEADING EDGE SLAYS

Performance improvement of delta wings at subsonic
speeds due to vortex flaps
[AIAA PAPER 80-1802] p0469 ABO-43285

Full-scale wind-tunnel investigation of the
effects of wing leading-edge modifications on the
high angle-of-attack aerodynamic
characteristics of a low-wing general aviation
airplane
[AIAA PAPER 80-1804] p0470 ABO-43302

Airplane wing leading edge variable camber flap
p0369 ABO-23514

LEADING EDGE SH PEEP

Steady flow over the pressure side of a piecewise-flat
delta wing with supersonic
leading edges
p0915 ABO-12908

Stationary flow past the lower surface of a piecewise-
planar delta wing with supersonic
leading edges
p0128 ABO-34708

Careful numerical study of flowfields about
asymmetric external conical corners
[AIAA PAPER 80-1329] p0451 ABO-41552

Supersonic wings with significant leading-edge
thrust at cruise
[AIAA-TP-1632] p0302 ABO-21279

Low-speed aerodynamic characteristics of a highly
swept arrow wing configuration with several
deflected leading edge concepts
[AIAA-TP-83168] p0641 ABO-33347

LEADING EDGES

LEADING EDGE SLAYS

Investigation of leading-edge devices for drag
reduction of a 60-deg. delta wing at high angles
of attack
[AIAA PAPER 80-0310] p0099 ABO-18309

Studies of leading-edge thrust phenomena
[AIAA PAPER 80-0325] p0099 ABO-18315

The effects of leading edge modifications on the
post-stall characteristics of wings
[AIAA PAPER 80-0199] p0097 ABO-18175

Streamwise development of the flow over a delta wing
[AIAA PAPER 80-0200] p0097 ABO-18370

Effects of foxbodc, wing and wing-body-LLX
flowfields on high angle of attack aerodynamics
leading Edge extensions
[SAA PAPER 791082] p0194 ABO-26638

Numerical modeling of supersonic flow near a thin
delta wing with discontinuous edge
p0203 ABO-27147

Laminar separation bubble with transition /theory
and experiment/

Design of flat plate leading edges to avoid flow
separation
p0272 ABO-30571

Conically cambered delta wings in supersonic flow.
I - Basic solutions
p0285 ABO-32526

Reflex cambered delta wings with leading edge
separation
p0285 ABO-32527

Heat transfer at a breaking point of the leading
edge of a plate in hypersonic flight
p0467 ABO-42565

LAUL VURCHES

LAUL VURCHING

NY AIRCRAFT LAUNCHING DEVICES

NY CATAPULTS

NY AIRCRAFT LAUNCHERS

BY AIR LAUNCHING

{...}

LAUL VURCHES

NY AIRCRAFT LAUNCHING DEVICES

NY CATAPULTS

NY AIRCRAFT LAUNCHERS

p0088 ABO-17559

A-260
**SUBJECT INDEX**

- **Minimum-weight wing in the presence of lift constraints**
  - p0203 A80-27136
- **Experimental study of flapping wing lift and propulsion**
  - p0273 A80-30680
- **The screw propeller -- marine and air propeller hydrodynamics**
  - p0386 A80-37572
- **A streamtube concept for lift -- With reference to the maximum size and configuration of aerial spray emissions**
  - p0074 A80-43687
- **On the unsteady, wake induced lift on a slotted airfoil**
  - p0514 A80-45840
- **Limiting values of the lift coefficient of lifting bodies with a flat surface at supersonic speeds**
  - p0525 A80-46661
- **Lifting and nonlifting kernel functions for cascade and isolated airfoils**
  - p0615 A80-51920
- **Overall aerodynamic characteristics of caret and delta wings at supersonic speeds**
  - p0038 A80-11022
- **Two-dimensional wind-tunnel tests of a NASA supercritical airfoil with various high-lift systems. Volume 1: Data analysis**
  - [NASA-CR-2214] p0067 A80-12054
- **Two-dimensional wind-tunnel tests of a NASA supercritical airfoil with various high-lift systems. Volume 2: Test data**
  - [NASA-CR-2215] p0067 A80-12055
- **Some wind tunnel measurements of the effectiveness at low speeds of combined lift and roll controls**
  - [NASA-CR-6171] p0160 A80-16035
- **A comparison of calculated and experimental lift and pressure distributions for several helicopter rotor sections**
  - [NASA-CR-61160] p0168 A80-16036
- **Summary of theoretical and experimental investigations of vortex lift at high angles of attack**
  - [NASA-CR-6171] p0168 A80-16037
- **Description and report on the calibration of an unsteady flow wind tunnel, part 1. The unsteady lift generated on an airfoil at moderate incidence to a flow containing streaming oscillations, part 2**
  - [NASA-CR-61174] p0176 A80-17000
- **An automatic analysis of wing unsteady aerodynamics**
  - [NASA-CR-61732] p0289 A80-20239
- **Transonic data memorandum: A framework relating the drag-rise characteristics of a finite wing/body combination to those of its basic airfoil**
  - [NASA-CR-61732] p0301 A80-21276
- **Numerical optimization of circulation control airfoils**
  - [NASA-CR-61812] p0302 A80-21277
- **A summary of joint US-Canadian augmentor wing powered-lift STOL research programs at the Ames Research Center, NASA, 1975-1980**
  - [NASA-TM-81215] p0536 A80-28373
- **Computation of spanwise distribution of circulation and lift coefficient for flapped wings of arbitrary planform**
  - [NASA-CR-61532] p0599 A80-31153
- **Wing profile design of the world championship sailplane 29 11**
  - [NASA-CR-75829] p0602 A80-31185
- **A comparison of flight and simulation data for three automatic landing system control laws for the augmentor wing jet STOL research airplane**
  - [NASA-CR-152365] p0628 A80-32338
- **Low-speed aerodynamic characteristics of specific configurations of aspect ratio 3 and 4 equipped with high lift systems**
  - [NASA-CR-61776] p0628 A80-32347
Application of identical aerodynamic functions

LIFT AUGMENTATION
Predicted jet thickness effects on the lift of an augmentor wing
p0012 A80-12597
Advanced circulation control wing system for Navy STOL aircraft
[ AIAA PAPBE 80-1025 ]
p0465 A80-43292
Lift improvement of an aerofoil by periodic deformations
p0474 A80-43179
The effects of turbine inlet temperature and engine complexity on VCS/BALS powered supersonic V/STOL aircraft --- Variable-Cycle Engine/Remote Augmentor Lift System
[ AIAA PAPBE 80-1853 ]
p0513 A80-45704
Calculation of the interaction between an exhaust jet and a high-lift wing
p0525 A80-46062

Experimental and theoretical investigation of the lifting properties of a wing of deformable profile
p0564 A80-47393

Development of the a-6/circulation control wing flight demonstrator configuration
[ AD-A081241 ]
p0355 A80-22365
Conceptual studies of a long-range transport with an upper surface blowing propulsive lift system
[ NASA-TM-801964 ]
p0356 A80-23249
Large-scale wind-tunnel tests of investing films on a STOL utility aircraft model
[ NASA-TP-1696 ]
p0432 A80-25318
LIFT COEFFICIENTS
LU LIFT
LU LIFT DEVICES
On the stability of the longitudinal disturbed motion of an airplane with lift force control system
p0376 A80-36796
Development of the external upper surface blowing propulsive-lift device
[ AIAA PAPBE 80-12044 ]
p0401 A80-38966
Lifting surface divergence and control effectiveness
[ NASA-TM-801381 ]
p0065 A80-12200
Accuracy of hydrofoil loading predictions obtained from a lifting-surface computer program
[ NASA-A0714702 ]
p0173 A80-16233
The influence of ballistic damage on the aeroelastic characteristics of lifting surfaces --- fighter aircraft
[ AD-A082536 ]
p0433 A80-25322
LIFT DISTRIBUTION
LU FORCE DISTRIBUTION
LU LIFT
LIFT DRAG RATIO
Induced drag and lift-drag ratio of swept wings at supersonic speeds
p0204 A80-27175
Overall aerodynamic characteristics of caret and delta wings at supersonic speeds
p0034 A80-11022
Wing profile design of the world championship sail plane SB 11
[ NASA-TM-75829 ]
p0602 A80-31385
LIFT PANS
Measurements of the dynamic performance of the main drive fan of the BAE 5 metre pressurised low speed wind tunnel
[ AIAA-80-00457 ]
p0200 A80-26956
Investigation of ground effects on large and small scale models of a twin fan V/STOL aircraft configuration
[ NASA-CR-152240 ]
p0167 A80-16030
JEFF(A) mixed-flow model fan performance optimization
[ AD-A076577 ]
p0173 A80-16234
LIFT FORCES
LU LIFT
LU LIFTING BODIES
LU LIFTING BODIES
LU LIFTING SYSTEMS
LU LIFTING SYSTEMS
LU-2P2 LIFTING BODY
Calculations of inviscid supercritical subsonic flow past a lifting profile of arbitrary thickness --- German thesis
p0048 A80-13456
Aerodynamics of wings in subsonic shear flow
[ AIAA PAPBE 80-1418 ]
p0452 A80-41612

LIMITING VALUES OF THE LIFT COEFFICIENT OF LIFTING BODIES WITH A FLAT SURFACE AT SUPERSONIC SPEEDS
p0525 A80-46861
Lifting surface divergence and control effectiveness
p0065 A80-12004
Trajectories optimization in hypersonic flight
[ NASA-CR-162846 ]
p0232 A80-19026
Unsteady pressure measurements on oscillating models in European wind tunnels
[ AD-A083298 ]
p0478 A80-26277

LIFTING ENTRY VEHICLES
LU N-2P2 LIFTING BODY
Investigation of numerical techniques for predicting aerodynamic heating to lifting vehicles
[ AD-A078121 ]
p0289 A80-20234
LIFTING MOTORS
Noise due to tip vortex formation on lifting rotors
[ AIAA PAPBE 80-1010 ]
p0393 A80-38636
Flapping response of lifting rotor blades to spanwise nonuniform random excitation
p0618 A80-52321
Effect of tip vortex structure on helicopter noise due to blade-vortex interaction
p0619 A80-52645

LIFTING SURFACES
LU LIFT DEVICES
LU LIFTING BODIES
LU SURFACES
LIGHT (VISIBLE RADIATION)
LU SKY RADIATION
LIGHT AIRCRAFT MULTIPURPOSE SYSTEM
Avionics logistics support including V/STOL, LAMPS, and instrument repair
[ AD-A077460 ]
p0239 A80-19087
LIGHT AIRCRAFT
LU OH-6 HELICOPTER
LU OH-58 HELICOPTER
LU FIPES AIRCRAFT
Light turbine helicopters to the year 2000
p0909 A80-11397
Designing light airplanes --- Russian book
p0101 A80-19148
A light aircraft camera Pod - The Enviro-Pod
p0103 A80-20251
A method of simplifying weight and balance for small aircraft
[ SAWEB PAPBE 1278 ]
p0104 A80-20630
A spin-recovery parachute system for light general aviation airplanes
p0147 A80-21122
The laminar lightplane or the aircraft performance revolution is upon us
p0159 A80-23306

The potential for development of high performance light aircraft
p0159 A80-23307
An induction gyrocompass
p0191 A80-25219
RNC in lightweight helicopters - Special problems and experience in design and control
p0121 A80-27773
Design and test of mini-BPV demonstrator engines
p0267 A80-29671
A study of light aircraft noise. I - Exhaust noise
p0274 A80-30812
Annoyance caused by general aviation
p0286 A80-32601
Study on the dynamics of small flight vehicles under gust loading
p0327 A80-34653
Propeller light aircraft noise at discrete frequencies
[ AIAA PAPBE 80-0097 ]
p0338 A80-35960
Noise transmission and control for a light, twin-engine aircraft
[ AIAA PAPBE 80-1037 ]
p0390 A80-35984
Effect of the architecture of light aircraft on their spin
[ AIAA PAPBE 80-11 ]
p0377 A80-36042
Lightweight diesel aircraft engines for general aviation
[ AIAA PAPBE 80-1238 ]
p0400 A80-38983
The influence of the thrust direction on the level flight of light airplanes
p0445 A80-40897
Cost effective series production on the basis of new design and production principles, using a light aircraft as an example
[ DGSL PAPBE 80-038 ]
p0523 A80-46289

A-263
Scatter of fatigue-life data for elements of full-scale light-aircraft wings under steady loads p0525 A80-46669
Allocating and accommodating small aircraft operations in the Baltimore-Washington Bi-region [NASA TP-20076] p0576 A80-9706
Inadequate harnesses as a cause of death in two light aircraft accidents 0580 A80-50118
Structural stiffening as an interior noise control technique for light twin-engine aircraft p0626 N80-10192
Comparison of stability and control parameters for a light, single-engine, high-winged aircraft using different flight test and parameter estimation techniques [NASA TM-80-8163] p0030 N80-10225
New aircraft technology: Report on the parachute test and parameter estimation techniques [PB-296345/0] p0039 N80-11078
Light airplane crash test crashes at three pitch angles p0046 N80-11505
Rotary balance data for a typical single-engine general aviation design for an angle-of-attack range of 8 degrees to 35 degrees. 3. Effect of wing leading-edge modifications, model A [NASA CR-3102] p0068 N80-12060
Evaluation of seating and restraint systems conducted during fiscal year 1978 [AD-A074881] p0077 N80-13014
Exploring study of the effects of wing-leading-edge modifications on the stall/transition behavior of a light general aviation airplane [NASA TP-1599] p0078 N80-13026
Exhaust emissions characteristics for a general aviation light aircraft Teledyne Continental Motors 6-285-B piston engine [AD-A074338] p0080 N80-13042
Low cost aircraft flutter clearance --- conference proceedings [AAGD-CP-278] p0138 N80-15141
Comparison of international flutter requirements and flutter freedom substantiation of light aircraft in the USA p0138 N80-15142
The state-of-the-art of flutter substantiation procedures among US general aviation manufacturers p0138 N80-15143
An empirical approach for checking flutter stability of gliders and light aircraft p0138 N80-15144
Dynamic identification of light aircraft structures and their flutter certification p0138 N80-15145
A simplified ground vibration test procedure for sailplanes and light aircraft p0138 N80-15146
The minimum cost approach to flutter clearance p0139 N80-15147
Exhaust emissions characteristics for a general aviation light aircraft Avco Lycoming TIO-200-3JR piston engine [AD-A075355] p0179 N80-17070
HF communication to small low flying aircraft p0248 N80-19374
Exhaust emissions characteristics for a general aviation light aircraft Teledyne Continental Motors (TCA) GT210-520-K piston engine [AD-A080433] p0292 N80-20270
Propeller driven light aircraft noise p0315 N80-22237
Preliminary study of advanced turboprop and turboshort engines for light aircraft --- cost effectiveness [NASA-TP-81667] p0353 N80-22350
Description of an experimental (hydrogen peroxide) rocket system and its use in measuring alleron and rudder effectiveness of a light airplane [NASA-TP-1647] p0359 N80-22358
Wind tunnel tests on the Sheriff twin-engined light aircraft [BU-291] p0361 N80-23277
Light twin-engine aircraft accidents following engine failures [PB80-177306] p0588 N80-30287

Light twins light twin-engine aircraft accidents following the strength of occupant restraint system in light twin-engine aircraft noise Hind tunnel tests on the Sheriff twin-engined Description of an experimental (hydrogen peroxide) Exhaust emissions characteristics for a general aviation light aircraft in the Langley full-scale tunnel [NASA TM-62023] p0232 N80-19023
Light TRANSPORT AIRCRAFT Toward new small transports for commuter airlines p0148 A80-21224
Small Transport Aircraft Technology p0148 A80-21225
Aerocoustic wind-tunnel tests of a light twin-boom general aviation airplane with free or shrouded-pusher propellers --- in the Langley full-scale tunnel [NASA TM-62023] p0232 N80-19023
Lighting U ILLUMINATING LIGHTING EQUIPMENT NT AIRCRAFT LIGHTS [AD-107772] p0490 N80-27315
Lighting protection for aircraft p0180 N80-25059
Lighting protection for aircraft p0202 A80-27021
Induced effects of lighting on an all composite aircraft p0212 A80-27783
Lighting damage mechanisms and simulation techniques --- for aircraft protection p0320 A80-38666
Long arc simulated lighting attachment testing using a 150 kW Tesla Coil --- for aircraft strike testing p0389 A80-37833
FAA lighting protection study: Report of investigations relative to providing lighting protection for the remote control air-to-ground (RCAG) [AD-A075963] p0173 N80-16259
Atmospheric electricity and military operations [AD-A078482] p0253 N80-19693
Calculations of lightning return stroke electric and magnetic fields above ground
The minimum cost approach to flutter clearance

Logistics forecasting for achieving low life cycle cost -- aircraft maintenance

LOW DENSITY GASES

LOW DENSITY MATERIALS

Comparative evaluation of firefighting foam agents -- extinguishing Jet A fuel fires

AIR--DOY74050

Development of fire-resistant, low smoke generating, thermally stable and items for commercial aircraft and spacecraft using a basic polysiloxane resin

[NASA--CR-160576] p0356 880-22492

LOW GRAVITY

LOW GRAVITY MANUFACTURING

Fast low-gravity calibration tests for materials processing in space precursory experiments

[NASA--TM-87287] p0436 880-25355

LOW SPEND

Low-speed wind-tunnel tests of a 1/10-scale model of an advanced array wing supersonic cruise configuration designed for cruise at Mach 2.2

--- Langley Full Scale Wind Tunnel

[NASA--TM-80152] p0024 880-10135

Some wind tunnel measurements of the effectiveness at low speeds of combined lift and roll controls

p0140 880-15153

Unsteady aerodynamics of two-dimensional spoilers at low speeds

p0162 880-15170

Optimus subsonic, high-angle-of-attack airfoils

[NASA--TM-81691] p0293 880-20275

Study of rotor wakes at very low advance ratio

[AD--A007252] p0303 880-21291

NASA low- and medium-speed airfoil development

[NASA--TM-78709] p0303 880-21294

Low-speed airspeed calibration data for a single-engine research-support aircraft

[880-26264]

LOW SPEED STABILITY

Naval V/STOL hover and low-speed Flying Qualities Criteria Recent developments

[480-48566]

A summary of low-speed longitudinal aerodynamics of two powered close-coupled wing-canard fighter configurations --- conducted in Langley C/STOL tunnel

[NASA--TP-1535] p0076 880-12994

The logic of the electric flight control system experiment on the Concorde --- achieving low-speed longitudinal stability by active control

p0612 880-32137

LOW SPEED WIND TUNNELS

Measurements of the dynamic performance of the main drive fan of the RM5 metre pressurized low speed wind tunnel

[AIAA 80-0456] p020 880-26956

A new rig for flight mechanics studies in the ONERA Aerothermodynamic Test Center of Modane

[AIAA 80-0464] p0201 880-26961

A system for the measurement of the attitude of wind tunnel models

[AIAA 80-0465] p0201 880-26962

Secondary flow and losses in straight turbine cascades

p0261 880-29138

Measurements on a three-dimensional swept wing at low speeds. Part 1: The flow around the leading edge

[FFA--130-PT-1] p0036 880-11044

Measurements on a three-dimensional swept wing at low speeds. Part 2: The flow in the boundary layer on the main wing

[FFA--130-PT-2] p0036 880-11045

Effects of fuselage forebody geometry on low-speed lateral-directional characteristics of twin-tail fighter model at high angles of attack

[NASA--TP-1592] p0076 880-13002

Air flow measurements in a large irregularly shaped tunnel using anemometer and pitot-static tube traverse

[880-660] p0082 880-13061

Recent research on V/STOL test limits at the University of Washington aeronautical laboratory


SUBJECT INDEX

LUBRICATING OILS

Diether-base lubricating oils for gas-turbine systems

Investigation of lubricant concepts applicable to aircraft gas turbine engines -- Problems and future aspects

[AD--A072557] p0030 880-10223

Development of the full scale T36 test for specification MIL--L--23699 and IAS--2354 gas turbine lubricants

p0424 880-24455

LUBRICATING OILS

Diwater lubricating oils for gas-turbine systems

Dehydration of aircraft fuels and lubricants

Mechanisms of turbine engine lubricant deposition

[AD--A072557] p0030 880-10223

The physical and chemical characterization of ten military turbine engine lubricants

[AD--A074073] p0144 880-15265

Investigation of lubricant concepts applicable to future Navy aircraft propulsion systems

[AD--A079410] p0353 880-22351

Rotor-bearing dynamics technology design guide. Part 5: Dynamic analysis of incompressible fluid bearings

LUBRICATING OILS

Lubricants for the aircraft gas turbine

Lubrication of aircraft gas-turbine engines

Mechanisms of turbine engine lubricant deposition

[AD--A072557] p0030 880-10223

Dehydration of aircraft fuels and lubricants

Research report on the development of a new anti-icing lubricant for aircraft gas turbine engines

[AD--A074073] p0144 880-15265

Investigation of lubricant concepts applicable to future Navy aircraft propulsion systems

[AD--A079410] p0353 880-22351

LUBRICATING OILS

Lubricants for the aircraft gas turbine

Lubrication of aircraft gas-turbine engines

Mechanisms of turbine engine lubricant deposition

[AD--A072557] p0030 880-10223

Dehydration of aircraft fuels and lubricants

Investigation of lubricant concepts applicable to future Navy aircraft propulsion systems

[AD--A079410] p0353 880-22351

LUBRICATING OILS

Lubricants for the aircraft gas turbine

Lubrication of aircraft gas-turbine engines

Mechanisms of turbine engine lubricant deposition

[AD--A072557] p0030 880-10223

Dehydration of aircraft fuels and lubricants

Investigation of lubricant concepts applicable to future Navy aircraft propulsion systems

[AD--A079410] p0353 880-22351

LUBRICATING OILS

Lubricants for the aircraft gas turbine

Lubrication of aircraft gas-turbine engines

Mechanisms of turbine engine lubricant deposition

[AD--A072557] p0030 880-10223

Dehydration of aircraft fuels and lubricants

Investigation of lubricant concepts applicable to future Navy aircraft propulsion systems

[AD--A079410] p0353 880-22351

LUBRICATING OILS

Lubricants for the aircraft gas turbine

Lubrication of aircraft gas-turbine engines

Mechanisms of turbine engine lubricant deposition

[AD--A072557] p0030 880-10223

Dehydration of aircraft fuels and lubricants

Investigation of lubricant concepts applicable to future Navy aircraft propulsion systems

[AD--A079410] p0353 880-22351
A rotary inverter system for a multiple-electrode gas-turbine engine.  

Experimental feasibility study of the application of magnetic suspension techniques to large-scale fluid bearings.  

Development of the fall scale test for lateral control of the B2-P2 lifting-body entry configuration at transonic and supersonic Mach numbers — wind tunnel tests.  

The problem of the optimum cruising Mach number.
Field impact evaluation report on the Electronic Tabular Display Subsystem (ETABSS) [AD-A078866] p0105 N80-17357
The effect of viewing time, time to encounter, and practice on perception of aircraft separation on a cockpit display of traffic information [NASA-TM-81173] p0225 N80-18038
Closed loop models for analyzing engineering requirements for simulators [NASA-CR-29665] p0235 N80-19063
Real-time simulation: An indispensable but overlooked evaluation technique p0255 N80-19020
Modeling the human operator: Applications to system cost effectiveness p0255 N80-19066
System, airspace, and capacity requirements for future ATC-systems p0491 N80-27328
Air traffic control automation: Its impact and role in the future air traffic controllers p0491 N80-27329
Development of simulator instructional feature design guides [AD-A084428] p0537 N80-28379
Results of a simulator investigation of control system and display variations for an attack helicopter mission [AD-A085812] p0554 N80-29370
Evaluation of the Aviation Weather And Flight System (AVIAD) [AD-A086457] p0556 N80-29560
Effects of criteria on flight simulation study 1: Heading deviation tolerance (AD-A089096) p0650 N80-33423
MAN OPERATED PROPULSION SYSTEMS
Crossing the Channel in the Gossamer Albatross p0208 A80-27389

MANAGEMENT
NT CONFIGURATION MANAGEMENT
NT CONTRACT MANAGEMENT
NT DATA MANAGEMENT
NT INDUSTRIAL MANAGEMENT
NT INFORMATION MANAGEMENT
NT INVENTORY MANAGEMENT
NT LOGISTICS MANAGEMENT
NT PROCUREMENT MANAGEMENT
NT PRODUCTION MANAGEMENT
NT PROJECT MANAGEMENT
NT RESEARCH MANAGEMENT
NT RESOURCES MANAGEMENT
NT SAFETY MANAGEMENT
NT SYSTEMS MANAGEMENT
The re-organization of airport administration in Canada p0191 A80-25245

MANAGEMENT INFORMATION SYSTEMS
Management of a stored program controlled ATC communication system p0387 A80-37694
Flight data management using the terminal information processing system p0388 A80-37699
On-line real-time management information systems and their impact upon user personnel and organizational structure in aviation maintenance activities [AD-A085141] p0546 N80-29200

MANAGEMENT METHODS
NT PROFILE METHOD (FORECASTING)
ATC flow management - Fuel is the spur and data links the key p0272 A80-30575
A method for monitoring maintenance - The audit --- for aircraft p0407 A80-39582
Air transport of dangerous materials - Safety and administrative simplification can go hand in hand p0408 A80-39588
Aircrew displays and avionics for application in a future national airspace system [NASA-TM-80095] p0036 N80-11052
The integrated management of reliability and maintainability in procurement p0252 N80-19558
A study for development of methods for air traffic management p0491 N80-27327

MANAGEMENT PLANNING
NT PRODUCTION PLANNING
NT PROJECT PLANNING
Controlling the technical servicing at an air technical base p0598 N80-31345
Estimating the time required to transition aircraft fleets to new scheduled maintenance intervals [AD-A078606] p0232 N80-19027
Mechanization architecture for enhancement of avionics planning data base [AD-A075572] p0292 N80-20267
Development of an effectiveness planning and evaluation model for Air Force Maintenance Organizations [AD-A080061] p0627 N80-32326
Energy conservation and management study of aircraft hangars at selected Air Force Bases [AD-A089075] p0649 N80-33420

MANAGEMENT SYSTEMS
NT MANAGEMENT INFORMATION SYSTEMS
Flight management systems p0392 A80-38513

MANEUVERABILITY
Manoeuvre limitations of combat aircraft [NAGAR-AR-1558] p0228 N80-10203
Precision controllability of the TP-17 airplane [NASA-TP-1677] p0366 N80-23327
Theory for computing the size and shape of a region of influence associated with manoeuvring vehicle [NASA-TP-1646] p0413 N80-24261
UK approach to aircraft dynamic response on damaged and repaired runways p0434 N80-25327
Exploratory piloted simulator study of the effects of vinglets on handling qualities of a representative agricultural airplane [NASA-TM-81817] p0536 N80-28370
The operational roles of the F-16 p0559 N80-30020
Operational missions and conceptual design of the Mirage 2000 p0560 N80-30021

MANEUVERABLE SPACECRAFT
NT AEROSPACEPLANES
NT LIFTING REENTRY VEHICLES
NT M-2F LIFTING BODY

MANEUVERS
NT AIRCRAFT MANEUVERS
NT EVASIVE ACTIONS
NT ORBITAL MANEUVERS
NT SIDESLIP

MACHINERY
U MANIPULATORS

MAINTENANCE

MAINTENANCE SPACECRAFT
NT AEROSPACEPLANES
NT SPACE SHUTTLES

MAINTENANCE TECHNIQUES
Advancements of the Space Shuttle p0367 A80-36446

MAINTENANCE RESOURCES
High-temperature ceramic heat exchanger [EPRI-PP-1127] p0426 N80-25488

MANUAL CONTROL
Variable-sweep optimization --- for hodograph-vector-control concept in maneuvering flight p0541 A80-18809

MANUAL CONTROLS
Automatic control of NASA Langley's 0.3-meter cryogenic test facility [NASA-TR-80-0416] p0198 A80-26931
Pilot control through the TAPCS automatic flight control system [NASA-TM-81152] p0122 N80-18138

MANUALS
NT USER MANUALS (COMPUTER PROGRAMS)
Racketflight flight simulation, computer program C81. Volume 1: Engineer's manual A-272
An analytical and experimental study of aircraft hydraulic systems including the effect of mass flow [AD-A077942]
Identification of lift systems [p0269 RRO-19496]
Identification evaluation methods [p0260 RRO-19696]
Identification experience in extreme flight regimes [p0261 RRO-19102]
Identification evaluation methods [p0260 RRO-19534]
Modeling and Simulation of Avionics Systems and Command, Control and Communications systems -- conferences [AD-A082618]
Verification and validation of avionic simulations [p0254 RRO-19809]
The application of modeling and simulation to the development of the E-3A [p0255 RRO-19602]
A study of avionics life cycle cost models and their applicability in the communications-electronic-aerological environment [AD-A077942]
Analysis of support cost model for avionics automatic test equipment -- f-16 aircraft [AD-A055586]
Theoretical analysis of jet engine control [NACA-8-16291]
Mathematical modelling in military aircraft weapon system design [p0301 RRO-21272]
A statistical model for multipath reflection effects of antennas mounted on aircraft [AD-A080369]
Lightning Technology: Proceedings of a technical symposium [NACA-CP-2128]
Calculations of lightning return stroke electric and magnetic fields above ground [p0312 RRO-21927]
Definition of a two-level control system for nonlinear motion of an aircraft [EPA-TR-61]
Mathematical model for the separation of gust and manoeuvre loads of civil aircraft [FB-141 (1979)]
Minimum mass sizing of a large low-aspect ratio airframe for flutter-free performance [NACA-8-91810]
Simple turbulence models and their application to boundary layer separation [NACA-CP-3268]
V/STOL rotary propeller noise prediction model update and evaluation [AD-A082616]
Viscous thin airfoil theory [NACA-8-163069]
Aircraft dynamic response to damaged runways [AGARD-E-865]
A numerical and experimental study of the turbulent wakes of turbomachinery rotor blades, isolated airfoils, and a cascade of airfoils [p0466 RRO-27277]
Determination of the safety in a North Atlantic organized track system with reduced lateral separation -- statistical tests [p0492 RRO-27322]
Combustor Modelling -- conference [AGARD-CP-275]
Fundamental modelling of mixing, evaporation and kinetics in gas turbine combustors [p0497 RRO-27371]
Mathematical modelling of gas-turbine combustion chambers [p0498 RRO-27374]
Fundamental characterization of alternative fuel effects in continuous combustion systems [p0499 RRO-27382]
Combustion modelling within gas turbine engines, some applications and limitations [p0500 RRO-27394]
Aerodynamic study of a combustion chamber with a view to its semi-empirical modelling [p0501 RRO-27395]
Investigation into adaptive control of a slip-cast, reaction-bonded silicon nitride process via adaptive learning network modeling [AD-A083730]
A comprehensive analytical model of rotorcraft aerodynamics and dynamics. Part 1: Analysis and development [NACA-TM-81182]
A piloted simulator analysis of the carrier landing capability of the quiet short-haul research aircraft [NACA-TM-78058]
Parametric study of modern airship productivity [NACA-TM-81151]
A mathematical representation of an advanced helicopter for piloted simulator investigations of control system and display variances [NACA-TM-81203]
Pollution by aircraft traffic. Pollution forecast techniques, and mathematical models to assess the hazards due to lightning [AD-A079493]
A mathematical model of the AFCS (ASH) mode part 1: Flexible rotor dynamics [AD-A083730]
A mathematical model of the AFCS (ASH) mode part 2: Helicopter for piloted simulator investigations of control system and display variances [AD-A087239]
A plan for developing and validating a gun system design trade-off methodology [AD-A087239]
Aerospace analysis of a wing-elevator cove with variable leakage [p0638 RRO-32537]
The development and operation of the BDC anechoic acoustic test facility

The problem of wind tunnel flow nonuniformity in free-model aircraft dynamic stability

Sea King Mk. 50 helicopter nose dynamics study.

A simplified control system mathematical model

Validation of the operating and support cost model for avionics automatic test equipment (UCAST)

MATRICES (MATHEMATICS)

The array processor AP-1203/190L for simulation applications

MATRICES (MATHEMATICS)

Singularity of the numerical solution of the algebraic Riccati equation in matrix form by a modification of the usual Rayleigh method — for automatic aircraft control

MATRICES (MATHEMATICS)

A matrix method for airport site evaluation

Applications of the integrating matrix method to solving bound-value problems with boundary form of the differential equations and isoperimetric edge conditions — for structural analysis

On interfacing structural information and loading data in aeroelastic analysis — using computer techniques

Methods for determining undamped normal modes and transfer functions from receptance measurements — with possible application to helicopter structures vibration testing

MATRICES (MATHEMATICS)

A matrix method for airport site evaluation

Application of the integrating matrix method to solving bound-value problems with normal form of the differential equations and isoperimetric edge conditions — for structural analysis

On interfacing structural information and loading data in aeroelastic analysis — using computer techniques

Methods for determining undamped normal modes and transfer functions from receptance measurements — with possible application to helicopter structures vibration testing

MATRICES (MATHEMATICS)

A matrix method for airport site evaluation

Application of the integrating matrix method to solving bound-value problems with normal form of the differential equations and isoperimetric edge conditions — for structural analysis

On interfacing structural information and loading data in aeroelastic analysis — using computer techniques

Methods for determining undamped normal modes and transfer functions from receptance measurements — with possible application to helicopter structures vibration testing

MATRICES (MATHEMATICS)

A matrix method for airport site evaluation

Application of the integrating matrix method to solving bound-value problems with normal form of the differential equations and isoperimetric edge conditions — for structural analysis

On interfacing structural information and loading data in aeroelastic analysis — using computer techniques

Methods for determining undamped normal modes and transfer functions from receptance measurements — with possible application to helicopter structures vibration testing
MECHANICAL DRAWINGS
U ENGINEERING DRAWINGS

MECHANICAL DRIVES
NT HELICOPTER PROPELLER DRIVE
NT PROPELLER DRIVE
NT TRANSMISSIONS (MACHINE ELEMENTS)
Selection of parameters of axial power-driven centrifugal breathers for gas turbine engine oil systems
p0566 A80-47439

Mechanical components
p0029 B80-10213

Mechanical power system for aircraft intermittent utility functions --- systems engineering of using flybeams for aircraft control equipment
[AD-4073297] p0079 B80-13030

Investigation of advanced prognostic analysis techniques --- failure analysis and wear tests of mechanical drive gears
[AD-407353] p0079 B80-13032

Evaluation of a high performance fixed-ratio traction drive
[ASA PAPER 80-67] p0230 B80-18004

The application of reliability improvement warranty to dynamic systems
[AD-4075520] p0230 B80-18019

Cost analysis of a helicopter transmission and drive train
[AD-A080576] p0305 B80-21322

MECHANICAL ENGINEERING
Some aspects of off-design testing of turbocompressors
p0260 A80-29102

The present state in the axial-flow transonic compressor design
p0260 A80-29103

Fabrication of double-curvature skins by rolling --- for aircraft structures
p0376 A80-36780

Demonstration of a unified approach to the balancing of flexible rotors
[ASA PAPER 80-67] p0460 A80-42213

High bypass turbofan component development. Phase 2: Detailed design
[AD-A0802753] p0435 B80-25341

MECHANICAL IMPEDANCE
Comment on "Calculation of rotor impedance for annular-rotor helicopters in forward flight"
p0527 A80-47325

MECHANICAL MEASUREMENT
NT DISPLACEMENT MEASUREMENT
NT DRAG MEASUREMENT
NT FLOW MEASUREMENT
NT FRICTION MEASUREMENT
NT PRESSURE MEASUREMENTS
NT STRESS MEASUREMENT
NT VELOCITY MEASUREMENT
NT VIBRATION MEASUREMENT
NT WIND MEASUREMENT
NT WIND VELOCITY MEASUREMENT

A fast method to control tackiness of fiber resin press
p0444 A80-80085

[ONERA, TP NO. 1980-37]

MECHANICAL PROPERTIES
NT ABRASION RESISTANCE
NT AEROPLASTICITY
NT BRITTLENESS
NT COMPRESSIBILITY
NT COMPRESSIVE STRENGTH
NT CREEP PROPERTIES
NT CREEP RUPTURE STRENGTH
NT DIMENSIONAL STABILITY
NT DUCTILITY
NT DYNAMIC MODULUS OF ELASTICITY
NT ELASTIC PROPERTIES
NT ELASTOPLASTICITY
NT FATIGUE LIFE
NT FIBER STRENGTH
NT FLEXIBILITY
NT FRACTURE STRENGTH
NT HARDNESS
NT HIGH STRENGTH
NT IMPACT STRENGTH
NT MODULUS OF ELASTICITY
NT NOTCH STRENGTH
NT PHOTOLEASTICITY
NT PROPORTIONAL LIMIT
NT STIFFNESS
NT STRESS CYCLES

MECHANICAL ROBOTICS
NT STRESS RATIO
NT STRESS RELAXATION
NT STRUCTURAL STABILITY
NT SUPERTENSILITY
NT TENSILE STRENGTH
NT THERMAL RESISTANCE
NT VISCOELASTICITY
NT WAVE STRENGTH

Experimental investigation of the strength of rotor materials in the presence of surface cracks
p0003 A80-10482

Evaluation of strength safety factors under multicomponent loading with consideration of material properties scatter
p0060 A80-16631

Composite materials: Hunting and design
p147 A80-21126

Resin matrices and their contribution to composite properties
p0155 A80-22262

Effects of thermally induced porosity on an as-BIP powder metallurgy superalloy
p0269 A80-29990

Experimental investigation of the strength of rotor materials with surface cracks
p0278 A80-32044

Engine environmental effects on composite behavior --- solute and temperature effects on mechanical properties
[AAIA 80-0695] p0335 A80-35101

Technology of graphite-resin composite materials and their application in the aeronautical industry
p0336 A80-35771

Load specifications for the envelopes of a captive balloons and flexible airship
p0404 A80-39299

Application of superalloy powder metallurgy for aircraft engines
p0507 A80-49240

The physical and chemical characterization of ten military turbine engine lubricants
[AD-4074073] p0144 A80-15265

Composite structural materials --- aircraft structures
[NASA-CR-163377] p0532 B80-26339

Mechanical behavior of airframe materials
[AD-4085044] p0945 B80-29290

Time-temperature-stress capabilities of composite materials for advanced supersonic technology application, phase 1
[NASA-CR-159267] p0651 B80-33946

MECHANICAL RESONANCE
NT RESONANT VIBRATION

MECHANICAL SHOCK
The Shock and Vibration Digest, volume 12, no. 7
p0607 B80-31662

MECHANIZATION
Mechanization architecture for enhancement of avionics planning data base
p0292 B80-20267

MEDICAL EQUIPMENT
NT ENDOSCOPE

MEDICAL SCIENCE
NT SURGICAL PATHOLOGY

MEDICINE
U CONFERENCES

MEDICAL TREATMENT
NT FUSION (MELTING)

MEMBRANE ANALOGY
NT STRUCTURAL ANALYSIS

MEMBRANE STRUCTURES
NT SKIN (STRUCTURAL MEMBRANE)

MEMBRANE THEORY
NT STRUCTURAL ANALYSIS

MEMBRANES
NT SKIN (STRUCTURAL MEMBRANE)

Fiberglass-reinforced plastic surfacing for rapid runway repair by naval construction
[AD-A085537] p0555 B80-29375

MEMS
High voltage spark carbon fiber detection system
[NASA-CR-162995] p0355 B80-22367

MESSAGE PROCESSING
Discrete Address Beacon System (DABS) front end processor es route central computer complex
METAL BONDING

Protocol [AD-A005882] p0631 A80-32367

METAL BONDING

BY METAL-METAL BONDING

Diffusion bonding - Aerospace applications p0011 A80-12081
Comparison of surface treatments of aluminium and their influence on long term strength of metal bonds p0329 A80-34805
Titanium welding in aircraft maintenance p0375 A80-36773

METAL COATINGS

ALUMINIUM COATINGS

Evaluation of coatings for wear and corrosion - Protection in air/field accelerators - for Navy aircraft carriers p0329 A80-34819
Development and evaluation of processes for deposition of Ni/Clr-AlX (MCrAlX) coatings for gas turbine components [AD-A09197E] p0535 A80-28362
Manufacturing process development for dust and rain erosion resistant coated metallic clads for helicopter rotors [AD-A088405] p0630 A80-32385

METAL COMBUSTION

Titanium combustion in turbine engines [AD-A0755657] p0170 A80-16059

METAL CUTTING

Profile cutting with direct data allocation and real-time operation planning [DGRL PAPER 80-035] p0522 A80-06286

METAL FATIGUE

A regression model of fatigue crack propagation under flight simulation loading - for aluminum alloys p0012 A80-12157
Impression fatigue - load level effects on crack propagation p0016 A80-13126
Sonic fatigue design data for bonded aluminum aircraft structures [AIAA PAPER 80-0303] p0094 A80-18304
Fatigue life prediction of a bonded splice joint [AIAA PAPER 80-0305] p0094 A80-18306
Variations in crack growth rate behavior p0160 A80-23858
Crack-detectives foil aircraft failure p0166 A80-24536
Evaluation of the effectiveness of case-hardening gas-turbine-engine components on the basis of fatigue/failure similarity equations p0192 A80-26193
Fatigue and microstructure; Proceedings of the Materials Science Seminar, St. Louis, Mo., October 14, 15, 1978 p0196 A80-26730
Fatigue in machines and structures - Aircraft 1978 p0196 A80-26731
Applying pressure ... Relieving stress ... stress-coining aircraft structures p0207 A80-27257
Acceleration of multicycle fatigue testing on aluminum structural alloys p0209 A80-27479
The fatigue performance of service aircraft and the relevance of laboratory data p0212 A80-27709
Avoiding divergent stall in control configured aircraft by using a canard arrangement p0217 A80-28858
Flight simulation fatigue crack propagation in 7010 and 7075 aluminum plate p0273 A80-30771
Experimental methodology and application of fracture mechanics concepts to metals [AIAA PAPER WT 79-25] p0379 A80-36869
Corrosion fatigue behavior of coated 430 steel for blade retention bolts of the AB-1 helicopter p0572 A80-48955
Material considerations for gas turbine engines p0618 A80-52127
On turbine blade creep and fatigue analysis by special kinematic assumptions [DGLB PAPEB 80-035] p0623 A80-53246
Fracture mechanics in engineering application; Proceedings of the International Conference, Bangalore, India, March 26-30, 1979

SUBJECT INDEX

Engineering application of fracture mechanics to flight simulation fatigue crack propagation p0623 A80-53439
Effects of fine porosity on the fatigue behavior of a powder metallurgy superalloy [NASA-TN-81048] p0310 A80-21993
Ultrasonic and acoustic emission detection of fatigue damage - aluminium alloy 7075-2561 [AD-A079277] p0310 A80-21510
Cumulative fatigue fracture mechanics under engine spectra [AD-A084934] p0536 A80-28365
Pulse compression results using metallic reflective array lines p0053 A80-19947

METAL FORGING

US FORGING

US FORGING TECHNIQUES

US METAL WORKING

US HARDENING (MATERIALS)

METAL JOINTS

BT SPOT WELDS

BT WELDED JOINTS

Fatigue life prediction of a bonded splice joint [AIAA PAPER 80-18306] p0094 A80-18306
Honeycomb sandwich joints for primary structure - of aircraft p0333 A80-35070
The use of holographic speckle interferometry to study the stress-strain state of a gas turbine engine disk near a scarf joint with a blade p0409 A80-39916
Study of the relaxation of the tightening force of bolted joints - in supersonic transport aircraft p0525 A80-46860
The diffusion of water vapour in humid air into the adhesive layer of bonded metal joints [AAR/LIB-TRANS-2038] p0539 A80-20947

METAL HETALIC COMPOSITES

FRS composites for advanced gas turbine engine components [AD-A079287] p0137 A80-15137

METAL OXIDES SICICONDUCTORS

BT CHARGE COUPLED DEVICES

METAL OXIDES

BT ALUMINUM OXIDES

BT SILICON OXIDES

METAL PARTICLES

BT METAL POWDER

BT POWDERED ALUMINUM

Investigation of the wear debris content in oil by measurements of the reluctance and eddy current losses in an electric circuit p0099 A80-19053

METAL PLATES

BT ROLLER PLATE

Flight simulation fatigue crack propagation in 7010 and 7075 aluminum plate p0273 A80-30771
Patterns shaping with a metal plate lens - microwave antenna design p0508 A80-44267

METAL POWDER

BT POWDERED ALUMINUM

Application of superalloy powder metallurgy for aircraft engines p0507 A80-44240
HIF of Rene 95 --- Hot Isostatic Pressing p0573 A80-49495

METAL SHEETS

Efficient sheet metal forming methods in the aircraft industry p0260 A80-32048
Anisometric dynamics of a sheet under large deformation conditions p0376 A80-36782
Flight simulation fatigue crack propagation evaluation of candidate lower wing skin materials with particular consideration of spectra truncation [ELR-TR-77092-0] p0404 A80-11524
Endurance of riveted lap joints (aluminium alloy sheets and rivets) [A550-2050] p0356 A80-22723

A-278
A-279

SUBJECT INDEX


METAL SHELLS
Experimental measurement of fields excited inside the fuselage of an aircraft p0207 A80-27306
A study of the stream-strain state of shaped hollow blinds for radial superchargers p0326 A80-34351

METAL SURFACES
Evaluation of the effectiveness of case-hardening gas-turbine-engine components on the basis of fatigue-failure similarity equations p0092 A80-26193
Some aspect of aerodynamic erosion in fans p0260 A80-29106
Comparison of surface treatments of aluminum and their influence on long term strength of metal bonds p0329 A80-34805

Neutron radiography for nondestructive testing p0643 A80-40793
Uncertainties in predicting turbine blade metal temperatures [TAEE PAPER 80-NY-25] p0565 A80-48018
Contact stress analysis of ceramic-to-metal interfaces --- in gas turbine engines [AD-A074941] p0124 B80-14417

METAL WORKING
MT COIRING
MT EXPLOSIVE FORGING
MT FORGING
MT SIZING (SHAPING)
Efficient sheet metal forming methods in the aircraft industry p0280 A80-32408
Fabrication of double-curvature skins by rolling --- for aircraft structures p0376 A80-36780

METAL-REINFORCED MATERIALS
Diffusion bonding as a production process -- Book p0011 A80-12076
A long European experience -– The adhesive bonding of metals [AABP PAPER 79-27] p0379 A80-36862

METALLOGRAPHY
Failure analysis p0539 B80-28518

METALLOIDS
MT BORON
MT ALUMINUM
MT ALUMINUM COATINGS
MT GALLIUM
MT LIQUID METALS
MT METAL COATINGS
MT METAL FILMS
MT METAL MATRIX COMPOSITES
MT METAL POWDER
MT POWDERED ALUMINUM
MT NICKEL
MT TITANIUM
MT VARADIN
Economic life criteria for metallic airframes [AIAA 80-0748] p0331 A80-35046

METAL/COMPOSITION TESTS
U MECHANICAL PROPERTIES
METALS
Shielding effects of a meteoroid surface by reflecting and evaporating molecules. III — The case of strong shielding — The overall picture of the phenomenon p0373 A80-36457

METEOROLOGICAL CHARTS
Development of a new contouring device -- for isoinstensity weather curve generation in ATC radar displays p0389 A80-37708
Design of an improved weather contouring device [AD-A082750] p0426 B80-24945

METEOROLOGICAL FLIGHT
Estimating aircraft true airspeed using temperatures from two different probes p0054 A80-15125
Further encounters with clear air turbulence in research aircraft p0042 A80-39070

NICHOLSON INTERFEROMETERS
Meteorological instrumentation system on the T-28 thunderstorm research aircraft p0584 A80-50686
A 94/183 GHz multichannel radiometer for Convair flights [NASA-CH-160032] p0639 N80-33047

NICHOLSON INTERFEROMETERS
METEOROLOGICAL INSTRUMENTS
MT CLOUD HEIGHT INDICATORS
Meteorological instrumentation system on the T-28 thunderstorm research aircraft p0584 A80-50686
Current research on aviation weather (bibliography), 1979 p0125 N80-14651
Preliminary assessment of an automated system for detecting present weather [AD-A076031] p0253 B80-19706

NICHOLSON INTERFEROMETERS
METEOROLOGICAL PARAMETERS
Takeoffs and wave-offs under the influence of wind shear [DCLR PAPER 80-047] p0523 A80-46297
Navigation and meteorological error equations for some aerodynamic parameters [NASA-TH-80045] p0026 B80-10150

NICHOLSON INTERFEROMETERS
METEOROLOGICAL RADAR
Weather detection using airport surveillance radar p0599 A80-19129
Reliability growth testing of avionic equipment p0209 A80-27612
Preliminary tests of an airborne meteorological pulse Doppler radar p0381 B80-37139
Wind shear detection with Doppler radar p0389 A80-37707
Nowcast and short-range (0-2 hour) forecasts of thunderstorms and severe convective weather for use in air traffic control [AD-A080426] p0290 B80-20247
Test and evaluation of the Airport Surveillance Radar (ASR)-4 wind shear detection system, phase 2 [AD-A080645] p0546 B80-29280

NICHOLSON INTERFEROMETERS
METEOROLOGICAL RESEARCH AIRCRAFT
Preliminary tests of an airborne meteorological pulse Doppler radar p0381 B80-37139
Dissonance — A meteorological mini-airship p0402 A80-39283

NICHOLSON INTERFEROMETERS
METEOROLOGICAL SERVICES
The effect of the Western Union Weather Data System on the preflight briefing position at the Chicago Flight Service Station p0639 N80-33065

NICHOLSON INTERFEROMETERS
METEOROLOGICAL STATIONS
U WEATHER STATIONS
U WEATHER STATION

NICHOLSON INTERFEROMETERS
METEOROLOGICAL STATIONS
MT AIR DEPARTMENTS
MT WEATHER FORECASTING
An aural simulation of fog dissipation using passive burner lines. I - Model development and comparison with observations. II - Sensitivity experiments p0509 A80-16162

NICHOLSON INTERFEROMETERS
METEOROLOGICAL STATIONS
MT AIR DEPARTMENTS
MT WEATHER FORECASTING
Study of methane flue for subsonic transport aircraft [NASA-CH-159320] p0538 B80-32533

NICHOLSON INTERFEROMETERS
METEOROLOGICAL STATIONS
MT AIR DEPARTMENTS
MT WEATHER FORECASTING
Method of Characteristic Three dimensional flow investigation with a method of characteristics in the inlet region and the blade-to-blade channels of supersonic axial compressors [BREA-MT-1979-1] p0366 B80-23323

NICHOLSON INTERFEROMETERS
Interferometer design and data handling in a high-vibration environment. I — Interferometer
BICROPROCESSORS

*ARMSTRONG PROGRAMMABLE TEST SET /APTS/
- Single chip custom LSI microprocessors for avionics applications
- Digital systems for dynamic turbine engine blade displacement measurements
- Microprocessors and small digital computers for avionics navigation systems

BICROPROCESSORS

- Error analysis of an algorithm for magnetic compensation of aircraft - microprocessor program for simulation
- Modular strapdown guidance unit with embedded microprocessors
- Verification of digital autopilot microprocessor hardware and software via hardware-in-the-loop simulation
- Avionics and controls in review
- Digital processing of unsteady periodic signals with application to the turbulence structure around oscillating airfoils
- Development, flight test and application of RFV control law concepts for microprocessor based computers
- Microprocessors in a FPV system
- The Fault Tolerant Multiprocessor on the structure and design of avionics systems
- A microprocessor controlled system for determining the height of clouds
- Microprocessors and small digital computers for avionics navigation systems
- Full authority microprocessor digital control -- for advanced technology engine
- Microprocessor requirements for implementing modern control logic
- Simplifying the development of programs for digital engine controllers
- Educational aspects of multi-microprocessor design, used in flight simulation applications
- Application of a microprocessor for aircraft electrical generator control and protection
- Microprocessor controlled ejection seat

BICROPROCESSORS

- Applications of microprocessors in a turbine engine fuel control
- Digital flight control research using microprocessor technology
- Intercommunications in real time, redundant, distributed computer systems

BICROSTRUCTURES

- Fatigue and microstructure: Proceedings of the Materials Science Seminar, St. Louis, Mo., October 14, 15, 1776
- State-of-the-art Sillon materials

MICROWAVE ANTENNAS

- Microwave landing system implementation. Volumes 1 and 2
- Microwave radio-frequency aircraft observations of the Farcy-Perot interferometer fringe of an ice-water system

MICROWAVE CIRCUITS

- The modular survivable radar -- LSI and microwave circuit technologies for military avionics

MICROWAVE EQUIPMENT

- NT BORN ANTENNAS
- NT LEAS ANTENNAS
- NT SLOT ANTENNAS
- Radiation characteristics of printed slot antennas with a switchable parasitic slot
- New comutated Doppler microwave landing system
- Patter shaping with a metal plate lens -- microwave antenna design
- Computation of aircraft mounted antenna radiation patterns at frequencies above 300 MHz - II

MICROWAVE IMAGERY

- Microwave radiometric aircraft observations of the Farcy-Perot interference fringes of an ice-water system

MICROWAVE SCANNING BEAM LANDING SYSTEMS

- NT TRAVELING WAVE TUBES
- NT VIDICONS
- Wind shear detection with Doppler radar
- The challenge of designing reliable ECM transmitters
- Development trends of airport surface traffic control radar

MICROWAVE FREQUENCIES

- Microwave landing systems
- A pulse compression, precision DME system
- What brings us down tomorrow - Landing guidance systems for the 1980s
- Design of an electronic model of a microwave aircraft landing system
- Precision DME
- The new MLS landing system
- Microwave landing system implementation. Volumes 1 and 2
- New comutated Doppler microwave landing systems

MICROWAVE LANDING SYSTEMS

- The new HLS landing system
- A pulse compression, precision DME system
- What brings us down tomorrow - Landing guidance systems for the 1980s
- Design of an electronic model of a microwave aircraft landing system
- Precision DME
- The new MLS landing system
- Microwave landing system implementation. Volumes 1 and 2
- New comutated Doppler microwave landing systems

SUBJECT INDEX

- Microprocessor control of low speed V/STOL flight
- The application of microprocessors to the regulation of military aircraft engines: The design of electronic regulators
- The design concept and experimental results using the little 8060/8085 microprocessor -- gas turbine engine fuel control
- Applications of microprocessors in a turbine engine fuel control
- Digital flight control research using microprocessor technology
- Intercommunications in real time, redundant, distributed computer systems
- Fatigue and microstructure: Proceedings of the Materials Science Seminar, St. Louis, Mo., October 14, 15, 1776
- State-of-the-art Sillon materials
- Microwave landing systems
- Microwave radio-frequency aircraft observations of the Farcy-Perot interferometer fringe of an ice-water system
- Microwave landing systems
- A pulse compression, precision DME system
- What brings us down tomorrow - Landing guidance systems for the 1980s
- Design of an electronic model of a microwave aircraft landing system
- Precision DME
- The new MLS landing system
- Microwave landing system implementation. Volumes 1 and 2
- New comutated Doppler microwave landing systems

A-280
The modular survivable radar --- LST and microwave circuit technologies for military avionics
Application of fracture mechanics to GSAF aircraft structural integrity requirements
TPE 1042 technical description
HMSAT technical description
Planning technology development to achieve consistent component technology and flexibility of application --- for military airbreathing propulsion systems
The HOD optoelectronic projection indicator
An inflatable troop seat
Aircraft operating and support cost development
Engine parameter trend analysis by LEADS 200: Experiences with a Flying Data Recording System
BACTAC: A combat-worthy computerized opponent
Hathematical modelling in military aircraft weapon systems
Military adaptation of a commercial VOB/ILS airborne navigation system
AFFDL experience in active control technology
Statistical review of counting accelerometer data for Navy and Marine flight aircraft
Increased standardization would reduce costs of ground support equipment for military aircraft
Experiences with a Flying Data Recording System (FDRS) in German Airforce fighter bomber wing after a troop tail
Engine parameter trend analysis by LEADS 200: Possibilities and limitations
The application of microprocessors to the regulation of military aircraft engines: The design of electronic regulators
Airfield operating and support cost development guide
An inflatable troop seat

Effect of aircraft power plant usage on turbine engine relative durability/life
Some vertical and horizontal ejection problems --- aircraft weapon deployment computerized simulation
A new test arena for aircraft research and development
Technology solutions to the runway denial problem
Mirage 2000 - Export fighter for the 'eighties --- France's new fighter aircraft technical study
Seaplane cruise aircraft research: An annotated bibliography
Data link: The key to improvements in civil/military air traffic management?
Midair conflicts and their potential avoidance by progressive implementation of automation
US Army users outlook on air traffic management
Evolution and transition of today's military landing system to compatibility with present and future civil military aircraft systems --- multimode receivers and the marine remote area approach landing system

KILIATIHB AVIAITION

A-282
SUBJECT INDEX

Military Technology
Operational missions and conceptual design of the Atmospheric electricity and military operations Training effectiveness of the CH-47 flight simulator for air-to-air combat motion system Built-in-test in HIL-STD-1553 systems Bavy V/STOL - A continuing initiative Technological trends in electronic warfare use Prospects for advanced tactical BPV Remotely piloted vehicles; International Fighter options for tactical air defense, Delta multiplex system DX 15-60 Design of control laws to implement ACT benefits Microwave landing system implementation - Volume 1 Design considerations for an active laser seeker Innovations in control and display of avionics and firepower increase cockpit efficiency Design of control laws to implement ACT benefits - Active Control Technology in aircraft design Microwave landing system implementation. Volume 1 Design of control laws to implement ACT benefits - Active Control Technology in aircraft design Microwave landing system implementation. Volume 1

Air Traffic Management: Civil/Military System and Technologies - conference Air Traffic Management: Civil/Military System and Technologies - conference Air Traffic Management: Civil/Military System and Technologies - conference

Missile Configurations
Air Traffic Management: Civil/Military System and Technologies - conference Millimeter waves Radioelectric measurements of targets and clutter Tunable millimeter-wave communications Milling (Machining) The process of chemical milling in machining aircraft structures

Missiles
SAMs MT Canberra HN 2000 - A continuing initiative" HN 2000-4 fighter tailored to a budget HN 2000 - Export fighter for the 'eighties HN 2000 update HN 2000 - A fighter tailored to a budget HN 2000 - Export fighter for the 'eighties HN 2000 - Export fighter for the 'eighties

Missile Configurations
Firebridge anti-ship missile target - Flight test program objectives and vehicle instrumentation requirements Firebridge anti-ship missile target - Flight test program objectives and vehicle instrumentation requirements Advance missile technology. A review of technology improvement areas for cruise missiles - including missile design, missile configurations, and aerodynamic characteristics

Missile Components
Firebridge anti-ship missile target - Flight test program objectives and vehicle instrumentation requirements Firebridge anti-ship missile target - Flight test program objectives and vehicle instrumentation requirements

Heatshield
The analysis of wing-body combinations at moderate angles of attack - missile bodies Lift, drag and pitching moment measurements on a missile body having various boattails at subsonic and transonic velocities - in a transonic wind tunnel test SORSET errors induced by missile casings

Firebridge anti-ship missile target - Flight test program objectives and vehicle instrumentation requirements Firebridge anti-ship missile target - Flight test program objectives and vehicle instrumentation requirements
MISSILE CONSTRUCTION

transonic wind tunnel test

MISSILE CONSTRUCTION

U MISSILE STRUCTURES

MISSILE CONTROL

Modular strapdown guidance unit with embedded microprocessors

AIAA PAPER 78-1239

Verification of digital autopilot microprocessor

Hardware and software via hardware-in-the-loop simulation

Advanced digital data processing for onboard missile guidance and control

Midcourse guidance for fire and forget missile

Modification of present homing missiles

Hardware-in-the-loop simulation of a digital autopilot

Theory of disturbance- utilization control with application to missile intercept problems

[AD-A081110] p0367 B80-23329

MISSILE DESIGN

Environmental control system design for the Tomahawk Cruise Missile


Assessment of analytic methods for the prediction of aerodynamic characteristics of arbitrary bodies at supersonic speeds

[AIAA PAPER 80-0071] p0101 A80-19308

Midcourse guidance for fire and forget missile

Modification of present homing missiles

[SACB-3187] p0324 A80-34180

Advanced missile technology

A review of technology improvement areas for cruise missiles

Including missile design, missile, configurations, and aerodynamic characteristics

[NASA-CR-3187] p0022 B80-10103

The use of computer aided design methods in airborne systems evaluation

p0298 B80-21244

MISSILE DETECTION

BY RADS DETECTION

MISSILE GUIDANCE

U MISSILE CONTROL

MISSILE STABILIZATION

U MISSILE CONTROL

U STABILIZATION

MISSILE STRUCTURES

Shock loading on reinforced splice joints of ultra high modulus graphite/epoxy cone frustums --- advanced intereptor structures

[SACB-3187] p0329 B80-34811

Elevated temperature structural testing of advanced missiles

[AIAA 80-0812] p0335 A80-35093

Real time digital model of a rolling airframe

[AD-A073565] p0069 B80-12075

Composite material application to the HH164 RH midbody substructure

[AD-A076485] p0183 B80-17152

MISSILE TESTS

Elevated temperature structural testing of advanced missiles

[AIAA 80-0812] p0335 A80-35093

Acousto-optic devices for use in radio frequency target simulators

p0508 B80-04510

MISSILE TRACKING

Design and simulation of a helicopter target hand-off computer

p0114 B80-12655

MISSILE TRAJECTORIES

Test and analysis of the ASALM-PVF insulated combustion chamber


Adaptive linear filtering in the presence of an evolution noise of poorly known variance

p0315 B80-22225

MISSILES

BY AIR TO AIR MISSILES

BY AIR TO SURFACE MISSILES

BY BALLISTIC MISSILES

BY CRUISE MISSILES

BY HARMET MISSILES

BY TAMARACK MISSILES

SUBJECT INDEX

Military aircraft and missile technology at theLangley Research Center: A selected bibliography

[NASA-TH-802048] p0232 B80-19024

Demonstration program for a flexible duct valve

[AD-A078529] p0244 B80-19123

A study of panel loads and centers of pressure of three different cruciform aft-tail control surfaces of a wingless missile from Mach 1.60 to 3.70

[NASA-TH-802187] p0358 B80-23251

The capabilities and operational roles of Royal Air Force Tornadoes

p0560 B80-30022

MISSION PLANNING

The impact of GPS on CV mission effectiveness

p0191 A80-25165

The influence of prior engine usage data on the selection of structural design criteria

[AIAA PAPER 79-1191] p0392 A80-38348

Sublette OFF level C navigation requirements

On-orbit

[NASA-TH-82205] p0630 B80-32363

Evaluation of laminar flow control system concepts for supersonic commercial transport aircraft

[NASA-CR-159253] p0688 B80-33394

BOUNDARY FLOW

U MULTIPHASE FLOW

MISSILES

Experimental evaluation of exhaust mixers for an Energy Efficient Engine

[AIAA PAPER 80-1080] p0397 A80-38903

Influence of pressure driven secondary flows on the behavior of turbofan forced mixers

[AIAA PAPER 80-1198] p0451 A80-41515

MISSILES

ST TURBULENT MIXING

MISSING LENGTH FLOW THEORY

Calculation of the turbulent boundary layer on an infinite swept wing using a three-dimensional mixing length model

[BSN-FT-536] p0346 B80-22273

MIXTURES

BY AEROSOLS

BY APIlations

BY ECONOMICAL EQUIPMENTS

BY EUTECTIC ALLOYS

BY FOG

BY GAS MIXTURES

BY METAL MATRIX COMPOSITES

BY SMOKE

BY SOLID SOLUTIONS

MODAL RESPONSE

Influence of optimizing the strength of a structure on the mode shapes and frequencies of the normal modes --- of flight vehicles

p0526 B80-046077

Analysis and tests of the B-1 aircraft structural mode control systems

[NASA-CR-190167] p0130 B80-15073

MODE OF VIBRATION

U VIBRATION MODE

MODERN SHAPES

U MODAL RESPONSE

MODELS

BY AIRCRAFT MODELS

BY ATMOSPHERIC MODELS

BY DIGITAL SIMULATION

BY DYNAMIC MODELS

BY MATHEMATICAL MODELS

BY SCALE MODELS

BY WIND TUNNEL MODELS

Opportunistic Maintenance Engine Simulation model: GE90 2

[AD-A072516] p0040 B80-110088

Model 540 rotor blade crack propagation investigation

[AD-A074734] p0130 B80-15001

Computer simulation model of the logistic support system for electrical engineering test equipment

p0252 B80-19560

Airavics evaluation program: Simulation models for the effectiveness analysis of avionics

p0255 B80-19839

Acoustic test and analyses of three advanced turboprop models

[NASA-CR-159667] p0364 B80-23311

MODERN

Spread-spectrum data link test facility

A-284
HOTIOH STABILITY
HOTIOH SIHOL&TOBS
HOTIOH PEBOCTIOH
HOPS (PBOPDLSIOi SYSTEHS)
HOPSB
HOPS (PBOPDLSIOi SYSTEHS)
HOT LATEBAL STABILITY
HT SYBOSCOPIC STABILITY
HT &EBODY8AHIC STABILITY
HT LOS SPEED STABILITY
HT FLOW STABILITY

The influence of simulator notion wash-out filters
HAVAIBDBVCEH dynanic flight simulator design and
Feasibility and concept study to convert the
Operations manual: Vertical notion Sinalator
SESAME: A system of equations for the sinalation
Controllers for aircraft notion sianlators
Becent advances in control loading and notion
The effects of motion and g-seat cues on pilot
Application of modified profile analysis to
Vibrational nodes of an aircraft sialator notion
Ezperinents in sensing transient rotational
Vibrational nodes of an aircraft notion sialators
Evaluation of the effect of asynchronous
simulator . vertical motion flight simulation

The Tornado all-weather high-speed low-level system
The Tornado multi-function combat aircraft - An
accomplishment of international collaboration'
The Tornado all-weather high-speed low-level system
Investigation of flight characteristics of the
RNCA-Tornado in the framework of the official
flight testing. I
Investigations of the RNCA Tornado flight
characteristics within official flight tests. I
Structure and service life verification for the
Tornado
Structural integration as a means of cost reduction
On the development of The BB 199
The capabilities and operational roles of Royal
Air Force Tornadoes
The Tornado all-weather high-speed low-level system
Main computer software for the RNCA TORNADO

t NO SUPPORTS

A statistical model for maltipath reflection
Optimal evalaation of anqular coordinates of
The Tornado all-weather high-speed low-level system
The nature of aircraft and complex system
dynamics of objects •.

Multi-path transmission
Multi-path analysis of ILS glide path

SUidjBEBG o RICHORUSE SCANNING BEAR LANDING SYSTEM

t NO SUPPORTS
MULTIPHASE FLOW
BY TWO PHASE FLOW
Study of mass exchange between primary zone and secondary air jets in gas turbine engine combustion chambers

MULTIPLE ACCESS
BY THREE-DIMENSIONAL MULTIPLE ACCESS
MULTIPLE TRANSMISSION
BY MULTIPLE ACCESS
MULTIPLEXING

MULTIPLEXING
Delta multiplex system DX 15-60
Avionic system architecture investigation (AVSAB II)
[AD-A071743] p0020 B80-11076
Applications of advanced electronic/electronic technology to conventional aircraft
[NASA-CR-197935] p0032 B80-32375
MULTIPROCESSING (COMPUTERS)
Advanced avionic architectures for the 1980's - A software view
The Fault Tolerant Multiprocessor engineering model/ A report/ --- computer systems design for avionics systems
[AD-A089-2410] p0280 B80-32420
The application of microprocessors to the control of military aircraft engines: The design electronic regulators
[p0481 B80-26314
MULTIPOINT TRACKING
U RADAR NETWORKS
MULTISPECTRAL PHOTOGRAPHY
BY INFRARED PHOTOGRAPHY
MULTISTAGE COMPRESSORS
U TURBOCOMPRESSORS
MULTISTAGE JET PROPULSION VEHICLES
BY AIRLIFT LAVNCH VEHICLE
Organizing multistage energy conversion systems
[p052 B80-07163
MULTISTATIC RADAR
Radar cross sections of conducting bodies over a lossy half space
[p030 B80-37409
MULTIVARIATE STATISTICAL ANALYSIS
BY COVARIANCE
BY DISCRIMINANT FUNCTIONS
BY REGRESSION ANALYSIS
A regression model of fatigue crack propagation under flight simulation loading --- for aluminum alloys
[p002 B80-12157
Active multivariable isolation for an helicopter by decoupling and frequency domain methods
[p052 B80-14825

N-156 AIRCRAFT
BY F-5 AIRCRAFT
NACELLES
Preliminary weight estimation of engine section structure
[SAE PAPER 1311] p0105 B80-20605
Simulated trimmings for aircraft with nacelles, pylons and winglets
[AIAP PAPER 80-0130] p0162 B80-23933
The development of the composite material engine nacelle
[AAAP PAPER N7-39-38] p0379 B80-36871
Effect of adding structural damping on a wing/nacelle mount type flutter node
[p047 B80-6159
Development of a Krailar/PHRA-15 reduced drag DC-9 nacelle fairing
[AIAP PAPER 80-1194] p048 B80-61193
Exhaust system performance improvement for a long-duct nacelle installation for the DC-10
[AIAP PAPER 80-1195] p0450 B80-11513
CF6-50 Short Core Exhaust Nozzle
[AIAP PAPER 80-1136] p0450 B80-11514
Some aspects of airflow/engine interference for single-jet afterbodies and engine nacelles with particular consideration of boattail flow
[DGLR PAPER 80-032] p0522 B80-46284
Aerodynamic development of the engine nacelle combination for the Boeing 767 airplane
(SAE PAPER 800731) p0574 B80-49683
Force and moment data from a wind tunnel test of a tilt-nacelle V/STOL propulsion system with an active control vanes conducted in Ames by a 90 foot wind tunnel
[NASA-TM-81157] p077 B80-13003
Quiet Clean Short-haul Experimental Engine (QCSEE) preliminary under the wing flight propulsion system analysis report
[NASA-CR-134868] p0131 B80-15088
Quiet Clean Short-haul Experimental Engine (QCSEE). Under-The-Wing (UTW) engine boilerplate nacelle test report, volume 1
[NASA-CR-135249] p0132 B80-15096
[NASA-CR-135251] p0132 B80-15097
Quiet Clean Short-haul Experimental Engine (QCSEE)
Over-The-Wing (OTW) boilerplate nacelle design report
[NASA-CR-135168] p0133 B80-15099
Quiet Clean Short-haul Experimental Engine (QCSEE)
Under-The-Wing (UTW) composite nacelle subassembly test report --- to verify strength of selected composite materials
[NASA-CR-135075] p0133 B80-15100
Quiet Clean Short-haul Experimental Engine (QCSEE)
Under-The-Wing (UTW) boiler plate nozzle design report
[NASA-CR-135068] p0135 B80-15116
Quiet Clean Short-haul Experimental Engine (QCSEE)
Under-The-Wing (UTW) composite nacelle
[NASA-CR-135332] p0135 B80-15119
Optima subsonic, high-angle-of-attack nacelles
[NASA-TM-81891] p0293 B80-20275
Computer programs for the design and performance evaluation of nacelles for high bypass-ratio engines
[p0301 B80-21270
Active research QCGAT engine, airplane, and nacelle design features
[p055 B80-22228
Quiet Clean Short-haul Experimental Engine (QCSEE)
Under-The-Wing (UTW) composite nacelle test report. Volume 2: Acoustic performance
[NASA-CR-15949] p0526 B80-22927
Comparison of calculated and measured blade loads on a full-scale tilting proprotor in a wind tunnel
[p0602 B80-31386
The design of axisymmetric cowls for podded nacelles for high by-pass ratio turbofan engines
[NASA-TM-3846] p0603 B80-31394
A preliminary assessment of the impact of 2-D exhaust-nozzle geometry on the cruise range of a hypersonic aircraft with top-mounted ramjet propulsion
[NASA-TM-81841] p0636 B80-32397
MAP-OF-THE-BARTS NAVIGATION
A pilot's assessment of helicopter handling-quality factors common to both agility and instrument flying tasks
[NASA-TM-81817] p0532 B80-28341
NASA PROGRAMS
BY PRELIMINARY PROJECT
BY GLOBAL ATMOSPHERIC RESEARCH PROGRAM
BY QUIET ENGINE PROGRAM
BY SKYLAB PROGRAM
BY SPACECRAFT CRUISE AIRCRAFT RESEARCH
BY TERMINAL CONFIGURATED VEHICLE PROGRAM
BY TILT ROTOR RESEARCH AIRCRAFT PROGRAM
Real-time data acquisition systems for the NASA Langley transonic dynamics tunnel
[p0013 B80-12621
NASA gear research and its probable effect on rotorcraft transmission design
[p0116 B80-13068
Engine component improvement program - performance improvement
[AIAP PAPER 80-0223] p0100 B80-19300
A comparison of computer architectures for the NASA demonstration advanced avionics system
[p261 B80-32427
Status of NASA full-scale engine aerelasticity research
[p0336 B80-35906
A-287
An overview of NASA's propeller and rotor noise research
[AD-A071895] p0027 N80-10199
Experimental evaluation of exhaust mixers for an Energy Efficient Engine
[AD-A071895] p0037 A00-36325
The Energy Efficient Engine /E3/ - Advancing the state of the art
[AD-A071895] p0037 A00-39093
Future trends in subsonic transport energy efficient turbofan engines
[AD-A071895] p0042 A00-42255
NASA overview
[AD-A071895] p0022 N80-10109
Small transport aircraft technology. A report for the committee on space, science, and technology of the U.S. Senate
[NASA-TH-800813] p0045 N80-11953
NASA broad-specification fuels combustion technology: Status and description
[NASA-TH-79315] p0120 N80-10126
NASA technical advances in aircraft occupant safety - clear air turbulence detectors, fire resistant materials, and crashworthiness
[NASA-TH-800851] p0128 N80-15060
Quick-start powered lift propulsion
[NASA-CR-2077] p0136 N80-15127
Composite components on commercial aircraft
[NASA-CR-60221] p0227 N80-18109
Aerospace Research Center publications: A continuing bibliography, 1978
[NASA-TH-8115] p0231 N80-18985
NASA authorization, 1981, program review, volume 2
[GO-56-220] p0257 N80-19988
Overview of NASA battery technology program
[NASA-TH-800821] p0297 N80-20021
NASA propeller technology program
[NASA-TH-800821] p0352 N80-22341
National Aeronautics and Space Administration Authorization Act, 1981
[S-96-77] p0372 N80-24210
NASA authorization, 1981
[GO-59-528] p0372 N80-24211
A summary of joint US-Canadian augmentor wing poweredlift SPO research program at the Ames Research Center, NASA, 1975-1980
[NASA-TH-8115] p0536 N80-28373
Analysis of general aviation single-pilot IFR incident data obtained from the NASA aviation safety reporting system
[NASA-TH-82026] p0644 N80-33384
Experimental and analytical studies for the NASA carbon fiber risk assessment
Using the Navier-Stokes equations

NASA STRUCTURAL ANALYSIS PROGRAM

NASA...
A-289
Pollutant emissions from 'partially' mixed turbulent flames

Low NO/x heavy fuel combustor program

Summary of aircraft results for 1978 southeastern Virginia urban plane measurement study of ozone, nitrogen oxides, and methane

Advanced combustion systems for stationary gas turbine engines. Volume 1: Review and preliminary evaluation

Advanced combustion systems for stationary gas turbine engines. Volume 2: Bench scale evaluation

Energy efficient engine

Noise attenuation

Noise reduction

Noise elimination

Noise generation

Sound generation in a flow near a compliant wall

Noise generation by a lifting wing/flap combination at Reynolds numbers to 2.3 x 10 to the 6th

Modelling low Mach number noise

A study of production and stimulated emission of sound by vortex flows

The problem of aeroacoustic interactions

An analysis of acoustic tone sources upstream of a fan

A collection of formulas for calculation of rotating blade noise - Compact and noncompact source results

Noise measurement, noise assessment

A linearized theory for swirling supersonic jets and its application to shock-cell noise

Infrasonic emission of the NK 8-4 engine

Discrete frequency noise reduction modeling for application to fanjet engines

Aerocoustic characterization of free jets

An experimental study of the structure and acoustic field of a jet in a cross stream -- Ames 7-ft by 10-ft wind tunnel tests

Identification of noise sources in PC centrifugal fan rotors

Adaptive linear filtering in the presence of an evolution noise of poorly known variance

Noise hazards

Noise intensity

Experimental studies of helicopter flight conditions and noise

The effect of intermittent aircraft noise on sleep. III

Estimation of noise source strengths in a gas turbine combustor

Trouble number influence on flight effects on jet noise radiated from convecting quadrupoles

A comparative multidisciplinary study of model and turbojet engine jets

Aircraft noise induced building vibrations -- human annoyance responses

A model for broadband jet noise amplification

Effect of background levels on community responses to aircraft noise

Effects of sound level fluctuations on annoyance caused by aircraft-flyover noise

Aircraft noise monitoring at Naval Training Center and Marine Corps Recruit Depot, San Diego, California, in 1978 and 1979

Propeller light aircraft noise at discrete frequencies

Supporting statement for community study of human response to aircraft noise

Predicted airframe noise levels

Noise measurement

Estimation of noise source strengths in a gas turbine combustor

Aircraft noise assessment

Excess noise from supersonic underexpanded jets in flight. I

Aeropole de Paris and aircraft noise - Trajectory control and least nuisance procedures

Propeller light aircraft noise at discrete frequencies

Upper surface blowing noise of the NASA-Ames Quiet Short-haul research aircraft

Aircraft noise assessment

Upper surface blowing noise of the NASA Ames Quiet Short-haul research aircraft

Community noise; Proceedings of the Symposia, Kansas City, Mo., May 24-26, 1978

Community noise measures --- human reactions to noise pollution

Noise-reduction measurements of integrally stiffened fuselage panels

Narrow-band spectrum analysis techniques for processing airplane flyover noise data

Prediction of free-field noise levels from pole microphone measurements

Location and propagation of shock associated noise from supersonic jets

Conunnular jets -- Are they really quiet and why

Aero-acoustic tests of duct-burning turbofan exhaust nozzles

A-291
Landig approach airframe noise measurements and analysis [NASA-TP-1602] p0125 880-15028
A study of partial coherence for identifying interior noise sources and paths on general aviation aircraft [NASA-TM-80197] p0165 880-15074
Status of cavity noise phenomena measurement and suppression on the B-1 aircraft p0173 880-16202
Aircraft noise monitoring at Naval Training Center and Marine Corps Recruit Depot, San Diego, California, in 1976 and 1979 [AD-A000285] p0314 880-22049
Propeller driven light aircraft noise p0315 880-22237
Acoustic test and analyses of three advanced turboprop models [NASA-CE-159667] p0364 880-2311
A comparison between an existing propeller noise theory and wind tunnel data [NASA-TM-81519] p0428 880-2501
Correction procedures for aircraft noise data. Volume 1: Pseudotones [AD-A0891962] p0503 880-28157
Correction procedures for aircraft noise data. Volume 2: Background noise considerations [AD-A0820111] p0503 880-28158
A new theory for rapid calculation of the ground pattern of the incident sound intensity produced by a maneuvering jet airplane [NASA-TP-1733] p0628 880-32334
Development of noisecheck technology for measuring aircraft noise exposure [AD-A088033] p0639 880-33182
Study of lateral excess sound attenuation as determined from far field aircraft noise certification measurements [AD-A089033] p0639 880-33183

NOISE POLLUTION
The effect of intersettent aircraft noise on sleep. III p0557 880-15632
Airport noise, location rent, and the market for residential amenities p0608 880-17720
Local ground noise generated by supersonic transport planes p0889 880-17720
The nature of the annoyance and the noise-annoyance relation around airports p0913 880-30806
Aeropost de Paris and aircraft noise - Trajectory control and least nuisance procedure p0974 880-30814
Noise zoning around airports in the Netherlands p0975 880-30816
Evaluation of annoyance due to Concorde noise in the vicinity of Washington-Dallas International Airport p0976 880-31810
Some unique characteristics of supersonic cruise vehicles and their effect on airport community noise [AIAA PAPER 80-059] p0319 880-32861
The effects of sonic boom on the ecological environment p0374 880-36748
Community noise; Proceedings of the Symposium, Kansas City, Mo., May 24-26, 1978

SUBJECT INDEX
p0386 A80-37601
Community noise measures — human reactions to noise pollution
p0386 A80-37602
Community annoyance with transportation noise
p0386 A80-37603
A unifying theory for determining human response to sound — aircraft noise
p0386 A80-37605
Towards more effective evaluation and control of airport noise
p0387 A80-37609
Abatement of aircraft noise and related regulatory actions
p0387 A80-37611
Technical considerations in Federal regulation of aircraft noise at the source
p0387 A80-37612
Aircraft noise monitoring at airports p0805 A80-49846
Effect of background levels on community responses to aircraft noise
p0514 A80-45945
On the noisiness of steady state and intermittent noises
p0620 A80-52820
Evaluating and minimizing noise impact due to aircraft flyover
p0371 880-23874
Noise Abatement Economic Policy Analysis Model WEPAR, Volume 1 p0502 880-27839
FIA integrated noise model validation. Phase 1: Analysis of integrated noise model calculations for air carrier flyovers [AD-A001426] p0502 880-27842
Disturbance caused by aircraft noise [NASA-TR-75487] p0539 880-28943
Annoyance due to multiple airplane noise exposure [NASA-TP-1706] p0540 880-28946
A new theory for rapid calculation of the ground pattern of the incident sound intensity produced by a maneuvering jet airplane [NASA-TP-1733] p0628 880-32334

AIRCRAFT NOISE PREDICTION
Assessment of airframe noise p0054 A80-15121
Rotational noise of helicopter rotors p0089 A80-17178
Acoustic considerations of flight effects on jet noise suppressor nozzles [AIAA PAPER 80-0164] p0108 880-20965
Aircraft noise assessment p0154 A80-22147
Theory of cross-spectral densities of jet noise p0161 A80-23909
Some analytical consideration in jet noise prediction p0161 A80-23910
Importance of jet temperature on the prediction of jet noise in flight p0161 A80-23922
The modeling of the noise emitted by a profile in a turbulent flow by means of unsteady aerodynamic theories p0273 A80-30087
Progress and trends in propeller/prop-fan noise technology [AIAA PAPER 80-0856] p0237 A80-35907
Transmission of high frequency sound waves through a slung flow jet [AIAA PAPER 80-0969] p0237 A80-35948
Experimental verification of propeller noise prediction [AIAA PAPER 80-0994] p0337 A80-35957

A-292
Prediction of the interior noise levels of high-speed propeller-driven aircraft
Noise control prediction for high-speed, propeller-driven aircraft
An analytical model for study of interior noise control for high-speed, propeller-driven aircraft
A unique coannular plug nozzle jet noise prediction procedure
Model rotor low frequency broadband noise at moderate tip speeds
Fan noise caused by the ingestion of anisotropic turbulence - A model based on axisymmetric turbulence theory
Analytical study of the effects of wind tunnel turbulence on interior noise
Prediction of flyover noise from single and coaxial jet engines
Model tests demonstrating under-wing installation effects on engine exhaust noise
Prediction of noise constrained optimum takeoff procedures
Comparison of aircraft noise-contour prediction programs
Airframe self-noise studies on the Lockheed L1011 TriStar aircraft
Subsonic transport noise
The development of inflow control devices for improved simulation of flight noise levels during static testing of a HBRP turbofan engine
Prediction of free-field noise levels from pole microphone measurements
Ground reflection effects on aircraft flyover noise
Prediction of unsuppressed jet engine exhaust noise in flight from static data
A review of per-propeller discrete frequency noise prediction technology with emphasis on two current methods for time domain calculations
Discrete frequency noise reduction modeling for application to fanjet engines
Noise of a model helicopter rotor due to ingestion of turbulence
A study of the prediction of cruise noise and linear flow control noise criteria for subsonic transport aircraft
Near-field noise prediction for aircraft in cruising flight: Methods manual --- linear flow control noise analysis
An improved prediction method for the noise generated in flight by circular jets
A comparison between an existing propeller noise theory and wind tunnel data
Interior noise control prediction study for high-speed propeller-driven aircraft
Some calculated effects of non-uniform inflow on the radiated noise of a large wind tunnel fan
Analytical study of interior noise control by fuselage design techniques on high-speed, propeller-driven aircraft
V/STOL rotary propulsor noise prediction model update and evaluation

Subject Index

Noise Reduction

[AB-AI02616] p0429 880-25106
Integrated noise model validation. Phase 1: Analysis of integrated noise model for air carrier flowover noise
[AB-AI02626] p0502 880-27902
Development of noisecheck technology for measuring aircraft noise exposure
[AB-AI00003] p0639 880-33182
An evaluation of a computer code based on linear acoustic theory for predicting helicopter main rotor noise --- CH-53A and 5-76 helicopters
[AB-AI03641] p0465 880-34217
Aircraft noise prediction program validation
[AB-AI02630] p0397 880-34221
Comparison of inlet suppressor data with approximate theory based on cutoff ratio
[AB-AI03598] p0108 880-20964
Noise radiation from the side edges of flaps
[AB-AI03603] p0272 880-30568
Noise transmission and attenuation by stiffened panels
[AB-AI03703] p0340 880-36592
Airframe self-noise studies on the Lockheed L1011 TriStar aircraft
[AB-AI03608] p0397 880-36640
Nonlinear propagation of broadband jet noise
[AB-AI03613] p0394 880-36465
Effect of jet noise propagation on aircraft flyover noise
[AB-AI03617] p0394 880-36850
Far-field radiation of AFT turbofan noise
[AB-AI03622] p0408 880-39638
Location and propagation of shock associated noise from supercritical jets
[AB-AI03708] p0474 880-33599
A study of partial coherence for identifying interior noise sources and paths on general aviation aircraft
[AB-AI03717] p0145 880-15384
Core noise investigation of the CF6-50 turbofan engine
[AB-AI03722] p0170 880-16601
Core noise investigation of the CF6-50 turbofan engine
[AB-AI03727] p0170 880-16602
Noise generated aerodynamically

Theoretical prediction of nonlinear propagation effects on noise signatures generated by subsonic or supercritical propeller or rotor-blade tips

[AB-AI03732] p0345 880-22265
Sound of low level noise attenuation as determined from far field 36 aircraft noise certification measurements
[AB-AI03737] p0639 880-33183

Noise Reduction

Efficient sound barriers are --- for aircraft noise reduction

[AB-AI03742] p0047 880-13182
Parameter selection for aerodynamic design of propellers

[AB-AI03747] p0053 880-15083
Design of damper systems and their application

[AB-AI03752] p0059 880-16272
Structural parameters that influence the noise reduction characteristics of general aviation wings

[AB-AI03757] p0092 880-18288
Comparison of inlet suppressor data with approximate theory based on cutoff ratio

[AB-AI03762] p108 880-20964
Acoustic considerations of flight effects on jet noise suppressor noise

[AB-AI03767] p108 880-20965
Flight and wind tunnel test results of the mechanical jet noise suppressor nozzle

[AB-AI03772] p109 880-20971
The case of subsonic jet aircraft --- noise reduction near airports

A-293
NOISE EFFICIENCY

Flight and wind tunnel test results of the mechanical jet noise suppressor nozzle [AIAA PAPER 80-0165] p0109 A80-20971
Mixer nozzle noise characteristics -- turbofan noise reduction [AIAA PAPER 80-0166] p0162 A80-23936
Installation trade for axisymmetric and nonaxisymmetric nozzles [AIAA PAPER 80-1084] p0447 A80-41178
A comparison of jet temperature effects on afterbody drag with those from jet turbulent weight and noise area ratios variation [AIAA PAPER 80-1161] p0448 A80-41191
Development of the 'D' vented thrust deflecting nozzle [AIAA PAPER 80-1856] p0471 A80-43308
Calculation of the static characteristics of two-hole swirl injectors [AIAA PAPER 80-3795] p0564 A80-37955
Study of clamshell reverser operation downstream of nozzle [AIAA PAPER 80-37955] p0566 A80-37943
Systematization of simple detail parts of regable nozzle of gas turbine engine p0202 W80-10071
Effect of several airframe/nozzle modifications on the drag of a variable-cowl nozzle configuration -- conducted in Langley 16 foot transonic tunnel [NASA-TP-51028] p0202 W80-10016
Static calibration of a two-dimensional conical nozzle with thrust vectoring and spanwise blowing [NASA-TP-51161] p0365 W80-23317
Development of ceramic nozzle section for small radial gas turbine p0553 W80-29354
Development of a nozzle to improve the turning of supersonic Coanda jets [AD-A0097709] p0610 W80-31765
Airframe engine nozzle [NASA-CASE-ARC-10977-1] p0635 W80-32392
Study for conceptual design of TEO, VTOL exhaust nozzle [NASA-CR-152388] p0646 W80-33397
NOZZLE EFFICIENCY

Investigation of infrared characteristics of three generic nozzle concepts [AIAA PAPER 80-1160] p0450 A80-41508
Development of the 'D' vented thrust deflecting nozzle [AIAA PAPER 80-1856] p0471 A80-43308
NOZZLE FLOW

On axial turbine stage rotor blade twist with tangential tilt of the stator vanes p0009 W80-10630
Experimental and theoretical investigation of the internal-duct hydraulics of stator and rotor blades for a sealed-circulation-air cooling system p0011 S80-12042
Numerical investigation of the external flow over the afterbody and the flow within the nozzle for different jet regimes p0050 A80-18520
Photon correlation laser velocimeter measurements in highly turbulent flow fields [AIAA PAPER 80-0341] p0095 A80-18328
Mixer nozzle noise characteristics -- turbofan noise reduction [AIAA PAPER 80-0166] p0162 A80-23936
Reconstructions for obtaining noise/afterbody drag data based on a comparison of wind tunnel and flight data [NASA PAPER 79-1169] p0391 A80-38347
Characteristics of internal- and jet-noise radiation from a multi-lobe, multi-tube suppressor nozzle tested statically and under flight simulation [AIAA PAPER 80-1027] p0393 A80-38642
The annular jet technique for noise/afterbody throttled dependent drag testing [AIAA PAPER 80-1163] p0393 A80-38945
Influence of pressure driven secondary flows on the behavior of turbofan forced mixers [AIAA PAPER 80-1198] p0451 A80-41515
Sox effects of using water as a test fluid in fuel nozzle spray analysis [ASME PAPER 80-GT-90] p0461 A80-42216
The determination of deviation angles at exit from the nozzle of an inward flow radial turbine [ASME PAPER 80-GT-187] p0463 A80-42259

Investigation of flows in Laval nozzles at small Reynolds numbers p0678 A80-32906
Experimental and analytical evaluation of 3-dimensional exhaust planes [AIAA PAPER 80-1399] p0507 A80-44152
Correlation of thrust and discharge losses for chemically nonequilibrium flows in jet-engine nozzles p0525 A80-46857
Application of spline approximations to the calculation of wall pressures in three-dimensional supersonic nozzles p0526 W80-48703
Influence of swirl chamber dimensions on the jet angle of an air nozzle p0526 W80-47181
Influence of working-fluid issuance through a nozzle on the rate of flame front propagation in a pulsating-type combustion chamber p0564 A80-47939
Heat transfer of the critical air flow in a nozzle. II. The flow and heat transfer characteristics of an accelerated transonic air flow in a divergent nozzle p0566 A80-47863
Workshop on Thrust Augmenting Jet Engines [NASA-CP-2093] p0022 W80-10107
Fuselage and nozzle pressure distributions on a 1/12-scale F-15 propulsion model at transonic speeds -- conducted in Langley 16 foot transonic tunnel [NASA-TP-15251] p0035 W80-11036
A time dependent difference theory for sound propagation in ducts with flow -- characteristics of inlet and exhaust ducts of turbofan engines [NASA-TP-79302] p0075 W80-12823
Computations of three-dimensional flow in turbofan mixers and comparison with experimental data [NASA-TP-81410] p0144 A80-15364
Investigation of axisymmetric and nonaxisymmetric nozzles installed on a 0.10 scale F-18 prototype airplane model -- wind tunnel tests [NASA-TP-1638] p0418 A80-29257
A preliminary assessment of the effect of 2-D exhaust-nozzle geometry on the cruise range of a hypersonic aircraft with top-mounted ramjet propulsion [NASA-TP-81841] p0636 W80-32397

NOZZLE GEOMETRY

Acoustic characteristics of jets issuing from ring-and-needle nozzles p0327 A80-34004
Noise suppression due to annular shaping of an inverted-velocity-profile coaxial nozzle p0336 A80-35496
Installation trades for axisymmetric and nonaxisymmetric nozzles [NASA-PAPER 80-1084] p0437 A80-41178
Study of clamshell reverser operation downstream of nozzle p0566 A80-47433
Systematization of simple detail parts of regable nozzle of gas turbine engine p0620 W80-10071
Static test-stand performance of the TP-102 turbofan engine with several exhaust configurations for the Quiet Short-Haul Research Aircraft (P854) [NASA-TP-1556] p0119 W80-14121
An improved prediction method for the noise generated in flight by circular jets [NASA-TP-81470] p0316 W80-22048
Investigation of axisymmetric and nonaxisymmetric nozzle installed on a 0.10 scale F-18 prototype airplane model -- wind tunnel tests [NASA-TP-1630] p0418 W80-28267

NOZZLE THRUST COEFFICIENTS

Characteristics of a Laval nozzle with gasdynamic regulation p0056 A80-15425
Numerical simulation of three-dimensional bow-tie tailbody flow fields

[AIAA PAPER 80-1347] p0506 A80-48132

Application of viscous analyses to the design of jet exhaust powered lift installations

[ASEE PAPER 79-07/TSR-15] p0511 A80-45666

Aerodynamic analysis of a supersonic cascade vibrating in a complex mode

[p0514 A80-45841

Calculation of the supersonic flow past a slender delta wing at angles of attack and sideslip

[p0524 A80-46826

Use of advanced computers for aerodynamic flow simulation

[p0299 B80-21257

Aerodynamic performances of three fan-stage designs operating with rotor having tip speed of 337 meters per second and pressure ratio of 1.54. Relation of analytical code calculations to experimental performance

[NASA-TP-1619] p0306 B80-21324

Numerical flow field program for aerodynamic heating analysis. Volume 1: Equations and results

[p0359 B80-23255

Numerical flow field program for aerodynamic heating analysis. Volume 2: User’s manual

[p0360 B80-23260

Airfoils at sonic velocity — Tricomi equation

[480-27270

Computational and simplified analytical treatment of transonic wing-fuselage-pylon-store interactions

[480-32383

WLED: Computer program for calculation of three dimensional potential compressible flow about wind turbine rotor blades

[p0662 B80-33357

Numerical Integration

Continuous-to-discrete transformations for control system simulation — Digital flight control filters for man-in-the-loop systems

[p0283 A80-32847

Integral methods of solving thermal conduction problems and their application to heat exchange calculations in gas turbine engine components

[p0568 A80-47915

Direct integration of transient rotor dynamics

[NASA-TP-1597] p0136 B80-15128

The response of turbine engine rotors to interference rubs

[NASA-TP-81518] p0501 B80-27696

An integral-representation approach for time-dependent viscous flows

[p0557 B80-29613

Numerical Stability

Steady state spurious errors in shock-capturing numerical schemes

[KTH-ABO-TP-60] p0642 B80-33353

O Ring Seals

Damper in tapered annular seals for an incompressible fluid

[NASA-TP-1646] p0299 B80-19495

Damper in ring seals for compressible fluids

[NASA-TP-29716

Oblique Shock Waves

Oblique detonation wave ranget

[KTH-ABO-TP-60] p0121 B80-19131

Steady state spurious errors in shock-capturing numerical schemes

[KTH-ABO-TP-60] p0642 B80-33353

Oblique Wings

Determination of an oblique wing aircraft’s aerodynamic characteristics

[NASA-80-1736] p0520 A80-45918

Wind tunnel investigation of an oblique wing transport model at each numbers between 0.6 and 1.5

[NASA-ABO-137697] p0060 B80-12059

Some recent trends in aircraft flutter research — Analytical and numerical methods for aircraft design and use of oblique wings in aircraft configurations

[p0083 B80-13307

The oblique wing-research aircraft

[p0640 B80-33338
OBSEVABILIT (SISTEBS)

Onega navigation system — Russian book

A-301
Why have none of the airship projects conceived during the last fifteen years not been realized to the present

The pilot face to face with concrete realities — application of flight regulations and instructions to various flight problems

Impact of aircraft vs logistics characteristics on operational readiness

[ITALA PAPERS 80-1830]

ICAO Dagreb meeting — airport problems and prospects

p0505 A80-0044110

OPERATIONS RESEARCH

Airport capacity and delays

Mathematical modeling and analysis of the technological processes of air traffic control

Estimating the time required to transition aircraft fleets to new scheduled maintenance intervals

[AD-A078606] Minimum performance standards: Emergency locator transmitters: Automatic Fixed-BLT (AF), Automatic Portable-BLT (AP), Automatic Deployable-BLT (AD) operating on 121.5 and 243.0 megahertz

[ETCA/DO-168] Aviation forecasting, planning, and operations

On-line real-time management information systems and their impact upon user personnel and organizational structure in aviation maintenance activities

[AD-A085111] Development of an effectiveness planning and evaluation model for Air Force Maintenance Organizations

[AD-A088606] The effect of the Western Union Weather Data System on the preflight briefing position at the Chicago Flight Service Station

[AD-A088615] OPERATOR PERFORMANCE

Flexible formats — The controller controls the computer

p0380 A80-0043697

OPERATORS (MATHEMATICS)

Method of conjugate gradients for optimal control problems with state variable constraints

[AD-A0722568] OPERATORS (PERSONNEL)

BY AIRCRAFT PILOTS

BY PILOTS (PERSONNEL)

Allocation of limited airport facilities to improve utilization in the deregulation environment

[S A E PAPER 800722] OPTICAL ABSORPTION

Light transmission

Communication

A fiber-optic link for high-speed, DAS-to-computer data transmission — Digital Data Acquisition System from ramjet engine test cell to base central data processing center

[AD-A0821267] Radio and optical flight support systems and communications in civil aviation — Russian book

Application of radio:TV optical communications technology for aircraft to satellite links

Intercommunications in real time, redundant, distributed computer system

F p0574 A80-40680

[ETCA/DO-168] OPTICAL DATA PROCESSING

Hybrid optical/digital processing for target identification

p0197 A80-26867

OPTICAL EQUIPMENT

BY CARBIS

BY ENDOSCOPIES

BY IMAGE TUBES

BY LASER COUPLER VELOCIMETERS

BY REFLECTORS

BY OPTICAL GYROSCOPES

BY OPTICAL MEASURING INSTRUMENTS

p0406 A80-39320

The pilot face to face with concrete realities — application of flight regulations and instructions to various flight problems

Impact of aircraft vs logistics characteristics on operational readiness

[ITALA PAPERS 80-1830]

ICAO Dagreb meeting — airport problems and prospects

p0505 A80-0044110

OPTICAL RADAR

OPTICAL RANGE FINDERS

OPTICAL PANORAMA CAMERAS

OPTICAL TELEVISION CAMERAS

Reliability pays off — reliability program case history for lead optical sight system for Northrop F-5R aircraft

Aero-optic overview — laser applications

OPTICAL GYROSCOPES

The laser gyro and its application to an helicopter navigation system

OPTICAL IMAGES

OPTICAL IMAGING

OPTICAL INTERFERENCE

OPTICAL MEASUREMENT

OPTICAL PHOTOMETERS

OPTICAL RANGE FINDERS

A method for active optical method for critical field inspection of aircraft canopy acrylic panels

A fast method to control tachiness of fiber resin prepgreps

[OMER, TP NO. 1980-37]

Engine condition monitoring using fiberoptic probes

[ASP E PAPER 80-GT-110]

OPTICAL PROPERTIES

OPTICAL REFLRACTION

OPTICAL REFRACTION

OPTICAL TRANSPARENCY

OPTICAL RADAR

Presentation of the STRADA trajectory system/landing trajectory system/

Methodology for target discrimination

[AD-A080473] Laser beacon system for aircraft collision hazard determination

[Lidar visibility measurements]

[AD-A078606] OPTICAL RANGE FINDERS

A microprocessor controlled system for determining the height of clouds

[AD-1072258] OPTICAL REFLECTION

The verification of a computer model of internal light reflections for helicopter canopy design

[ETCA/DO-168]

OPTICAL SENSORS

OPTICAL MEASURING INSTRUMENTS

OPTICAL SIGNALS

OPTICAL COMMUNICATION

OPTICAL SIGHT RANGES

Remote sensing methods for determination of slant range visibility

[DFVLR-PB-79-174]

[AD-A089415] OPTICAL TRACKING

IN-camera for day and night fire control

VSTOL test techniques utilizing laser tracking

[AD-A090415] OPTICS

OPTICAL GEOMETRY

OPTICAL CONTROL

OPTICAL CONTROL

Numerical computation of neighboring optimal feedback control schemes in real-time

A singular perturbation analysis of optimal aerodynamic and thrust magnitude control

[AD-A080473]
Optimal receivers and discrete-signal processors for hyperbolic navigation systems

Application of automated radar navigation systems (AIAA 80-12030)

A new procedure for linear optimal flight control

Follow-up and final-value control of a special non-linear process - a study on optimal aircraft guidance during the final landing phase

Optimal washout for control of a moving base simulator - vertical motion flight simulation using linear filter

Parry controls for maintenance scheduling in transportation systems - aircraft flight trajectory regulation

Theory of correlation-extremum navigation systems

Optimization of flight-vehicle control on the basis of motion of a variable-component body

Controllers for aircraft motion simulators (AIAA PAPER 80-0050)

Constrained optimum trajectories with specified range

A nonlinear observer/command generator tracker approach to the X-97 helicopter gun turret control law design

Development of a program for controlling the angle of bank of an orbital aircraft during entry into the atmosphere

Optimal output feedback for systems having direct feedthrough of control - applied to turbofan engine regulator design

Optimal design of a linear sampled data control system using round robin output feedback

A single-step method of optimizing statically indeterminate minimum-volume systems

Minimum-weight wing in the presence of lift constraints

Application of geometrical programming to problems of optimal design

Flight control design based on nonlinear model with uncertain parameters

Implicit model following and parameter identification of unstable aircraft

Optimal control of flight vehicle motion in a turbulent atmosphere

Selection of the characteristic polynomial of a closed-loop transfer function by minimizing integral quadratic estimates

Design of perfect model following systems by geometric approach - application of optimal control to improve aircraft flight control

Application of certain optimal methods of propeller phase synchronization

Predictive guidance for interceptors with time lag in acceleration

Minimum sensitivity controllers with application to VTOL aircraft

Navigation for a group of aircraft - application of data processing and flight control procedures - Russian book

Automation of air navigation and air traffic control - Russian book

Optical flow control of air traffic (AIAA 80-15974)

Open-loop models for solving large 3D EHP problems

Optimal flutter suppression using linear quadratic Gaussian theory

A model-based technique for predicting pilot opinion ratings for large commercial transports

A direct method for synthesizing lower-order optimal feedback control laws with application to flutter suppression

A pilot modeling technique for handling-qualities research

Controller for aircraft motion simulators

Design of perfect model following systems by minimizing integral quadratic estimates

Variable-sweep optimization for VTOL aircraft

Optimal control of flight vehicle with elastic elements

Multi-variable digital control systems

Method of conjugate gradients for optimal control problems with state variable constraints

Inequalities and approximation with applications to VSTOL aircraft - using control theory for optimal control approximations

Design criteria for optimal flight control systems - study of optimal flight control systems engineering for feedback control

Closed loop models for analyzing engineering requirements for simulators

Optimal flow control of air traffic (PB80-105976)

Application of two design methods for active flutter suppression and wind-tunnel test results

Definition of a two-level control system for nonlinear motion of an aircraft

Determing the optimal control laws for setting the rpa's of a turbojet engine

Optimization and simulation of flight control laws under parameter uncertainty and external disturbances

Variable-sweep optimization - for hodograph-vector-control concept in maneuvering flight
incidence to a flow containing streaming oscillations, part 2 [IC-AERO-79-04-F1-1/2] p0176 880-17040
Dynamic stall on oscillating airfoils in oscillating free-streams p0219 880-17993
Transient effects on a stalled airfoil in a pulsating flow: Comparison with results from a similar airfoil undergoing horizontal shaking during wind tunnel tests [AAAP-WT-79-13] p0221 880-18003
OSCILLATION DAMPERS Experience with an adaptive stick-gain algorithm to reduce pilot-induced-oscillation tendencies [AIAA-80-1571] p0516 880-45870
Apparatus for damping operator induced oscillations of a controlled system using adaptive filters to damp oscillations in a flight control system [NASA-CASE-FSC-11041-1] p0296 880-20488
Off-design correlation for losses due to part-span dampers on transonic rotors [NASA-TP-1693] p0539 880-28352
OSCILLATIONS MT BARHOMIC OSCILLATION MT PRESSURE OSCILLATIONS MT SELF OSCILLATION MT STABLE OSCILLATIONS MT WING OSCILLATIONS Oscillations in aircraft engines Russian book p0381 880-37109
Theoretical and experimental parameter-studies of oscillating turbine blades in a centrifugal force field p0392 880-38350
Eigenbehavior of symmetrical rotation rotor systems p0475 880-51514
Unsteady measurements on oscillating models in European wind tunnels [AD-A083248] p0478 880-26277
Comparison of calculated and measured blade loads on a full-scale tilting proprotor in a wind tunnel [NASA-TR-61218] p0602 880-31386
OSCILLATORS MT CATRODE RAY TUBES MT CRYSTAL OSCILLATORS OTTO CYCLES Electronic fuel injection techniques for hydrogen powered I.C. engines p0158 880-23205
OUTLET FLOW Laser anemometer measurements at the exit of a 763 combustor p0210 880-27737
Pressure losses in the inlet and outlet channels of high-pressure single- and two-stage axial-flow fans p0261 880-29133
The determination of deviation angles at exit from the nozzles of a low-speed flow radial turbine [ASBE PAPER 80-01-147] p0463 880-42259
OVERPRESSURE Measurement and correlation of structural response to inlet hamaschek phenomena on an F-14 airplane p0330 880-34975
Wind-tunnel investigation of the validity of a sonic-boom-elimination concept Langley Unitary Plan Wind Tunnel tests for supersonic transport design [NASA-TP-1621] p0022 880-10102
An evaluation of the ADINA finite element program for application to aircraft overpressure vulnerability [AD-A074261] p0169 880-16056
Nuzzle blast overpressure levels on the AH-1S helicopter tow sight unit [AD-A080427] p0495 880-27352
OXIDATION Effect of aromatic arotem hydrocarbons on the oxidizability of hydrocarbon jet fuel — jet engine fuels p0088 880-17675
Titanium combustion in turbine engines [AD-8075417] p0170 880-16059
Thermal oxidative stability test methods for JPTs jet fuel [AD-8076374] p0183 880-17242
Determination of jet fuel thermal deposit rate using a modified JPTOT p0550 880-29326
OXIDATION RESISTANCE Selection of assembly clearances for gas-turbine engine seals p0563 880-67732
OXIDERS MT ALUMINUM OXIDES MT CARBON MONOIDE MT HYDROGEN PEROXIDE MT NITRIC OXIDE MT NITROGEN OXIDES MT ZIRCONIUM OXIDES
OXIDIZERS MT LIQUID OXIDIZERS MT HIGH PRESSURE OXIDIZERS MT LIQUID OXIDIZERS MT OZONE Characteristics of afterburning bypass turbojet engine with oxygen injection into the afterburner chamber — study of fuel injection into thrust chambers for thrust augmentation p0017 880-10029
OXIDIZING AGENTS BREATHING Fluid contamination of aircraft-cabin air and breathing oxygen [AD-A085828] p0543 880-29268
OXIDIZING AGENTS DECOMPOSITION OF HYDROGEN INTO WATER AND OXYGEN [AD-A084118] p055a 880-29358
OXIDES Circumstellar measurements of ozone, particles, and carbon monoxide from a commercial airliner p0512 880-21160
Simultaneous cabin and ambient ozone measurements on two Boeing 747 airplanes, volume 1 [NASA-TR-79166] p0128 880-15059
OXIDOMETRY Measurements of cabin and ambient ozone on 747 airplanes p0217 880-28853
Oxygen measurements in cabin air of Concorde p0443 880-80707
P-3 AIRCRAFT Optimizing the performance of the P-3C environmental control system [ASBE PAPER 80-9816-6] p0468 880-31163
P-531 HELICOPTERS In an analytical investigation of the effect of varying rotor tip speed to reduce helicopter acoustic detection — Advanced Scout Helicopters [AD-A076961] p0305 880-21319
PACKAGING MT ELECTRONIC PACKAGING CAD/CAM in packaging aerospace electronics p0263 880-29450
Improved packaging for the LN-31 inertial measurement unit (F-15 aircraft) p0362 880-23293
PARABOLIC MILITARY AIRCRAFT Reliability management of the avionic system of a military strike aircraft p0251 880-19546
PANEL MIVTER (FLUID DYNAMICS) A direct method for synthesizing low-order optimal feedback control laws with application to flutter suppression [AIAA-80-1613] p0518 880-65903
Development of stability methods for applications to nonlinear aeroelastic optimization [AD-A077051] p0294 880-20282
PANEL MIVTER (FLUID DYNAMICS) The influence of compressibility on the simulation of the separation behavior of external stores from a carrier [DGLR PAPER 79-094] p0454 880-41899
Reflection cracking of bituminous overlays for airport pavements: A state of the art
(AD-A073084) p0122 880-1444
Shrinkage-compensating cement for airport
pavement, phase 2
(AD-A075739) p0173 880-16197
Nondestructive evaluation of airport pavements.
Volume 1: Program references
(AD-A079385) p0226 880-18051
Nondestructive evaluation of airport pavements.
Volume 2: Operational manual for PAVEP program
at TCC
(AD-A079495) p0245 880-19130
Airfield pavement evaluation, volume 4. A
bibliography with abstracts
(975/PS-79/075/6) p0295 880-20288
The pressuremeter: Application of pavement design
--- airport runways
(AD-A080430) p0296 880-20432
Acceptance criteria for bituminous surface course
on civil airport pavements
(AD-A080430) p0423 880-24335
Predicting the fatigue life of flexible airfield
pavements: A recommended approach
(AD-A079787) p0423 880-24335
Nondestructive evaluation of airport pavements.
Volume 3: Operation manual for SIGEV program
at TCC
(AD-A079591) p0483 880-26331
Traffic testing of a fiberglass-reinforced
polyester rim surface for rapid runway repair
(AD-A085268) p0537 880-28381
Fiberglass-reinforced plastic surfaces for rapid
runway repair by naval construction
(AD-A085357) p0555 880-29375
Pavement evaluation and overlay design using
vibratory nondestructive testing and layered
elastic theory. Volume 1: Development procedure
(AD-A087716) p0589 880-30088

SUBJECT INDEX

PAYLOAD DELIVERY (STS)
PAYLOAD DELIVERY
PAYLOAD HARDWARE
Parametric study of variation in cargo-airplane
performance related to progression from current
to spanloader designs
(NASA-TP-1625) p0305 880-21318
PDR (MODULATION)
U PULSE DURATION MODULATION
PEELING
The significance of peel stresses in cyclic
debonding
(AD-A096439) p0428 880-24339
PEGASUS ENGINE
U BRISTOL-SIDDELEY BS 53 ENGINE
PREDICTION FUNCTION
A first look at the effect of severe rainfall upon
an aircraft
(NASA-CH-162569) p0126 880-15058
PERCEPTION
U AUDITORY PERCEPTION
U MOTION PERCEPTION
U SPACE PERCEPTION
U VISUAL PERCEPTION
PERCEPTIONS
U SELF ORGANIZING SYSTEMS
PERFECT GAS
U IDEAL GAS
PERFORATED PLATES
Stress-intensity factors for two symmetric corner
cracks
(161) A80-23876
PERFORATED SHELLS
On determining the temperatures at given points of
cooled turbine blades made from multilayer
perforated materials
(161) A80-51089
PERFORMANCE
Dynamic characteristics of flight simulator motion
systems
(AGARD-AR-140) p0032 880-10238
PERFORMANCE PREDICTION
U PREDICTION ARTS TECHNIQUES
Prediction of surge-point in multi-stage axial
compressors
(p005 880-10987
Improvement of weapon system performance in air to
air and air to ground operation with airborne
radar
(106) A80-11170
Analytical investigation of aerodynamic
characteristics of highly swept wings with
separated flow
(106) A80-17697
Determination of the spin and recovery
characteristics of a typical low-wing general
aviation design
(AD-A086169) p0096 880-18351
Multiple tactical aircraft combat performance
evaluation system
(AD-A086189) p0096 880-18358
Problems associated with cargo airplanes having
aft mounted engines
(SAE PAPER 80-1316) p0106 880-20648
Infrared sensor system performance simulations
(AD-A087740) p0107 880-24900
Summary of advanced methods for predicting high
speed propeller performance
(AD-A087740) p0108 880-29066
Simulating the shock protection performance of
large transit packs by means of small scale
laboratory models --- applicable to aircraft
engine power plant design
(106) A80-27790
Some aspects of off-design testing of
turbocompressors
(AD-A088630) p0260 880-29102
Naval Airship Program for Sizing and Performance
(106) A80-29177
Performability evaluation of the STP aircraft
--- Software-Implemented Fault Tolerance computer
onboard commercial aircraft during transoceanic
flight
(AD-A087740) p0390 880-30403
Evaluations of the performance of a detector for an
SSR monopulse system --- Secondary
Surveillance Radar
(AD-A087740) p0395 880-38383
Enhancing dynamic model fidelity for improved
prediction of turbofan engine transient
performance
(AD-A087740) p0397 880-38900
An evaluation of statistical methods for the
prediction of maximum time-variant inlet total
pressure distortion
(AD-A087740) p0397 880-38918
The study of an RPM dipole antenna type simulator
(AD-A087740) p0406 880-39411
Saluting Darreus rotors
(AD-A087740) p0446 880-41033
Prediction and measurement of turbulent
aerodynamic trailing edge flows
(AD-A087740) p0542 880-41599
A theoretical and experimental investigation of
propeller performance methodologies
(AD-A087740) p0568 880-43283
Wind-body pitch damping at arbitrary Mach number
(AD-A087740) p0668 880-43284
Performance advanced in fighter aircraft —
Measuring and predicting progress
(AD-A087740) p0741 880-35012
Status of centrifugal impeller internal
aerodynamics. I — Inviscid flow prediction
methods. II — Experiments and influence of
viscosity
(AD-A087740) p0511 880-45667
Product performance enhancement in the United
States Air Force
(AD-A087740) p0512 880-45730
A model-based technique for predicting pilot
opinion ratings for large commercial transports
(AD-A087740) p0516 880-45872
Validation of a wing leading edge stall prediction
technique
(AD-A087740) p0519 880-45900
Uncertainties in predicting turbine blade metal
temperatures
(AD-A087740) p0569 880-48016
Experimental and theoretical studies on helicopter
blade tips at OHEBA
(AD-A087740) p0622 880-53281
Measurement and prediction of the aerodynamic
damping of compressor blades
(AD-A087740) p0622 880-53284
Effect of time dependent flight loads on JT9D-7
performance deterioration
(AD-A087740) p0583 880-10515
PBBFOBBABCE TESTS

SUMMARY OF ADVANCED METHODS FOR PREDICTING HIGH PERFORMANCE ESTIMATES OF A BOEING 747-100 AIRCRAFT ENGINES

DIFFICULTIES IN PREDICTING AVIONICS RELIABILITY

PERFORMANCE ESTIMATES OF A JTIDS PERFORMANCE MODEL FOR THE F-3A

METHODS USED FOR DETERMINING THE RELIABILITY OF MILITARY AIRCRAFT RADAR

ADVANCED PROPELLER AERODYNAMIC ANALYSIS

PROPELLER AEROACOUSTIC METHODOLOGIES

PERFORMANCE DETERIORATION BASED ON IN-SERVICE ENGINE DATA: JT9D JET ENGINE DIAGNOSTIC PROGRAM

MINIMUM PERFORMANCE STANDARDS: EMERGENCY LOCATOR TRANSMITTERS: AUTOMATIC FIXED-BEAM (AFB) RANSEU-FLIGHT (AF) PROVIDING 24-HOUR OPERATION IN ADDITION TO AUTOMATIC PORTABLE-BEAM (AP) PROVIDING 24-HOUR OPERATION IN THE DESERT OF THE WORLD

AERONAUTICAL ENGINEERING PROGRAMS

CF6-50 ENGINE PERFORMANCE DEGRADATION

MATHEMATICAL MODELLING OF GAS-TURBINE COMBUSTION CHAMBERS

DETERMINATION OF NET FUEL THERMAL DEPOSIT RATE USING A MODIFIED JPTOT

VIBRATIONS OF A COMPRESSOR BLADE WITH SLIP AT THE ROOT

HELICOPTER DYNAMIC PERFORMANCE PROGRAM

NATIONAL AVIATION FUEL SCENARIO ANALYSIS PROGRAM

EXPERIMENTAL PERFORMANCE AND ANALYSIS OF 12.04-CENTIMETER-DIAMETER, RADIAL-INFLOW TURBINE WITH WORK FACTOR OF 1.126 AND THICK BLADING

PERFORMANCE TESTS

EXPERIMENTAL TECHNIQUES DEVELOPED AT OHEA FOR ADVANCED COMPRESSION TESTING

ANALYSIS OF PROGRAMS FOR REGULATING HELICOPTER TURBINE ENGINES

EFFECT OF THE RELATIVE AREA OF THE FLOW CORE ON THE PERFORMANCE OF A HYPERSONIC WIND TUNNEL

AN EXPERIMENTAL MODEL INVESTIGATION OF TURBOFAN ENGINE INTERNAL EXHAUST GAS METER CONFIGURATIONS

VERIFICATION OF DIGITAL AUTOPILOT MICROPROCESSOR HARDWARE AND SOFTWARE VIA HARDWARE-IN-THE-LOOP SIMULATION

THE NATURE OF AIRCRAFT AND COMPLEX SYSTEM RELIABILITY AND MAINTAINABILITY CHARACTERISTICS

WIND TUNNEL DESIGN AND PERFORMANCE FOR ROUGH WALL TURBULENT BOUNDARY LAYER

NAVSTAR FIELD TEST RESULTS

NEW SEPARATOR MATERIALS FOR NICKEL-CADMIUM AIRCRAFT BATTERIES
Aircraft emergency decisions: Cognitive and situational variables
[AD-A077918] p0234 880-19051
Modelling the human operator: Applications to system cost effectiveness
[AD-A077929] p0256 880-19065
Air combat manoeuvering performance measurement
[AD-A077929] p0368 880-23336
Wind-shear encounters during visual approaches at night: A piloted simulator study
[AR-TU-79126] p0417 880-29291
Handling qualities of large flexible control-configured aircraft
[NASA-CR-161206] p0436 880-25344
Analytical methodology for determination of helicopter IFR precision approach requirements --- pilot workload and acceptance level
[NASA-CR-152267] p0531 880-28330
Light twin-engine aircraft accidents following engine failures
[PB-80-177306] p0588 880-30287
Helicopter electro-optical system display requirements. 2: Performance of helicopter pilots when using a low-light-level television system during simulated nap-of-the-earth flight
[AD-A0868655] p0590 880-30308
Preliminary evaluation of time and distance spacing cues using a cockpit displayed target
[NASA-TN-81794] p0630 880-32362
Pilot/vehicle model analysis of visual and motion cue requirements in flight simulation --- helicopter hovering
[NASA-CR-1312] p0646 880-33398
Advanced simulator for pilot training: Design of automated performance measurement system
[AD-A088855] p0649 880-33421
Effects of articulation on flight simulation study 1: Heading deviation tolerance
[AD-A088908] p0650 880-33423
PILOT TRAINING
The impact of the limits of simulation in extending the use of simulators in training
[p004 880-10763
The development and use of large-motion simulator systems in aeronautical research and development
[p004 880-10765
Recent advances in control loading and motion systems used in simulation
[p005 A80-10766
The capability of CGI in flight simulation -- computer generated imagery
[p005 A80-10768
Recent and future engineering developments in flight training simulators
[p005 A80-10776
Flight simulation techniques - the quest for realism
[p321 A80-33135
Synthesis of piloting properties of training simulators with allowance for the human factor
[p0465 A80-42342
Some problems involving the assurance of the controllability of an aircraft in the control-wheel regime
[p0465 A80-42350
A new test arena for aircraft research and development
[AD-A062136] p0473 A80-43329
High-resolution intensified vidicon for low light level applications --- in aircraft flight simulators
[p0508 A80-44630
Advanced simulator for pilot training (ASPT): Design
[p031 A800-10223
Meteorological input to general aviation pilot training
[p0124 880-14634
Aircraft emergency decisions: Cognitive and situational variables
[AD-A077918] p0234 880-19051
Development of simulator instructional feature design guides
[AD-A069429] p0537 880-28379
The use of simulators for training in-flight and emergency procedures
[CHASA-TH-8179] p0606 880-31412
Advanced simulator for pilot training: Design of automated performance measurement systems
[AD-A088855] p0649 880-33421
PILOTLESS AIRCRAFT
By Dusne AIRCRAFT
Pyrotechnic delay cutters for more severe acceleration and temperature environments --- mid-Air Retrieval System (MARS) for remotely piloted vehicle
[p0160 880-23042
Flight research techniques utilizing remotely piloted research vehicles
[p0597 880-31337
PILOTS (PERSONNEL)
By AIRCRAFT PILOTS
Aircraft displays and avionics for application in a future national airspace system
[NASA-TM-80095] p0366 880-11052
Low cost simulation of piloting tasks
[AD-A080856] p0463 880-26332
PIPE FLOW
Effect of flow swirling on heat transfer in the cylindrical part of the presnozzle volume of a model chamber
[p0002 880-10196
Performance of conical diffusers up to the choking condition
[p0261 880-29130
Transmission of high frequency sound waves through a slug flow jet
[p337 A80-35944
PIPELINING (COMPUTERS)
Bit slices in a radar processor --- for target detectability improvement
[p0160 880-23530
PIPER AIRCRAFT
Aircraft accident report: COHAIB, Inc., Piper PA-31-310, Bavojo, N6642L, Greater Cincinnati Airport, Covington, Kentucky, 6 October 1979
[FAA-PUB-80-8] p0478 880-26287
General aviation icing flight test
[p0594 880-31312
PIPER (TUBES)
Selection of tube diameters for aircraft deicing systems
[p0527 880-47190
Mathematical formulation of the problem of selecting the tube diameters of aircraft deicing systems
[p0564 880-47405
PISTON ENGINES
By DIESEL ENGINES
Experimental investigation of the characteristics of pneumatic transfer lines
[p0099 880-19052
Study of cooling air inlet and exit geometries for horizontally opposed piston aircraft engines
[FAA-PAPER 80-1242] p0401 880-38984
Dynamic tests of a test bed for piston engines
[p0512 880-47505
Hydrazine monopropellant reciprocating engine development
[ASME-PAPER 78-WA/AERO-12] p0524 880-65684
Exhaust emissions characteristics for a general aviation light-aircraft Teledyne Continental Motors 6-205-B piston engine
[AD-A070336] p0580 880-13042
Exhaust emission reduction for intermittent combustion aircraft engines
Exhaust emission characteristics for a general aviation light-aircraft Avco Lycoming TIO-540-J2BD piston engine
[AD-A075355] p0179 880-17070
Exhaust emissions characteristics for a general aviation light-aircraft Teledyne Continental Motors (TCM) CTIO-520-6 piston engine
[AD-A080843] p0292 880-20270
The spark-ignition aircraft piston engine of the future
[p351 880-22317
Oxtralene combustion in general aviation piston engines
[NASA-CR-163001] p0356 880-22430
Evaluation of HC (hydrocarbon) control strategies for general aviation piston engines
[AR-1995] p0486 880-26971
Exhaust emissions characteristics for a general aviation light-aircraft Avco Lycoming O-320/IO-D20-INDEX piston engines
[AD-A084933] p0535 880-28364
Experimental investigation of the characteristics of pneumatic transfer lines—New requirements on combustion chambers

- **Poisson Process**
  - Initial data bank report: Fall 1978; winter, spring, summer, fall 1979, winter 1980
  - Initial data bank report: Fall 1978; winter, spring, summer, fall 1979, winter 1980

- **Polarization (Waves)**
  - Theoretical and experimental study of the effects of jet plumes on pressure distribution over a cylindrical afterbody at transonic speeds
  - Computational models for the viscous/inviscid analysis of jet aircraft exhaust plumes
  - A unique coaxial plug nozzle jet noise prediction procedure

- **Plemens**
  - The simulation and modeling of jet plumes in wind tunnel facilities
  - Comparison of stack plume properties obtained from aircraft and spacecraft measurements
  - Experimental and analytical evaluation of 3-dimensional exhaust plumes
  - Analysis of experiments on the effects of jet plumes on pressure distribution over a cylindrical afterbody at transonic speeds
  - Computational models for the viscous/inviscid analysis of jet aircraft exhaust plumes
  - Effects of fuel additives on plume opacity of a subsonic turbojet test cell with a ramjet type dump combustor
  - Carbon fiber plume sampling for large scale fire tests at Degway Proving Ground—fiber release during aircraft fires
  - Advanced simulator for pilot training (ASPT)

- **Pneumatic Control**
  - A hybrid composite helicopter main rotor blade employing pneumatic lift control
  - Pneumatic distributor for turbojet engine control system—Type 154 aircraft
  - Advanced simulator for pilot training (ASPT)
  - On the dynamics of compressor surge
POLYTHERM FOAM
Charging of jet fuel on polyurethane foams
Advanced materials and the Canadair Challenger
[AIAA-PAPER-80-1287]
INVESTIGATION OF RAPIDLY DEPLOYABLE PLASTIC FOAM SYSTEMS. VOLUME 1: SYSTEM DEVELOPMENT
[AD-A076332]
INVESTIGATION OF RAPIDLY DEPLOYABLE PLASTIC FOAM SYSTEMS. VOLUME 1: SYSTEM DEVELOPMENT
[AD-A076332]
INVESTIGATION OF APPLICATION PARAMETERS AND TESTING OF RAIN EROSION COATINGS
[AD-A083576]
ADVANCED STRUCTURES MAINTENANCE CONCEPTS
[AD-A076909]
PORE SIZE
U POROSITY
Effects of thermally induced porosity on an as-HIP powder metallurgy superalloy
[PB80-988559]
[PB80-988559]
Effects of fine porosity on the fatigue behavior of a powder metallurgy superalloy
[PB80-988559]
PORE WALLS
An experiment of lift interference on 2-dimensional wings in a wind tunnel with perforated walls
[AD-A076332]
The nonlinear impedance of perforated walls in the case of two-pure-tone excitation
[AD-A076332]
Two-dimensional aerodynamic interference effects on oscillating airfoils with flaps in ventilated subsonic wind tunnels --- computational fluid dynamics
[BASA-CASE-10113-1]
PORTABLE EQUIPMENT
PORTABLE EQUIPMENT
PATT - An Air Force approach to ATE calibration
[AD-A076332]
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability
[AD-A076332]
GUIDANCE SYSTEM POSITION UPDATE BY MULTIPLE DATA SOURCES
[HASA-1081-10113-1]
POSITION (LOCATION)
Magentic position and orientation tracking system
[PB80-988559]
Guidance system position update by multiple subarea correlation
[PB80-988559]
The Transit system in radio navigation
[SBE-PAPER-79-1205]
Experimental determination of position-estimate accuracy using back-assist signals from a microwave landing system
[BASA-TC-1574]
A-315
POSITION ERRORS

Positional error analysis, A-10 aircraft on three-axis ground mount
[AD-A0773600] p0082 880-13336
Laser-optical blade tip clearance measurement system
[BASA-TN-81376] p0120 880-18128
Double broadband glide slope array --- for landing systems
[AD-A077002] p0169 880-16007
Perm. band sensors for measuring angular position
[BASA-TN-8154] p0229 880-18368
Minimum performance standards: Emergency locator transmitter
[AD-A077002] p0169 880-16007
Automatic Portable-ELT (AP), Automatic Deployable-ELT (AD) operating on 121.5 and 243.0 megahertz
[NCIA-DO-168] p0439 880-25511
Loran-based busy position auditing systems:
[AD-A0882656] p0631 880-32369

POSITION ERRORS

Pitot-static system - Errors and calibrations
p0327 A80-36593
Further analyses of position errors in navigation
p0510 A80-45522
Determination of the repeatability of FMC --- flight tests for position error calibrating
[AD-A088171] p0116 880-14109

POSITION INDICATORS

1. RADIO DIRECTION FINDERS

Helicopter crash position indicator flight trials
p0205 A80-27290
Algorithms and logic for incorporating LORNA, TVA-NASA
[AD-A0773600] p0169 880-13336
In-service improvements and modernization of all components of the instrument landing systems.
Volume 1: Sections 1-10
[AD-A0774425] p0077 880-13018
In-service improvements and modernization of all components of the instrument landing systems.
Volume 2: Sections 11 and 12
[AD-A0774426] p0077 880-13019
High accuracy flight profile determining system --- systems analysis of inertial navigation system for aircraft position determination
p0113 880-14042
A flight investigation of system accuracies and operational capabilities of a general aviation air transport area navigation system
[RNAV] [AD-A0881646] p0362 880-23288

POSSIBILITY

Fueling operations as a function of aircraft positioning
p0581 A80-50027

POSSESSORS DEVICES (MACHINERY)

NAVIGATION SYSTEMS: USERS: PROCEEDINGS OF THE NATIONAL AEROSPACE SYMPOSIUM, SPRINGFIELD, VA., MARCH 6-8, 1979
p0190 880-25141

POTENTIAL ENERGY

By CONTACT POTENTIALS

Potential Flow
The nonlinear supersonic potential flow over delta wings
[AAIA PAPER 80-0269] p0162 A80-23922
Numerical prediction of compressible potential flow for arbitrary geometries --- in air linear air-intake systems
p0211 A80-27743
Method of calculating the velocity at the surface of an arbitrary wing in an ideal fluid
[AD-A0773600] p0169 880-13336
Investigation of transonic flow in a cascade using an adaptive mesh
[AAIA PAPER 80-1430] p0262 A80-29208
Lift improvement of an aerofoil by periodic deformations
[AD-A008140] p0452 880-46117
A multi-grid code for 3-D transonic potential flow about axisymmetric inlet model of test, angle of attack
[AAIA PAPER 80-1305] p0506 A80-46141
Potential flow past a wing profile with a trailing edge of finite thickness
p0479 A80-43739

POWERS

Theoretical method for the analysis of airfoils in viscous flows
p0528 A80-66827
Method for calculating surface velocity of arbitrary wing in ideal fluid
p0571 A80-46824
Notion of rectangular wing between parallel walls
p0581 A80-50683
General potential theory of arbitrary wing sections
[BASA-452] p0127 880-15046
Wing design process by inverse potential flow computer program
p0300 880-21259
Transonic data memorandum: Numerical methods for solving the potential flow equations for two-dimensional aerofoils in subsonic and transonic flows, brief details, test cases and examples
[BASA-79009] p0302 880-21278
Blade-to-blade flow of ideal fluid with wall injection
p0315 880-22228
Development and application of a subsonic flight test Wang panel
p0541 A80-29204

POTENTIAL THEORY

p0076 A80-12999
General potential theory of arbitrary wing sections
[BASA-452] p0127 880-15046

POWDER (PARTICLES)

By METAL POWDER

By POWDER ALLOY

POWDER METALLURGY

Review of generally--powder metallurgy processing for aircraft gas turbine applications
p0003 A80-10310
Effects of thermally induced porosity on an a-HiP, powder metallurgy superalloy
p0269 A80-29990
Application of superalloy powder metallurgy for aircraft engines
p0507 A80-44240
HIP of Banne 95 --- Hot Isostatic Pressing
p0310 A80-21466
Advanced aluminum alloys from rapidly solidified powders
[AD-A077179] p0227 880-18161
Development of advanced aluminum alloys from rapidly solidified powders for aerospace structural applications
[AD-A077800] p0227 880-18162
Consolidation of titanium powder to near net shapes
[AD-A078033] p0227 880-12339
Manufacture of low carbon steel cylinder in disks shaped by hot isostatic pressing, Volume 2, project 1
[AD-A078034] p0306 880-21329
Application of superalloy powder metallurgy for aircraft engines
[BASA-TN-81466] p0310 880-21466
Effects of fine porosity on the fatigue behavior of a powder metallurgy superalloy
[BASA-TN-81468] p0310 880-21493
Materials for advanced turbine engines, Volume 2: Power metallurgy Banne 95 rotating turbine engine parts
[BASA-15902] p0539 880-28499

POWDERED ALUMINIUM

Advanced aluminum alloys from rapidly solidified powders
[AD-A077179] p0227 880-18161
Development of advanced aluminum alloys from rapidly solidified powders for aerospace structural applications
[AD-A077800] p0227 880-18162
Application of rapidly solidified alloys --- aluminum alloy fans blades and iron alloy bearings
[AD-A088266] p0019 880-50463

POWDERED METALS

5 METAL POWDERS

POWER CONDITIONING

Generating information for the F-18
p0012 A80-12312
A rotary inverter system for a multiple-electrode NMR generator
p0190 A80-25093

A-316
subject index

High power density superconducting generator  p0571 a80-48219
The challenge of designing reliable ECM transmitters  p0582 a80-50525

Power Efficiency
Wind-turbine power improvement with modern airfoil sections and multi-speed generators  [AIAA 80-0633]  p0217 a80-26819
Design study for a fuel efficient turbogas engine  [NASA PAPER 80-CT-141]  p0462 a80-42254
Aerodynamic design optimisation of a fuel efficient high-performance, single-engine, business aircraft  [AIAA PAPER 80-1846]  p0471 a80-43300
Fuel efficiency of small aircraft  [AIAA PAPER 80-1847]  p0471 a80-43305
Some aspects of the thermodynamics of duct jet flows  p0525 a80-46846
Range of applicability and energetic characteristics of small-scale high-pressure-gradient birotational turbines  p0526 a80-47177
Organising multistage energy conversion systems  p0526 a80-47183
Influence of upper and lower overlap on efficiency of partial-admission axial air microturbine  p0566 a80-47438
Speed control of electrical pumps in aircraft and military vehicle applications  p0583 a80-50681

Power Generators
Power Plants
Simulating the shock protection performance of large transit packs by means of small scale laboratory models  p0213 a80-27790
Power Processing Systems
Power Supply Circuits
An overvoltage safety system for direct current aircraft generators  p0058 a80-19051
Integrated control techniques for advanced aircraft electrical power systems  p0570 a80-48216

Power Lift Aircraft
The structure-free thrust-doubling of insect-like aircraft - the possibility of using insect-flight/thrust-flight on a large technical scale  p0160 a80-23371
Experimental study of flapping wing lift and propulsion  p0273 a80-30680
QCSEE DWT engine powered-lift acoustic performance  p0273 a80-30680
Quiet Clean Short-haul Experimental Engine Under the Wing  [AIAA PAPER 80-1065]  p0394 a80-38651
Application of viscous analyses to the design of jet exhaust powered lift installations  [AIAA PAPER 79-GT-15]  p0511 a80-45666
Workshop on Thrust Augmenting Injectors  [NASA-CP-2993]  p0022 a80-10107
Quiet Clean Short-haul Experimental Engine  [NASA-CP-159473]  p0135 a80-15120
Quiet powered-lift propulsion  [NASA-CP-2077]  p0136 a80-15127
The TC-14 upper surface bladed flap: A unique control surface  p0140 a80-15157
Analysis of fuel-conservative curved decelerating approach trajectories for powered-lift and CTOL jet aircraft  [NASA-TP-1650]  p0231 a80-19022
Flight evaluation of configuration management system concepts during transition to the landing approach for a powered-lift, STOL aircraft  [NASA-TR-B1146]  p0246 a80-19127

Prediction Techniques
Prediction of lift thickness effects on the lift of an augmentor wing  p0012 a80-12597
A pre-design code for predicting engine augmentation costs  p0012 a80-12597
Application of the Estimation-Before-Modeling (EBB) system identification method to the high angle of attack/sideslip flight of the T-2C jet trainer aircraft. Volume 3: Identification of
application of direct jet exhaust powered lift installations  p0217 a80-26819
Prediction of lateral aerodynamic loads on fighter aircraft at high angles of attack  p0392 a80-11073
A method for evaluating aircraft take-off performance  p0039 a80-11076
Remarks on the transonic flow past oscillating airfoils  p0065 a80-12009
An adaptation and validation of a primitive flight improved methods for predicting spectrum loading effects, phase 1 report, volume 2: Test data  [AIAA PAPER 80-1375]  p0316 a80-45872
Prediction of helicopter rotor downwash in hover and vertical flight  [NASA-CP-1500]  p0022 a80-10105
Prediction of acceleration of leading-edge thrust for wings at subsonic and supersonic speeds  [NASA-CP-1500]  p0022 a80-10105
Prediction of helicopter rotor downwash in hover and vertical flight  [NASA-CP-1500]  p0022 a80-10105
Aerofoil performance  p0022 a80-10105
Prediction of lateral aerodynamic loads on fighter aircraft at high angles of attack  p0392 a80-11073
A method for evaluating aircraft take-off performance  p0039 a80-11076
Remarks on the transonic flow past oscillating airfoils  p0065 a80-12009
An adaptation and validation of a primitive variable mathematical model for predicting the flows in turbojet test cells and solid fuel rocket motors  [AIAA 80-14133]
Prediction of dynamic properties of a rotor supported by hydrodynamic bearings using the finite element method  [AIAA-79-129-0]  p0185 a80-17842
Prediction of dynamic properties of a rotor supported by hydrodynamic bearings using the finite element method  [AIAA-79-129-0]  p0185 a80-17842
Derivative drag prediction methods  [AIAA-79-6915]  p0232 a80-19028
Application of the Estimation-Before-Modeling (EBB) system identification method to the high angle of attack/sideslip flight of the T-2C jet trainer aircraft. Volume 3: Identification of

A-317
PREDICTIONS

T-2C aerodynamics stability and control characteristics from actual flight test data
[AD-A079924] p0237 N80-19072

Advanced infrared signature prediction program.
Spectral calculation of radiation from a turbine propulsion system an intercepted by an observer
[SCORION]. Volume 3: Analysis
[AD-A078436] p0294 N80-19124

Aerodynamics Reliability, Its Techniques and Related Disciplines --- conferences
[AGAB-CP-261] p0250 N80-19519

The development of rapid prediction methods for three-dimensional transonic flow fields about fighter bomber aircraft, part 1
[AD-A078683] p0280 N80-20236

Analysis of uncertainties in turbine metal test-rig predictions
[BASA-TP-1593] p0305 N80-21326

Comparison of theoretically predicted lateral-directional aerodynamic characteristics with full-scale wind tunnel data on the ATAT airplane
[BASA-CP-163189] p0417 N80-24295

The rapid prediction of aircraft store loading distribution at transonic speeds, part 2
[AD-A1062005] p0419 N80-24308

A numerical and experimental study of the turbulent wakes of turbomachinery rotor blades, isolated airfoils, and a cascade of airfoils
[AD-A0846] N80-27277

Off-design correlation for losses due to part-span dampers on transonic rotors
[BASA-TP-1693] p054A N80-28352

Wind-tunnel experiments on divergence of forward-swept wings
[BASA-TP-1685] p0545 N80-29287

A methodology for long-range prediction of air transportation
[AD-A0886] N80-29305

Influence of mistuning on blade torsional flutter
[BASA-CN-165137] p0599 N80-31351

PREDICTIONS

WT IMPACT PREDICTION
WT NOISE PREDICTION (AIRCRAFT)
WT PERFORMANCE PREDICTION
A new approach to maintainability prediction --- avionics, ground, and shipboard electronics
[AD-A079817] p0291 N80-19537

PREDICTORS

U PREDICTIONS

PRELIFHT ANALYSIS

Store separation testing techniques at the Arnold Engineering Development Center. Volume 4: Description of dynamic drop store separation testing
[AD-A086749] p0559 N80-31350

PRELIFHT OPERATIONS

WT AIRCRAFT BLOWUP

Fueling operations as a function of aircraft positioning
[AD-A0891] A80-50272

PRELIFHTING

U HEATING

PRELAUNCH TESTS

WT STATIC FIBING

PRELOADING

U PRESTRESSING

PREMIRED FLAMES

Premixing quality and flame stability: A theoretical and experimental study
[BASA-CR-3216] p0071 N80-12090

PREPARATION

WT PRESTRESSING

PRESSURING

U SINTERING

PRESSING (FORMING)

WT COILING

Efficient sheet metal forming methods in the aircraft industry
[AD-A080] A80-32408

PRESSURE

WT ATMOSPHERIC PRESSURE

WT BASE PRESSURE

WT DIFFERENTIAL PRESSURE

WT DYNAMIC PRESSURE

WT GAS PRESSURE

WT HYDRO PRESSURE

WT IMPACT LOADS

WT INLET PRESSURE

SUBJECT INDEX

WT ISOMETRIC PRESSURE

WT LUNAR PRESSURE

WT OVERPRESSURE

WT SOUND PRESSURE

WT STATIC PRESSURE

WT SUPERCRITICAL PRESSURES

WT TRANSIENT PRESSURES

WT WALL PRESSURE

WT WIND PRESSURE

Pressure and velocity measurements in a three-dimensional wall jet
[AD-A0833] A80-10126

Surface conforming thermal/pressure seal --- for control devices in space vehicles
[BASA-CASE-NSC-18622-1] p0124 N80-14400

PRESSURE CABIN

U PRESSURIZED CABIN

PRESSURE DISTRIBUTION

Unsteady pressure measurements on wing-store combinations in incompressible flow
[AD-A0893] A80-26269

Pressure distribution in rectangular wing /blade/ sections during curvilinear motion in an incompressible media
[AD-A0886] A80-27157

Hysteresis of aerodynamic characteristics for wing models and segmented conical bodies of revolution
[AD-A0886] A80-27167

Pressure rise of axial flow fans with whirling outflow
[AD-A0895] A80-29096

Pressures inside a room subjected to simulated sonic booms
[AD-A0895] A80-31089

System to measure the pressure distribution on fan aerfoil surfaces during flutter conditions
[AD-A0895] A80-36144

Calculation of pressure distribution on slender wings in supersonic flow
[AD-A0895] A80-36797

Separation pressure of a turbulent boundary layer in transonic interactions
[AD-A0895] A80-38035

Transonic flow over airfoils with tangential injection
[AD-A0895] A80-38263

An evaluation of statistical methods for the prediction of maxium time-variant inlet total pressure distortion
[AD-A0895] A80-38918

The influence of compressibility on the simulation of the separation behavior of external stores from a carrier
[DLG1 PAPER 79-089] p045A A80-41899

On the pressure losses due to the tip clearance of centrifugal blowers
[ASA-PAPER 80-C-139] p0462 A80-42252

Calculation of unsteady transonic aerodynamic forces on a three-dimensional wing
[DLG1 PAPER 80-027] p052A A80-46281

Theoretical method for the analysis of airfoils in viscous flows
[AD-A080] A80-48624

Shockless airfoils for wings, compressors, and turbines
[AD-A080] A80-50311

Laminar boundary layer calculation from experimental pressure distribution
[AD-A080] A80-10045

Fuselage and nozzle pressure distributions on a 1/12-scale V-15 propulsion model at transonic speeds --- conducted in langley 16 foot transonic tunnel
[AD-A080] A80-11036

The normal force on a cruciform sissile at bank angles of a deg and 45 deg
[AD-A080] A80-12037

Wind tunnel force and pressure tests of a 21% thick general aviation airfoil with 20% sliver, 25% slotted flap and 10% slot-lip spoiler
[BASA-CP-3801] p0071 N80-12053

Unsteady pressure distortion --- in compressor inflow
[AD-A080] A80-12333

Evaluation of airjet distortion generator used to produce steady-state, total-pressure distortion at the inlet of a General Electric F101-GE-100 turbofan engine
[AD-A080] A80-12333
Pressure fields generated by instabilities waves and coherent structures in an impinging jet
[IAIA PAPER 80-0980] p0392 A80-38632

An experimental investigation of pressure oscillations in a side dump ramjet combustor
[IAIA PAPER 80-1117] p0398 A80-38922

Aerodynamic characteristics of moving trailing-edge controls at subsonic and transonic speeds
[SAE-TH-STRUCT-947] p0347 880-22281

PRESSURE SENSORS

PRESSURE SENSORS

Statistical characteristics of pressure fluctuations in the flow-separation zone on a plate behind a spoiler
p0069 A80-13695

Base pressure fluctuations - aircraft acoustic loads
p0050 A80-19510

Experimental and numerical results on a shear layer excited by a sound pulse
[NASA-CM-801083] p0075 880-12821

PRESSURE RECOVERY

Effect of the relative area of the flow core on the performance of a hypersonic wind tunnel
p0086 A80-17673

Straight-walled, two-dimensional diffusers - Transitory stall and peak pressure recovery
p0211 A80-27426

The hybrid diffuser – for gas turbine engines
[ASME PAPER 80-GT-136] p0462 A80-42249

An investigation of vane-island diffusers at high swirl
[ASME PAPER 80-GT-148] p0463 A80-42260

PRESSURE REDUCTION

Secondary losses in axial compressor
p0260 A80-29108

Reduced bleed air extraction for DC-10 cabin air conditioning
[IAIA PAPER 80-1197] p0488 A80-41194

Engine bleed air reduction in DC-10
[NASA-CR-1590846] p0633 880-32378

PRESSURE SENSORS

Measuring unsteady pressure on rotating compressor blades – with semiconductor strain gages under gas turbine engine operating conditions
p0013 A80-12630

Some dynamic and time-averaged flow measurements in a turbine rig
p0147 A80-21120

System to measure the pressure distribution on fan aerfoil surfaces during flutter conditions
p0332 A80-36164

Steady-state performance of J85-21 compressor at 100 percent of design speed with and without interstage rake blockage
[IAIA-TH-61451] p0307 880-21333

Data analysis of P sub sub T'sub s sub S sub s sub S sub s sub S probe testing on F100 engine F68007 at NASA Lewis Research Center [NASA-CR-159816] p0307 880-21334

Experimental study of airfoil trailing edge noise: Instrumentation, methodology and initial results [NASA-CR-163007] p0365 880-22264


PRESSURE TRANSDUCERS

U PRESSURE SENSORS

PRESSURE WAVES

U ELASTIC WAVES

PRESSURE WELDING

NT DIFFUSION WELDING

NT ULTRASONIC WELDING

PRESSURIZED CABINS

Helicopter environmental control – Commercial and military solutions [ASME PAPPS 79-ENAS-35] p0056 A80-15259

Air supply system approach for the Boeing Model 767 Airplane [ASME PAPPS 791066] p0194 A80-26631

PRESSURIZING

NT FUEL TANK PRESSURIZATION

Crack development in panels of a pressurized fuselage under the combined effect of pressurization-induced cyclic loads and high-frequency vibrations

A-320
Subject Index

[FP-2315-00] p0539 N80-28550

PROCESSIONS (COMPUTERS) p0539 N80-28550
CUENTRAL PROCESSING UNITS

PROCESSION

GOVERNMENT PROCUREMENT
The integrated management of reliability and maintenance in procurement p0252 N80-19558

PROCUREMENT

ATE SYSTEM ACQUISITION FOR B-3A MENTERY [AWACS] p0271 N80-30033

AURORA /CP-140/ AIRCRAFT OPERATIONAL SOFTWARE SYSTEM p0324 N80-38185

Cost analyses for avionics acquisition p0409 N80-40311

Affordable automatic testing - A modular concept [AIAA PAPER 80-1628] p0513 N80-45742

PRODUCT DEVELOPMENT

The interrelationships between engineering development simulation and flight simulation - aircraft design development simulator technology transfer to flight simulator and training program improvements p0005 N80-10777

NASA gear research and its probable effect on rotorcraft transmission design p0016 N80-13068

Development and flight test of a two-place night/adverse weather A-10 for the close-air support and battlefield attack mission [J85 PAPER 791063] p0194 N80-26632

Crossing the Channel in the Gossamer Albatross p0208 N80-27389

Flight recording in the UK. I - Evolution p0212 N80-27751

Airbus family concept for the 1990s p0216 N80-28489

The aerodynamics of future transport aircraft and the role of the wind tunnel during development p0216 N80-28484

Test program set development process used for F3 Orion avionics support p0269 N80-29997

The anatomy of an avionics system development and integration laboratory p0284 N80-32455

The hovercraft comes of age p0407 N80-39569

Planning technology development to achieve consistent component technology and flexibility of application - for military airbreathing propulsion systems [AIAA PAPER 80-1081] p0467 N80-41176

The development and application of improved combustor wall cooling techniques [ASRE PAPER 80-GT-66] p0459 N80-42196

Development and field experience of a new 29000 hp gas turbine [ASRE PAPER 80-GT-152] p0463 N80-22624


Development of lightweight transformers for airborne high power supplies [AD-A076215] p0185 N80-17366

PRODUCTION ENGINEERING

BY PRODUCTION PLANNING
Organization of automated control systems for technological processes in aircraft mechanical engineering - Russian book p0001 N80-10123

Diffusion bonding as a production process - Book p0011 N80-12076

Composites in aircraft manufacturing - An impressive rise - in Western Europe p0153 N80-21923

The shapes of things to come - An introduction to the capabilities of the British Aerospace Numerical Master Geometry System - computer-aided design and manufacturing of aerodynamic surfaces p0159 N80-23351

NAVAir pushes SPP/88 for structures - in naval aircraft design and construction p0189 N80-24739

Fiberglass rotor produced p0189 N80-24740

Pratt and Whitney innovations - turboshaft blade casting and hot isostatic pressing of turbine disks p0191 N80-25488

CADD on the F-18 program - Computer aided Design and Drafting p0193 N80-26365

New materials and methods for airframe and propulsion systems p0217 N80-20495

CAD/CAM in packaging aerospace electronics p0263 N80-29450

Technological and commercial aspects of aircraft production [DGLR PAPER 80-03] p0522 N80-46285

Profile cutting with direct data allocation and real-time operations planning [DGLR PAPER 80-035] p0522 N80-46286

Cost effective series production on the basis of new design and production principles, using a light aircraft as an example [DGLR PAPER 80-038] p0523 N80-46289

Integration of CAD/CAM systems for production of structural components p0572 N80-46937

Advanced manufacturing development of a composite epoxycomposite component for 1-1011 aircraft p0226 N80-19104

Manufacture of low carbon astrolgy turbine disk shapes by hot isostatic pressing. Volume 2, project 1 [NASA CR-135410] p0306 N80-21329

Parametric study of helicopter aircraft systems costs and weights [NASA CR-152315] p0347 N80-22305

R655 fiber reinforced plastic helicopter tail rotor assembly (patented spar) [AD-A082352] p0418 N80-24298

Shock wave thermomechanical processing of gas turbine disk alloys [AD-A082060] p0420 N80-24319

Cost estimating relationships for airframes in the development and production phases [NASA TM-80229] p0441 N80-26198

Some examples of procedures used in UK for acceptance testing of aircraft produced by the aircraft industry under government contract p0556 N80-31332

PRODUCTION MANAGEMENT

F-16 co-production - An American point of view p0012 N80-12315

Value analysis for the aircraft Airbus [SNIA 79-501105] p0486 N80-27212

Costs and benefits of requiring new production of older aircraft types to meet specified noise standards [AD-A080130] p0495 N80-27356

The application of design to cost and life cycle costs and aircraft engines [AGARD LS-107] p0597 N80-31342

A new look at the B6 Air Force approach for the practical management of engine life cycle costs - gas turbine engines p0598 N80-31345

Military engine programs with cost objectives p0598 N80-31346

PRODUCTION METHODS

G PRODUCTION ENGINEERING

PRODUCTION PLANNING
Planning technology development to achieve consistent component technology and flexibility of application - for military airbreathing propulsion systems [AIAA PAPER 80-1081] p0447 N80-41176

Costs and benefits of requiring new production of older aircraft types to meet specified noise standards [AD-A080130] p0495 N80-27356

The application of design to cost and life cycle costs and aircraft engines [AGARD LS-107] p0597 N80-31342

A new look at the B6 Air Force approach for the practical management of engine life cycle costs - gas turbine engines p0598 N80-31345

Military engine programs with cost objectives p0598 N80-31346

PRODUCTS

PETROLEUM PRODUCTS

PROFILE METHOD (FORECASTING)

IPF aircraft handled forecast by air route traffic control center, fiscal years 1979-1990 [AD-A070786] p0026 N80-10153

Application of modified profile analysis to function testing of simulated CTOL transport touchdown-performance data [NASA TP-156] p0038 N80-11609


Cargo generation forecasting models [AD-A076136] p0176 N80-17044

PROFILOMETERS

Discontinuous registration of industrial
radiographs using profile analysis and piecewise correlation techniques

PROGRAM MANAGEMENT

U PROJECT MANAGEMENT

PROGRAM VERIFICATION (COMPUTERS)

DRAS - A flexible data handling system for F-15 software performance evaluation

p0204 ABO-32450

Software/Hardware Integrated Critical Path analysis /ICPA/

p0411 ABO-40352

An assessment of and approach to the validation of digital flight control systems

p0112 ABO-18036

Verification and validation of avionic simulations

p0254 ABO-19814

PROGRAMMED INSTRUCTION

AT COMPUTER ASSISTED INSTRUCTION

PROGRAMMING LANGUAGES

AT ASSEMBLY LANGUAGE

AT FORTRAN

Programs for the transonic wind tunnel data processing installation. Part 7: Extended focal

[AD-A073414]
p0226 ABO-16054.

PROGRAMS

AT ATLIT PROJECT

ST DEFENSE PROJECT

ST GLOBAL ATMOSPHERIC RESEARCH PROGRAM

ST NASA PROGRAMS

ST QUIET ENGINE PROGRAM

ST SKIDLAB PROGRAM

ST SQUID PROJECT

ST SUPERSONIC CIVIL AIRCRAFT RESEARCH

ST TERMINAL CONFIGURED VEHICLE PROGRAM

ST TILT ROTOR RESEARCH AIRCRAFT PROGRAM

PROJECT MANAGEMENT

Acquisition logistics management in naval aviation

[AT IA PAPEB 80-1627]
p0513 ABO-45741

An evaluation of the bird/aircraft strike hazard at selected United Kingdom bases: RAF Mildenhall, RAF Alconbury, RAF Upper Heyford, RAF Bentwaters, RAF Fairford, RAF Lakenheath, and RAF Woodbridge

[AD-A073062]
p0609 ABO-12077

Technical and operational factors concerning the licensing and introduction of a new microwave landing system for category 2

p0492 ABO-27336

PROJECT PLANNING

Systems analysis for planning of air fleets and maintenance facilities

p0153 ABO-21935

Installation criteria for the approach lighting system improvement program (ALSIP)

[AD-A070076]
p0082 ABO-11057

NASA/Army IV-15 cilt rotor research aircraft wind-tunnel test program plan — assess 40-ft by 80-ft wind tunnel tests

[NASA-TR-78562]
p0129 ABO-15067

PROJECTS

HT HYPERSONIC PROJECTS

HT SUPERSONIC PROJECTS

HT ABORT PROJECTS

Wind tunnel and flight test drag comparisons for a guided projectile with cruciform tails

[AT IA 80-0426]
p0202 ABO-26566

Wind tunnel tests of a tubular supersonic inlet for projectiles

[OPFLE-PB-79-26]
p0436 ABO-25367

PROJECTS

AT ATLIT PROJECT

ST SQUID PROJECT

PROPAGATION (EXTENSION)

ST CRACK PROPAGATION

ST FLAME PROPAGATION

PROPAGATION MODES

Biporous solutions for sound radiation from circular ducts with hyperbolic horns or infinite plane baffle

p0390 ABO-37895

Theoretical prediction of nonlinear propagation effects on noise signatures generated by supersonic or supersonic propeller or rotor-blade tips

[NASA-TP-1660]
p0345 ABO-22265

PROPAGATION VELOCITY

Influence of working-fluid immiscibility through a nozzle on the rate of flame front propagation in a pulsating-type combustion chamber

A-322

SUBJECT INDEX

p0564 ABO-47394

PROPELLAFT CORROSION

A primitive variable computer model for combustion within solid fuel ramjets

[AD-A081081]
p0365 ABO-23319

PROPELLAFT comprises

The impact of fuels on aircraft technology through the year 2000

[AT IA PAPEB 80-0896]
p0363 ABO-38598

The monopropellant isopropyl nitrate - its characteristics and uses, and possible future applications

[AT IA PAPEB 80-1293]
p0402 ABO-39008

PROPELLAFT STABILITY

Modelling of prop-vehicle emissions under laboratory conditions — aircraft fuel storage

p0562 ABO-47947

PROPELLANTS

AT HIGH TEMPERATURE PROPELLANTS

AT LIQUID ROCKET PROPELLANTS

AT SOLID PROPELLANTS

AT SOLID ROCKET PROPELLANTS

PROPELLER BLADES

Construction of a nonstationary nonlinear propeller theory

p015 ABO-12911

Parameter selection for aerodynamic design of propellers

p053 ABO-15083

Summary of advanced methods for predicting high speed propeller performance

[AT IA PAPEB 80-0225]
p0108 ABO-20966

Combined design of q-fan superchargers and multiblade propellers

p0279 ABO-32223

Construction of a nonstationary nonlinear theory of helicopter rotors

p032 ABO-34711

Noise from a vibrating propeller

[AT IA PAPEB 80-1011]
p0339 ABO-35969

A review of propeller discrete frequency noise prediction technology with emphasis on two current methods for time domain calculations

p0567 ABO-47565

Aircraft control by propeller cyclic blades

[NASA-CP-3212]
p0035 ABO-11031

The NASA high-speed turbojet program

[NASA-TR-81561]
p0604 ABO-31401

Investigation of performance, noise, and detectability characteristics of remotely Piloted Vehicle (RPV) propellers

[AO-086325]
p0536 ABO-32398

PROPELLER DRIVE

AT HELICOPTER PROPELLER DRIVE

Progress and trends in propeller/prop-fan noise technology

[AT IA PAPEB 80-0856]
p0337 ABO-35907

Experimental verification of propeller noise prediction

[AT IA PAPEB 80-0994]
p0337 ABO-35957

Propeller light aircraft noise at discrete frequencies

[AT IA PAPEB 80-0997]
p0338 ABO-35960

Prediction of the interior noise levels of high-speed propeller-driven aircraft

[AT IA PAPEB 80-0998]
p0338 ABO-35961

Noise control prediction for high-speed, propeller-driven aircraft

[AT IA PAPEB 80-0999]
p0338 ABO-35962

As analytical model for study of interior noise control for high-speed, propeller-driven aircraft

[AT IA PAPEB 80-1000]
p0338 ABO-35963

Analytical study of interior noise control by fuselage design techniques on high-speed propeller-driven aircraft

[AT IA PAPEB 80-1001]
p0338 ABO-35964

An overview of NASA's propeller and rotor noise research

[AT IA PAPEB 80-0992]
p0373 ABO-36325

Reliability study of an isolated reverse thrust system for gas turbine engines — marine propulsion

[AD-A077989]
p0293 ABO-20276

PROPELLER EFFICIENCY

New trends and possibilities of propeller development

p0053 ABO-15082
Summary of advanced methods for predicting high speed propeller performance  
[AIAA PAPER 80-0225] p0108 A80-20966
Numerical design and optimization of propellers, II  
[p0321 A80-33107
Propeller propeller optimization based upon analytical and experimental methods  
[AIAA PAPER 80-1241] p0505 A80-44109
Summary of advanced methods for predicting high speed propeller performance  
[NASA-TE-81009] p0127 A80-15051
Aerodynamic wind-tunnel tests of a light twin-boom general-aviation airplane with free or shrouded-pusher propellers --- in the Langley full-scale tunnel  
[NASA-TR-80303] p0232 A80-19023
High speed turboprops for executive aircraft, potential and recent test results  
[NASA TP 81482] p0302 A80-21205
NASA propeller technology program  
[p0352 A80-22341
Low speed propellers: Impact of advanced technologies  
[p0352 A80-22342
Performance estimation for highly loaded six and ten blade propellers combined with an advanced turbine turboshift engine  
[NASA-TR-81004] p0536 A80-28353
Subsonic aircraft: Evolution and the matching of size to performance  
[NASA-TP-1060] p0540 A80-29245
PROPELLER FANS  
Combined design of Q-fan superchargers and multiblade propellers  
[p0279 A80-32223
Acoustic measurements of three Prop-Fan models  
[AIAA PAPER 80-0995] p0317 A80-35958
Acoustic pressures on a prop-fan aircraft fuselage surface  
[AIAA PAPER 80-1002] p0338 A80-35965
Potential benefits for propfan technology on derivatives of future short- to medium-range transport aircraft  
[AIAA PAPER 80-3900] p0397 A80-38905
Propfans for commercial air transports  
[S/E/PAPER 800733] p0574 A80-49685
Vortex shedding mechanisms in relation to tip clearance flows and looseness in axial fans  
[ARC-NASA-3829] p0180 A80-17077
PROPELLER SLIPSTREAMS  
Propeller slipstream/ring interaction in the transonic regime  
[AIAA PAPER 80-6125] p0156 A80-22733
Effect of propeller slipstream on the drag and performance of the engine cooling system for a general aviation twin-engine aircraft  
[AIAA PAPER 80-1872] p0472 A80-43315
PROPELLERS  
ST PROPELLER FANS  
ST VARIABLE PITCH PROPELLERS  
Application of certain optimal methods of propeller phase synchronization  
[p0278 A80-31796
Combined design of Q-fan superchargers and multiblade propellers  
[p0279 A80-32223
Propeller signatures and their use --- aircraft noise and vibration measurements and analysis  
[AIAA PAPER 80-1035] p0380 A80-35983
The screw propeller --- marine and air propeller hydromechanics  
[p0386 A80-37572
A theoretical and experimental investigation of propeller performance characteristics  
[AIAA PAPER 80-1240] p0468 A80-43323
Propeller proplet optimization based upon analytical and experimental methods  
[AIAA PAPER 80-1241] p0505 A80-89109
A theoretical sensitivity study of general aviation propellers  
[AIAA PAPER 80-1871] p0560 A80-50191
NASA propeller technology program  
[p0352 A80-22341
Low speed propellers: Impact of advanced technologies  
[p0352 A80-22342
High-speed-propeller wind-tunnel aeroacoustic results  
[p0352 A80-22344
Advanced propeller aerodynamic analysis  
[p0352 A80-22345
Propeller aeroacoustic methodologies  
[p0352 A80-22346
NASA propeller noise research  
[p0352 A80-22347
Propeller dynamic and aeroelastic effects  
[p0352 A80-22348
A comparison between an existing propeller noise theory and wind tunnel data  
[NASA-TE-81519] p0428 A80-25101
Influence of noise reduction on weight and cost of general aviation propellers  
[AD-A002120] p0497 A80-27366
Investigation of performance, noise, and detectability characteristics of Remotely Piloted Vehicle (RPV) propellers  
[AD-A008325] p0636 A80-32398
PROPERGATION  
The implementation and practical verification of a superposition method for the solution of elastic crack problems  
[NASA-TR-56079-980] p0080 A80-13527
PROPSULION  
ST JET PROPULSION  
ST LASER PROPULSION  
ST MAN OPERATED PROPULSION SYSTEMS  
ST MARINE PROPULSION  
ST SOLAR PROPULSION  
ST SPACECRAFT PROPULSION  
Experimental study of flapping wing lift and propulsion  
[p0273 A80-39680
Computational fluid mechanics of internal flow  
[p0029 A80-10211
Control technology  
[p0029 A80-10215
Turbopropulsion combustion technology assessment  
[AD-A100784] p0366 A80-23323
Exploratory studies of the cruise performance of upper surface blow configurations  
Experimenal program: Test facilities, model design instrumentation, and low-speed, high-lift tests  
[NASA CR 3192] p0431 A80-25297
PROPSULSION SYSTEM CONFIGURATIONS  
Propulsion characteristics of flapping wings  
[p0505 A80-18415
Propulsion/airframe integration considerations for high altitude hypersonic cruise vehicles  
[AIAA PAPER 80-0111] p0093 A80-18272
Advanced technology effects on VSTOL propulsive system weight  
[SAME PAPER 1300] p0105 A80-20640
The innovative application of boost engine technology to the design of a variety of tactical and strategic aircraft  
[AIAA PAPER 80-0190] p0156 A80-22740
Single rotor options for heavy lift and potential of multi lift  
[S/E/PAPER 791087] p0195 A80-26642
Multi rotor options for heavy lift  
[S/E/PAPER 791089] p0195 A80-26643
Future large cargo aircraft technology  
[p0207 A80-27269
Aeropropulsion in year 2000  
[AIAA PAPER 80-0574] p0320 A80-32887
Propulsion-system integration for tactical aircraft  
[p0385 A80-37484
Development of the external upper surface blowing propulsive-lift device  
[p0401 A80-38966
Aerodynamic development of the engine nacelle combination for the Boeing 767 airplane  
[S/A/E/PAPER 800733] p057a A80-49683
Recent developments in ejector technology in the Air Force: An overview  
[p0022 A80-10108
Supersonic propulsion technology --- variable cycle engines  
[p0029 A80-10216
Hypersonic propulsion --- supersonic combustion ramjet engines  
[p0029 A80-10217
Vertical Takeoff and Landing (VTOL) propulsion technology  
[p0029 A80-10218
High-performance-vehicle technology --- fighter aircraft propulsion  
[p0029 A80-10218
A-323
PULSED LASERS

PULSED LASERS
Laser Target Marker/Designator/ and Range
P0324 A80-34187

PULSED RADIATION
NT ELECTROMAGNETIC PULSES
Capacitors for aircraft high power
[AD-A087427]
P0608 B80-31734

PULSES
NT ELECTROMAGNETIC PULSES
NT PRESSURE PULSES
P0808 A80-32049

PUMPS
NT CENTRIFUGAL PUMPS
NT FUEL PUMPS
NT TURBINE PUMPS
Improving the suction capability of vane pumps --- for aircraft fuel tank
P0565 A80-47430

PUSHER TRACKING
An approximate feedback solution of a variable speed non-linear pursuit-evasion game between two airplanes in a horizontal plane
[AIAA 80-1597] P0517 A80-45890

PWM (MODULATION)
U PULSE DURATION MODULATION
P0921 A80-13107

PYLON MOUNTING
Preliminary weight estimation of engine section structure
[SAME PAPER 1231] P0105 A80-20645
Wing/store flutter with nonlinear pylons stiffness
[AIAA 80-0792] P0334 A80-35075

PYLONS
Computational and simplified analytical treatment of transonic wing-fuselage-pylon-store interactions
[AIAA PAPER 80-0127] P0157 A80-23013
Simulated transonic flows for aircraft with nacelles, pylons, and winglets
[AIAA PAPER 80-01300] P0162 A80-23933
Direct side force and drag control with the aid of pylon split flaps
Decoupler pylon: Wing/store flutter suppressor
[NASA-CAS8-LAB-12468-1] P0357 A80-23359

PYROCHROMEBALOY
U COMPOSITE MATERIALS
U REACTIVE MATERIALS

PYROFASTICS
Pyroprocessing of light pyrolysis fuel oil for kerosene type jet fuel
P0652 A80-33599

PYROLYTICS
Full-scale flammability tests with experiments on animals in the Aeronomical Test Center of Toulouse
P0047 A80-13321

PYROMETER
U TEMPERATURE MEASUREMENT
PYRONECHANICS
Development of a hot wire initiated pyrotechnic-propellant gas source for a parachute ejection system
P0160 A80-23461
Pyrotechnic delay cutters for more severe acceleration and temperature environments --- Mid-Air Retrieval System (MARS) for remotely piloted vehicle
P0160 A80-23462

PSY AIRCRAFT
U P-3 AIRCRAFT

QUADRATIC EQUATIONS
On the use in stability analysis of the relationships between the coefficients of a quartic equation and those of quadratic factor
[AR-TR-79065] P0422 B80-24333

QUADRATIC PROGRAMMING
Rear model parameters estimation and rotor balancing studies with quadratic programming
P0297 B80-20587

QUALITY
NT AIR QUALITY
NT ENVIRONMENTAL QUALITY
QUALITY CONTROL
Flaw detection of aircraft components in operation --- Russian book
P0011 A80-11879

SUBJECT INDEX

All-Equipment Production Reliability Tests /AEPRT/ for the P-15
P-16 independent assessment - An Air Force viewpoint
Dehydration of aircraft fuels and lubricants --- Russian book
Non-destructive examination of fibre composite structures by thermal field techniques
Problems involved in the detection of aircraft defects
Technologies of aircraft maintenance.
Application of the method of electro-luminescence emission to the quality control of gas-turbine engine components
An analysis of MIL-STD-472 test methods
Reliability program planning and avionics systems
Some recent advances in non-destructive testing applied to aircraft in service
Alternative jet aircraft fuels
Fatigue strength testing employed for evaluation and acceptance of jet-engine instrumentation probes
Study of the influence of hole quality on composite materials
耐磨ability test methods
Airframe Assessment and Acceptance Testing
Some comments on the problems involved in aircraft assessment and acceptance testing
Evaluation of lateral and directional characteristics and spinning behaviour
Characterization and quality control for an adhesive
A quantitative assessment of the variables involved in crack propagation analysis for in-service aircraft
On the use in stability analysis of the relationships between the coefficients of a quartic equation and those of quadratic factor
Investigations of the optimal configuration of high-stability quartz oscillators for aircraft and missiles
Analytical determination of the influence of elasticity and mass distribution on the aerodynamic characteristics of an aircraft in quasi-steady motion
QUASILEATURABILITY
QUASILEATURABILITY
QUESCHEING (COOLING)
Ignition, combustion, detonation, and quenching of reactive mixtures
A piloted simulator analysis of the carrier landing capability of the quiet short-haul research aircraft
Airport capacity and delays
Radar data utilization in automating the sequencing of aircrafts in terminal areas
A distributed processing system for radar data presentation
Filtering of synthetic radar data

RADAR DETECTION
Use of sign statistics for sequential signal detection in a pulse radar system
The 'Martello' 3D radar antenna --- for civil ATC and military technology
Design of a wind shear detection radar for airports
Hybrid optical/digital processing for target identification
Methodology for target discrimination
New radar-system at the Rhein-Rain airport

RADAR DIRECTION FINDERS
U RADAR DIRECTION FINDERS
RADAR DISPLAYS
U RADARSCHOES
RADAR RECEIVERS
NT CLUTTER
Radar cross sections of conducting bodies over a lossy half space
Statistical correlation models of SSR monopulse responses received during aircraft illumination
Aircraft radar echoes characterization
Spectrum resource assessment in the 2.7-2.9 GHz band phase 2: Radar signal processing

RADAR EQUIPMENT
NT RADAR ANTENNAS
NT RADAR BEACONS
NT RADAR FILTERS
NT RADAR RECEIVERS
NT RADAR TRANSMITTERS
NT RADARSCHOES
E-3A Sentry, airborne early warning and control for Europe
The Viggen multi-mode radar
Airfield surveillance by radar
Principles of electronic warfare -- Radar and EW
The nodular survivable radar --- LSI and microwave circuit technologies for military avionics
Transponders in civil aviation
Methods used for discerning the reliability of military aircraft radar
A standardization evaluation potential study of the common multi-mode radar program
Introduction on LOBADS and ASDE
ASDE: Selective address SSR, performance of the evaluation station --- air traffic control

RADAR FILTERS
A survey of the stochastical filtering techniques for data processing in air-trafic control and surveillance systems
Survey of radar data-processing techniques in air-traffic-control and surveillance systems

RADAR IMAGERY
Tradeoff between picture element dimensions and incoherent averaging in side-looking airborne radar
The Surface Contour Radar, a unique remote sensing instrument

Experiences of a 50 MBPS video recording and processing system for FLIR images
Series 9 cathode ray tube display system
Deteriorating sea-ice boundaries and ice roughness using GMS-3 altimeter data

RADAR MAPS
U RADAR IMAGERY
RADAR MEASUREMENT
Radio metric measurements of targets and clutter
Lidar visibility measurements

RADAR NAVIGATION
The collision avoidance problem requires a mix of partial solutions
Airborne radar -- Evolution and diversification
Primary radar in ATC
Address Selective Surveillance Radar
New radar-system at the Rhein-Rain airport
Deficiencies in flight safety --- using minicomputer control of extracted radar data

RADAR NETWORKS
Britain's new air traffic control radar network
Problems related to the design and construction of a radar network
Methodology for the evaluation of a radar site
Organisation of an integrated global maintenance service --- Radar Networks

RADAR OBSERVATION
U RADAR OBSERVATION
RADAR SCANNING
Required radar ranges for AEW aircraft
A time-shared monopulse approach to air/surface radar ranging

RADAR RECEIVERS
Evaluation of the performance of a defruter for an SSR monopulse system -- Secondary Surveillance Radar
Evaluation of the effect of asynchronous interference on a monopulse radar in a network of secondary sensors
Implementation of air traffic control radar receivers with fast Fourier transforms processors
Design study of a low cost civil aviation GPS receiver system

RADAR REFLECTIONS
U RADAR REFLECTIONS
RADAR SIGNATURES
Principles of electronic warfare -- Radar and EW

RADAR TARGETS
Filtering of synthetic radar data
The target tracking problem using airborne radar under ECM environment
Rayometric measurements of targets and clutter

RADAR TRACKING
Radar resoting --- command and control center system for military air operations
Technological trends in electronic warfare --- use of radar equipment for aircraft detection and weapons control accuracy in air defense

A-329
Subject Index

Radio Equipment
- Radio Antennas
- Radio Beacons
- Radio Receivers
- Radio Transmitters
- Reception Diversity
- Transmitters

Very High Frequency Radio Equipment
Method for increasing the accuracy of an airborne geodetic radio ranging device
- Aircraft radio equipment adjustment and maintenance technology
- The design, development and operation of gas turbine radio telemetry systems
- Standard engineering installation package. Air Traffic Radio Channel Control (ATRCC) equipment
- Theoretical feasibility of digital communication over ocean areas by high frequency radio
- Installation of C-6533 (II-2)/ARC ICS in OH-18 helicopter

Radio Frequencies
- High Frequencies
- Microwave Frequencies
- Ultra High Frequencies
- Very High Frequencies

A standard for RF modulation factor - for instrument landing systems and VOR navigation systems

Radio Frequency Interference
U Electromagnetic Noise
- Comparisons of measured data with IF-77 propagation model predictions
- Suppression of electrostatic radioelectric interference on aircraft
- Measurement of interference-to-navigation/communication avionics from cable television (CATV) systems
- High power HF and noise cancellation system
- Interference and noise in and adjacent to the LORAN-C spectrum at airports

Radio Frequency Noise
U Electromagnetic Noise

Radio Interference
U Radio Frequency Interference

DECCA Navigation
- Hyperbolic Navigation
- Loran
- TACAN

VHF Uninterrupted Navigation
The Omega radio navigation system

The Federal Aviation Administration navigation program

Airport radio navigation systems

The Transit system in radio navigation

Transponders

New possibilities offered by a radio-inertial hybrid guidance system digital simulation study

Radio Propagation
U Radio Transmission

Radio Ranges
U Radio Beacons

Radio Receivers
ST TRANSMITTER RECEIVERS
- Optimal receivers and discrete-signal processors for hyperbolic radar navigation systems
- Receivers for the Navstar global positioning system
- A simple Navstar receiver
- Scalar update navigation algorithms for a low-cost NAVSTAR GPS receiver
- A navigation algorithm for single channel low-cost GPS receiver
- Advanced signal processing concepts for multi-function radio systems
- Military adoption of a commercial VOR/TLS airborne radio with a reliability improvement warranty
- Interferometric locating systems
- Analytical evaluation

Radio Relay Systems
ST RADIO SIGNAL PROPAGATION

Radio Signals
ST RADIO TRANSMISSION

Radio Tracking
The use of single-frequency Decca Navigator signals for remote position monitoring

Radio Transmission
ST IONOSPHERE PROPAGATION

Radio Transmission
ST MICROWAVE PROPAGATION

Short Wave Radio Transmission

Spread Spectrum Transmission

The Omega radio navigation system

Present-day problems of air traffic control

ground-to-air communications

The use of single-frequency Decca Navigator signals for remote position monitoring

Comparison of measured data with IF-77 propagation model predictions

Modern HF communications for low flying aircraft

Features study: A study of HF-external transmissions

Scalar update navigation algorithm for a low-cost aircraft and spacecraft

Radio Transmitters
ST Radio Beacons
ST Transmitter Receivers

A sea-distress signal via satellites

The challenge of designing reliable ECA transmitters

Radio Waves
ST MILLERWAVE WAVES

Radio Range
ST Neutron Radiography

Radio Topography
Discontinuous registration of industrial radiographs using profile analysis and piecewise correlation techniques

Transparent engines at Rolls-Royce - The application of high energy X-ray technology to gas turbine development

A pulsed radiography technique for studying the internal structure of fuel injection jets

A-331
A primitive variable computer model for combustion within solid fuel ramjets

Carbon slurry fuels for volume limited missiles

A comparison of solid fuel ramjet flow characteristics and combustion behavior

A preliminary assessment of the impact of 2-D exhaust-noise geometry on the cruise range of a hypersonic aircraft with top-mounted ramjet propulsion

New-generation ramjets - A promising future

Airplane ski jump takeoff

Impact of ramp launch technology on a Navy support aircraft

Ramjet test facilities

A statistical distributions

Ramjet loads

Drift load tests

Variable mathematical model for predicting the performance of practical swimmers for integral rocket/ramjets

Laser-Raman flow-field diagnostics of two large hypersonic test facilities

Hypersonic combustion ramjet engines

Test and analysis of the ASALB-PTV insulated combustion chamber

Prospects for computer modeling in ramjet combustors

Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet

Modeling techniques for the analysis of ramjet combustion processes

Oblique detonation wave ramjet

An adaptation and validation of a primitive variable mathematical model for predicting the flows in turbojet test cells and solid fuel ramjets

Demonstration program for a flexible duct valve for ramjet engine fuel controls

Thermodynamics of organic compounds - ramjet fuels

Carbon radiography of gas turbine ceramics

Optical microscopy of engines for high altitude hypersonic cruise vehicles

An experimental investigation of pressure oscillations in a side-dump ramjet combustor

The design and combustion performance of practical swimmers for integral rocket/ramjets

Elementary considerations for ramjet modelling

Prospects for computer modeling in ramjet combustors

Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet

Modeling techniques for the analysis of ramjet combustion processes

Oblique detonation wave ramjet

An adaptation and validation of a primitive variable mathematical model for predicting the flows in turbojet test cells and solid fuel ramjets

Demonstration program for a flexible duct valve for ramjet engine fuel controls

Thermodynamics of organic compounds - ramjet fuels

A primitive variable computer model for combustion within solid fuel ramjets

Carbon slurry fuels for volume limited missiles

A comparison of solid fuel ramjet flow characteristics and combustion behavior

A preliminary assessment of the impact of 2-D exhaust-noise geometry on the cruise range of a hypersonic aircraft with top-mounted ramjet propulsion

New-generation ramjets - A promising future

Airplane ski jump takeoff

Impact of ramp launch technology on a Navy support aircraft

Ramjet test facilities

A statistical distributions

Ramjet loads

Drift load tests

Variable mathematical model for predicting the performance of practical swimmers for integral rocket/ramjets

Laser-Raman flow-field diagnostics of two large hypersonic test facilities

Hypersonic combustion ramjet engines

Test and analysis of the ASALB-PTV insulated combustion chamber

Prospects for computer modeling in ramjet combustors

Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet

Modeling techniques for the analysis of ramjet combustion processes

Oblique detonation wave ramjet

An adaptation and validation of a primitive variable mathematical model for predicting the flows in turbojet test cells and solid fuel ramjets

Demonstration program for a flexible duct valve for ramjet engine fuel controls

Thermodynamics of organic compounds - ramjet fuels
A-333
Design approaches for GPS receivers/processors p0304 A80-21308
Evolution and transition of today's military landing system to compatibility with present and future civil military systems - multi-mode receivers and the marine remote area approach landing system p0493 A80-27339
Alternate waveforms for a low-cost civil global positioning system receiver [AD-A088245] p0632 A80-32371
RECEIVING SYSTEMS
U RECEIVERS
RECEPTION DIVERSITY
Error rate performance of M-ary DPSK systems in satellite/aerospace communications p0192 A80-25905
RECEIVING ENGINE U PISTON ENGINES
RECEPIENT
On the characteristics of centrifugal-reciprocating machines - cryogenic coolers [NASA-CR-162881] p0249 A80-19499
RECIRCULATION
U CIRCULATION
RECIRCULATING FLUID FLOW
Effect of swirl, wake parameter and wake Reynolds' number on recirculation in combustion chambers of jet engines p0617 A80-52021
RECOGNITION
MT SPEECH RECOGNITION
MT TARGET RECOGNITION
MT AERIAL RECONNAISSANCE
RECOGNIZANCE IN SPACE
MT RECONNAISSANCE AIRCRAFT
MT CI-88 AIRCRAFT
MT F-5 AIRCRAFT
MT MIRAGE AIRCRAFT
MT MIRAGE 3 AIRCRAFT
MT WEATHER RECONNAISSANCE AIRCRAFT
In Soviet service. VII - Mikoyan Foxbat Soviet High-25 program p0006 A80-10900
Preliminary design of an integrated redundant digital flight control system for the maritime patrol aircraft p0262 A80-32438
Back-door surveillant - Mark Three MiGred hails images HN boost --- UK surveillance aircraft p0466 A80-42824
Concept of a research aircraft for remote sensing, using an integrated sensor/data system [DGCR PAPER 80-051] p0523 A80-46300
A mission training simulator for the MiGed RF MK 2 and some aspects of the derivation and verification of its system models p0254 A80-19826
[AD-A077677]
RECONSTRUCTION
The reconstruction of flight paths from AIS-data with the aid of modern filtering methods p0430 A80-25288
RECORDING
MT DATA RECORDING
MT DATA SHARING
MT PHOTOGRAPHIC RECORDING
Application of flight simulator record/playback feature [AD-A081752] p0484 A80-26335
RECORDING INSTRUMENTS
MT FLIGHT LOAD RECORDERS
MT FLIGHT RECORDERS
RECOVERABILITY
New remotely piloted vehicle launch and recovery concepts. Volume 1: Analysis, preliminary design and performance/cost trade studies [AD-A077675] p0236 A80-19066
RECOVERABLE SPACECRAFT
MT AIRSPACEPLANES
MT REUSABLE SPACECRAFT
MT SPACE SHUTTLES
RECOVERY
BPV recovery systems p0266 A80-29658
RECOVERY PARAPLANCHE
Parachute recovery systems. I - Parachute materials, applications and design. II - The recovery system as an integral part of vehicle design p0266 A80-29657
Recovery system preliminary design. A simplified approach to determining staging, timing and altitude requirements for fast, infalling parachutes [AD-A075758] p0233 A80-19001
RECOVERY VEHICLES
Thanks, Coast Guard ... We needed that --- Short Range Recovery Helicopter avionics p0408 A80-39825
RECTANGULAR PANELS
Sonic fatigue design data for bonded aluminum aircraft structures [AIAA PAPER 80-0303] p0094 A80-18304
Propagation of edge cracks in laterally excited stiffened panels p0623 A80-53465
RECTANGULAR PLANSFORMS
MT RECTANGULAR PANELS
MT RECTANGULAR VINGS
RECTANGULAR VINGS
The effects of leading edge modifications on the post-stall characteristics of wings [AIAA PAPER 80-0199] p0097 A80-18375
The relationship between the critical reversal and divergence speeds for a straight wing [AD-A082622] p151 A80-21310
Analytical investigation of the nonlinear characteristics of a small-aspect rectangular wing [AIAA A80-21317]
Calculation of the supersonic flow field with vortices behind a slender rectangular wing p151 A80-21320
Pressure distribution in rectangular wing plates/blade sections curving linear motion in an incompressible medium p0203 A80-27157
Major results of the asymptotic theory of a low-flying wing - Method of matched asymptotic expansions p0453 A80-41708
Motion of rectangular wing between parallel walls p0019 A80-10050
Calculation of transonic flows around wings p0606 A80-12016
Study of an edge vortex by means of ultrasound in a close field behind a rectangular wing in a wind tunnel [MPS-11/1979] p0587 A80-30282
RECOPRORATORS
MT REGENERATORS
REDUCED GRAVITY
F-104 low-gravity calibration tests for materials processing in space precursor experiments [NASA-TM-78278] p0436 A80-25355
REDUCTION (CHEMISTRY)
MT HYDROLYSIS
REEDUNDANCY
Redundancy
Redundancy management considerations for a control-configured fighter aircraft triplex digital fly-by-wire flight control system p0111 A80-14026
Failure detection, isolation and indication in highly integrated digital guidance and control systems p0112 A80-14027
REEDUNDANCY ENCODING
Isochronic error in asynchronous digital flight control p0436 A80-25366
REEDUNDANT COMPONENTS
Preliminary design of an integrated redundant digital flight control system for the maritime patrol aircraft p0262 A80-32434
Fault-tolerant system optimization p0410 A80-40312
Backup flight control system for a highly maneuverable remotely piloted research vehicle [AIAA 80-1761] p0511 A80-45548
Investigation into the reliability and cost of ownership of the Flesnay air motor servo unit - Type 306

[AD-1078156] p0248 800-19266

Assessment of RF communications reliability
[AD-1078157] p0250 800-19532

Methods used for discerning the reliability of military aircraft radar
[AD-1078158] p0250 800-19533

Impacts of technologies selected on the reliability and operational availability of equipment. Cost considerations
[AD-1078159] p0251 800-19536

Military adoption of a commercial V08/ILS airborne radio with a reliability improvement warranty
[AD-1078160] p0251 800-19540

Radar approach control (BAPCON) primary input power study
[AD-1078161] p0416 800-24029

A Combined Environments Reliability Test (CERT) facility for testing of airborne equipment
[AD-1078162] p0423 800-24337

Reliability and maintainability improvement techniques for the AN/ALQ-119 airborne electronic countermeasure system. Volume 2: Modifications to display set control, C10626/A9-30(V)
[AD-1078163] p0450 800-30307

Production oriented maintenance organization: A critical analysis of sortie-generation capability and maintenance quality
[AD-1078164] p0595 800-31323

RELIABILITY ANALYSIS

Reliability and life of aircraft gas turbine engines
[AD-1078165] p0504 800-15090

The reliability of the mechanical components of jet aircraft -- Russian book
[AD-1078166] p0516 800-23036

All-Equipment Production Reliability Tests /AEPRT/ for the F-15
[AD-1078167] p0163 800-23962

Reliability growth testing of avionic equipment
[AD-1078168] p0209 800-27612

Basic issues of reliability in aviation
[AD-1078169] p0280 800-32227

Survivable C3 -- command, control and communication centers in military electronics defense
[AD-1078170] p0322 800-34156

Canadian Reliability Symposium, Toronto, Canada, May 16, 17, 1980, Proceedings
[AD-1078171] p0409 800-39918

Reliability pays off -- reliability and life history for Lead Computing Optical Sight System for Northrop F-5B Aircraft
[AD-1078172] p0409 800-39922

Analysis of fault isolation criteria/techniques
[AD-1078173] p0409 800-40305

An analysis of MIL-STD-671 test methods
[AD-1078174] p0409 800-40307

Reliability program planning and avionics systems
[AD-1078175] p0409 800-40318

Integrated Test - A must for reliability achievement
[AD-1078176] p0410 800-40333

Software/ Hardware Integrated Critical Path Analysis /ICPA/
[AD-1078177] p0411 800-40352

Accelerating reliability growth of electronic propulsion controls in the 1980's
[AD-1078178] p0441 800-41188

Reliability prediction techniques for defense power conversion equipment
[AD-1078179] p0441 800-41188

Reliability prediction techniques for defense power conversion equipment
[AD-1078180] p0456 800-42056

Reliability/safety analysis of a fly-by-wire system
[AD-1078181] p0511 800-45547

The relationship between reliability and airworthiness -- flight risk and failure estimation for civil aviation
[AD-1078182] p0511 800-45694

New technology for the SBP-system and its reliability. I - -- on directional beacon for civil aviation
[AD-1078183] p0568 800-47797

Reliability problems of adaptive automatic control systems /Review/
[AD-1078184] p0572 800-48699

Risk and failure analysis for improved performance and reliability; Proceedings of the
RELIABILITY

Assessment of instrument reliability during design
Study of turboprop systems reliability and maintenance costs
Reliability of high-brightness CBTs for airborne displays
Reliability management of the avionic system of a military strike aircraft
An analysis of software reliability prediction models
Software development for FORNADO: A case history from the reliability and maintainability aspect
Reliability measurement for operational avionic software
An assessment of the stability and opening characteristics of cruciform parachutes
Summary of 1979 independent research on risk analysis methods — minimum fatigue test data for reliable aircraft structures
Reliability of ceramics for heat engine applications

RELIABILITY CONTROL

U QUALITY CONTROL

RELIABILITY ENGINEERING
Future requirements for environmental control systems in naval aircraft
Fault-surviving flight control avionics
The reliability of the mechanical components of flight vehicles — Russian book
Reliability and maintainability design standards from readiness-related goals — for naval aircraft weapon systems
Advanced computer program — for future automation and system performance improvements
Reliability improvement on aircraft engine bearing by discriminant analysis
A comparison of computer architectures for the NASA demonstration advanced avionics system
The Fault Tolerant Multiprocessor engineering model /A report/ — computer systems design for avionics systems
Canadian Reliability Symposium, Toronto, Canada, May 16, 17, 1980, Proceedings
Cost analyses for avionics acquisition
Fault-tolerant system optimization
Protection and specification of clutches to be used with gas turbine generators
Interferometer design and data handling in a high-vibration environment. I — Interferometer design
The challenge of designing reliable ECU transmitters
IPP system concept based on two synchronization
Reliability of nondestructive inspections

REMOTE SENSORS

Fatigue strength testing employed for evaluation and acceptance of jet-engine instrumentation probes
The application of reliability improvement warranty to dynamic systems
Avionics Reliability, Its Techniques and Related Disciplines — conferences
An analysis of the evolution of the reliability and maintainability disciplines
Difficulties in predicting avionics reliability
Reliability growth models
A simulation program for the determination of system reliability of complex avionic systems
Trends in reliability modeling technology for fault tolerant systems
Non-electronic aspects of avionic system reliability — actuation
Reliability growth through environmental simulation — electronic equipment
The k-t head-up display reliability programs
Formal methods for achieving reliable software
The integrated management of reliability and maintainability in procurement
In-service improvements to reliability and maintainability of the instrument landing system
Non-operating failure rates for avionic systems
An approach to the derivation and validation of requirements

RELIABLE NAVIGATION SYSTEMS

Design of an improved weather contouring device
Radar remoting — command and control center system for military air operations
Remote piloted vehicles. Citations from the International Aerospace Abstracts data base
The use of single-frequency Decca Navigator signals for remote position monitoring
Assessment of the environmental compatibility of differing helicopter noise certification standards
The use of single-frequency Decca Navigator signals for remote position monitoring

REMOTE SENSORS

In-service improvements to reliability and maintainability of the instrument landing system
Non-operating failure rates for avionic systems
An approach to the derivation and validation of requirements
REMOTE PILOTED VEHICLES

Remote sensing of turbine engine gases
[AD-A098454] p0534 880-28355

REMOTE PILOTED VEHICLES
Technical concept for a strike-BPV flight guidance and weapon delivery system
p0007 880-11174

Take-off and landing problems of ship based RPVs
p0007 880-11175

Pyrotechnic delay cutters for smoke screen accentuation and temperature environments --- Mid-Air Retrieval System (MARS) for remotely piloted vehicle
p0160 880-23462

Firebrand anti-ship missile target - Flight test program objectives and vehicle instrumentation requirements
p0206 880-27236

Remotely piloted vehicles; International Conference, Bristol, England, September 3-5, 1979, Conference Papers and Supplementary Papers
p0265 880-29651

Operations of unmanned aircraft
p0265 880-29652

Prospects for advanced tactical RPV's
p0265 880-29653

Unmanned aircraft systems research in the UK
p0265 880-29654

VPV-Poker-concept for a ground-attack-BPV
p0265 880-29655

A low budget experimental BPV system
p0265 880-29656

Parachute recovery systems. I - Parachute materials, applications and design. II - The recovery system as an integral part of vehicle design
p0266 880-29657

BPV recovery systems
p0266 880-29658

Aerfoils down to critical Reynolds numbers and the performance of remotely controlled gliders
p0266 880-29659

Mini-BPV research
p0266 880-29660

Development, flight test and application of BPV control law concepts for microprocessor based computers
p0266 880-29661

Power units for mini-BPV's
p0266 880-29662

The design and manufacture of a prototype cost-effective B.P.V. engine
p0266 880-29663

Antennas for BPV's
p0266 880-29664

Use of a simulator in the development of a BPV system
p0266 880-29665

Mini-BPV technology development
p0267 880-29668

BPV aeronautical and support system Supporting Technology Programs
p0267 880-29669

Design and test of mini-BPV demonstrator engines
p0267 880-29670

Advanced developments in turbo machinery for use in small BPV engines
p0267 880-29671

Microprocessors in a BPV system
p0267 880-29672

Communication to RPV's --- data link design for information transfer from ground terminal or other BPV
p0267 880-29673

Application of a ground based minicomputer system for real time, closed loop control of remotely piloted aircraft models used in stall/spin research
p0276 880-31018

HIAT technical description
p0046 880-41000

Backup flight control system for a highly maneuverable remotely piloted research vehicle
[AD-A098454] p0534 880-28355

Small/spin flight results for the remotely piloted spin research vehicle
[AD-A098454] p0534 880-28355

Nickel-zinc batteries for aircraft and aerospace applications
p0571 880-48483

A hybrid simulator for the BGB-34C multi-mission BPV
p0578 880-49828

The development of the DAST I remotely piloted research vehicle for flight testing an active flutter suppression control system
p0079 880-12083

Remotely piloted vehicles. Citations from the International Aerospace Abstracts data base
p0080 880-13040

Experience in producing software for the ground station of a remotely piloted helicopter system
p0112 880-16038

New remotely piloted vehicle launch and recovery concepts: Computer program listings
[AD-A076611] p0223 880-16035

New remotely piloted vehicle launch and recovery concepts. Volume 1: Analysis, preliminary design and performance/cost trade studies
[AD-A077475] p0236 880-19066

Remote piloted vehicles, volume 2. A bibliography with abstracts
p0239 880-19089

Proceedings of the Association for Unmanned Vehicle Systems AUVS '79: 6th Annual Convention
p0258 880-20018

Flight research techniques utilizing remotely piloted research vehicles
p0597 880-31337

Remotely piloted seaplane for antisubmarine warfare
p0603 880-31380

Investigation of performance, noise, and detectability characteristics of Remotely Piloted Vehicle (BPV) propellers
p0636 880-32398

REPAIRING U MAINTENANCE

REPOETS

NT CONGRESSIONAL REPORTS

REPUBLIC AIRCRAFT

RT A-10 AIRCRAFT

REPUBLIC MILITARY AIRCRAFT

US MILITARY AIRCRAFT

RESCUE OPERATIONS

A sea-distress signal via satellites
p0049 880-13998

Helicopter crash position indicator flight trials
p0206 880-27240

Rescue at sea of aircrew personnel
p0268 880-29775

Navy combat Search and Rescue
p0508 880-50224

Aeronautical systems technology needs: Escape, rescue and survival
[AD-A083552] p0370 880-26268

Naval aviation water survival program
p0559 880-30015

RESEARCH

NT DYNAMIC PROGRAMMING

NT GAME THEORY

NT LIBRARY PROGRAMMING

NT MARKET RESEARCH

NT OPERATIONS RESEARCH

Current research on aviation weather (bibliography), 1979
[NASA-CH-3214] p0125 880-14651

RESEARCH AIRCRAFT

RT B-70 AIRCRAFT

RT C-8A AGUROS/M WING AIRCRAFT

RT GUSTOL

RT ROCKET SYSTEMS RESEARCH AIRCRAFT

General aviation icing flight test
p0208 880-27383

The Quiet Short-Haul Research Aircraft /QSRA/
[AD-A077877] p0258 880-27384

Mini-BPV research
p0266 880-29660

Further encounters with clear air turbulence in research aircraft
p0042 880-39070

HIAT technical description
p0046 880-41000

An experimental aircraft to test new technologies
p0046 880-42918

Effects of discontinuous drooped wing leading-edge modifications on the spinning characteristics of a low-wing general aviation airplane
[AD-A098454] p0470 880-43301

Backup flight control system for a highly maneuverable remotely piloted research vehicle

A-338
The future of short-haul transport aircraft
(SAE PAPER 800755)

Future aviation fuels - the petrochemical industry responds to the challenge
(SAE PAPER 800769)

Aircraft noise and the market for residential amenities
(SAE PAPER 800773)

Multiport - France's mountain airports
(SAE PAPER 800781)

The development of maintenance schedules for aircraft structures
(SAE PAPER 800583)

Aeronautics and Space Administration
National Aeronautics and Space Administration
(90-96-710)

NASA authorization, 1981
(90-96-710)

Recent developments in aerospace technology

An overview of NASA research on positive displacement general aviation engines
(SAE PAPER 800224)

Aeronautical Research Laboratories
(NASA-CH-159790)

Design considerations for attaining 250-knot test velocities at the aircraft landing dynamics facility
(SAE PAPER 800125)

Air Force Flight Dynamics Laboratory fiscal year 1981.
Technical objective document
(SAE PAPER 800245)

Description of the warm core turbine facility recently installed at NASA Lewis Research Center
(SAE PAPER 800258)

RESEARCH FACILITIES

Lightning protection for aircraft
(SAE PAPER 800202)

Aeronautical Research Laboratories
(90-96-710)

Design considerations for attaining 250-knot test velocities at the aircraft landing dynamics facility
(SAE PAPER 800125)

Air Force Flight Dynamics Laboratory fiscal year 1981.
Technical objective document
(SAE PAPER 800245)

Description of the warm core turbine facility recently installed at NASA Lewis Research Center
(SAE PAPER 800258)

RESEARCH HANDBOOK

The cautious course to introducing new SBM technology into production systems - Structures, Dynamics and Materials
(SAE PAPER 800193)

Major areas of research in aeronautics and air traffic at the German Aerospace Research Establishment
(SAE PAPER 800526)

The aerodynamics of future transport aircraft and the role of the wind tunnel during development
(SAE PAPER 800216)

NASA/DOD program: Status and description
(SAE PAPER 800130)

Unsteady flow and dynamic response analyses for helicopter rotor blades
(SAE PAPER 800125)

Research on helicopter rotor noise
(SAE PAPER 800125)

Is the joint Air Force/Navy alternate engine program workable? GAO thinks not, as presently structured
(SAE PAPER 800125)

Project SQUID
(SAE PAPER 800125)

RESEARCH PROJECTS

Navy V/STOL - A continuing initiative
(SAE PAPER 800130)

Unmanned aircraft systems research in the UK
(SAE PAPER 800265)

SPHERA research on airships
(SAE PAPER 800265)

RESIDENTIAL AREAS

Airport noise, location rent, and the market for residential amenities
(SAE PAPER 800306)

Aircraft noise and the market for residential housing: Empirical results for seven selected airports
(SAE PAPER 800295)
<table>
<thead>
<tr>
<th>Subject Index</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature field as a means of evaluating excitation intensity of aircraft turbine blades</td>
<td>p0619 A80-52193</td>
</tr>
<tr>
<td>The reduction of dynamic interference by sound-absorbing walls in the BAB 3 foot wind tunnel</td>
<td>p0182 B80-17093</td>
</tr>
<tr>
<td>The use of sound absorbing walls to reduce dynamic interference in wind tunnels</td>
<td>p0182 B80-17096</td>
</tr>
<tr>
<td>Vibrations of a compressor blade with slip at the root</td>
<td>p0183 B80-17263</td>
</tr>
<tr>
<td>Rotor-bearing dynamics technology design guide. Part 1: Flexible rotor dynamics</td>
<td>p0611 B80-31002</td>
</tr>
<tr>
<td><strong>RESOURCES</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MT CYLINDER RESERVOIRS</strong></td>
<td></td>
</tr>
<tr>
<td>Model studies of acoustic resonators</td>
<td>p0327 A80-30403</td>
</tr>
<tr>
<td><strong>RESOURCE ALLOCATION</strong></td>
<td></td>
</tr>
<tr>
<td>The allocation of runway slots by auction. Volume 1: Executive summary</td>
<td>p0543 B80-29269</td>
</tr>
<tr>
<td>The allocation of runway slots by auction. Volume 2: The airline management game and slot auction testing</td>
<td>p0543 B80-29270</td>
</tr>
<tr>
<td>The allocation of runway slots by auction. Volume 3: Theory and technical issues for implementation</td>
<td>p0543 B80-29271</td>
</tr>
<tr>
<td><strong>RESOURCES</strong></td>
<td></td>
</tr>
<tr>
<td>MT COAL</td>
<td></td>
</tr>
<tr>
<td>MT CRUDE OIL</td>
<td></td>
</tr>
<tr>
<td>MT FORESTS</td>
<td></td>
</tr>
<tr>
<td>MT FOSSIL FEULS</td>
<td></td>
</tr>
<tr>
<td><strong>RESOURCES MANAGEMENT</strong></td>
<td></td>
</tr>
<tr>
<td>An engine fuel chemistry solution to the problem of jet fuel supplies</td>
<td>p0002 A80-10199</td>
</tr>
<tr>
<td>Fuels research: Fuel thermal stability overview</td>
<td>p0550 B80-29324</td>
</tr>
<tr>
<td><strong>RESPONDERS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>U TRANSFORMERS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>RESPONSES</strong></td>
<td></td>
</tr>
<tr>
<td>MT DYNAMIC RESPONSE</td>
<td></td>
</tr>
<tr>
<td>MT MODAL RESPONSE</td>
<td></td>
</tr>
<tr>
<td>MT PHYSIOLOGICAL RESPONSE</td>
<td></td>
</tr>
<tr>
<td>MT TRANSIENT RESPONSE</td>
<td></td>
</tr>
<tr>
<td><strong>RESTRAINTS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>U CONSTRAINTS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>RETRACTABLES</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MT FLAKE RETRACTABLES</strong></td>
<td></td>
</tr>
<tr>
<td>Retarding</td>
<td></td>
</tr>
<tr>
<td>External store flutter suppression with active controls</td>
<td>p0309 B80-21351</td>
</tr>
<tr>
<td><strong>REVERSAL ADAPTATION</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MT DARK ADAPTATION</strong></td>
<td></td>
</tr>
<tr>
<td><strong>REVERSAL LEAVES</strong></td>
<td></td>
</tr>
<tr>
<td>The influence of colors on the visibility of aircraft and ground obstacles</td>
<td>p0007 A80-13778</td>
</tr>
<tr>
<td><strong>RETRACTIBLE LANDING GEAR</strong></td>
<td></td>
</tr>
<tr>
<td>MT LANDING GEAR</td>
<td></td>
</tr>
<tr>
<td><strong>RETRIVAL</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MT INFORMATION RETRIEVAL</strong></td>
<td></td>
</tr>
<tr>
<td><strong>RETOPFITTING</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MT ACOUSTIC RETOPFITTING</strong></td>
<td></td>
</tr>
<tr>
<td>How to get more out of your 747 - Pan Am and Qantas take different routes</td>
<td>p0620 A80-52699</td>
</tr>
<tr>
<td><strong>REUSABLE SPACECRAFT</strong></td>
<td></td>
</tr>
<tr>
<td>MT AERO SPACECRAFT</td>
<td></td>
</tr>
<tr>
<td><strong>MT SPACE SHUTTLES</strong></td>
<td></td>
</tr>
<tr>
<td>Antecedents of the Space Shuttle</td>
<td>p0373 A80-36446</td>
</tr>
<tr>
<td><strong>REVERBERATION</strong></td>
<td></td>
</tr>
<tr>
<td>Experimental investigation of sound absorption in a flow-carrying channel with a sound-absorbing lining</td>
<td>p0326 A80-39499</td>
</tr>
<tr>
<td><strong>REVERSAL FLOW</strong></td>
<td></td>
</tr>
<tr>
<td>The relationship between the critical reversal and divergence speeds for a straight wing</td>
<td>p0151 A80-21310</td>
</tr>
<tr>
<td>Feasibility study of an isolated reverse-turbine system for gas turbine engines --- marine propulsion</td>
<td>p0183 B80-17263</td>
</tr>
</tbody>
</table>

**TEMPERATURE FIELD AS A MEANS OF EVALUATING EXCITATION INTENSITY OF AIRCRAFT TURBINE BLADES**

Temperature field as a means of evaluating excitation intensity of aircraft turbine blades.

**THE REDUCTION OF DYNAMIC INTERFERENCE BY SOUND-ABSORBING WALLS IN THE BAB 3 FOOT WIND TUNNEL**

The reduction of dynamic interference by sound-absorbing walls in the BAB 3 foot wind tunnel.

**THE USE OF SOUND ABSORBING WALLS TO REDUCE DYNAMIC INTERFERENCE IN WIND TUNNELS**

The use of sound absorbing walls to reduce dynamic interference in wind tunnels.

**VIBRATIONS OF A COMPRESSOR BLADE WITH SLIP AT THE ROOT**

Vibrations of a compressor blade with slip at the root.

**ROTOR-BEARING DYNAMICS TECHNOLOGY DESIGN GUIDE. PART 1: FLEXIBLE ROTOR DYNAMICS**

Effect of tip vortex structure on helicopter noise due to blade-vortex interaction

RIGID ROTORS
A rotor supported without contact - Theory and application

Experimental evaluation of the predicted behavior of squeeze-film-bearing-supported rigid rotors

Vibration reduction with higher harmonic blade trailing for helicopter with two-bladed teetering and four-bladed hingeless rotors

Non-linear dynamic analysis of rotors by finite element method

Effects of primary rotor parameters on flapping dynamics

RIGID STRUCTURES
RIGID ROTORS
RIGID WINGS
Calculation of minimum-weight and maximum-rigidity structures in the presence of design constraints

Noise transmission and attenuation by stiffened panels

An analytical study of tilt proprotor aircraft dynamics in airplane cruise configuration including the effects of fuselage longitudinal rigid body motion

An experimental investigation of the effects of aeroelastic couplings on aerostructural stability of a hingeless rotor helicopter

RIGID WINGS
Experimental study of flapping wing lift and propulsion

Investigation of a foam supported glass fiber p-box for a rigid wing hang glider

WING STRUCTURES
REINFORCED WINGS
WING WINGS
Two-dimensional finite-element analysis of simulated rotor-fragment impacts against rings and beams compared with experiments

WING WINGS
A test of the method of Fink and Sob for following vortex-sheet motion

RISK
Risk and failure analysis for improved performance and reliability; Proceedings of the Twenty-fourth Sagnare Army Materials Research Conference, Baguette Lake, N.Y., August 21-26, 1977

Assessment of the risk due to release of carbon fiber in civil aircraft accidents, phase 2

Assessment of risk due to the use of carbon fiber composites in commercial and general aviation

An assessment of the risk arising from electrical effects associated with the release of carbon fiber composites from general aviation aircraft fires

Determination of the safety in a North Atlantic organized track system with reduced lateral separation - statistical tests

Statistical aspects of carbon fiber risk assessment modeling - fire accidents involving aircraft

SUBJECT INDEX

AIRCRAFT
[ NASA-CR-159318] p0555 800-29432
Carbon/graphite composite material study --- risk and hazards of fiber release
Experimental and analytical studies for the NASA carbon fiber risk assessment
[ NASA-CR-159214] p0651 800-33490

RIVETED JOINTS
Ensuring geometrical accuracy of riveted aircraft component contours --- Russian book

Damping effects in joints and experimental tests on riveted specimens

Endurance of riveted lap joints (aluminum alloy sheet and rivets)

RIVETING
Mechanical fasteners dominating aerospace --- airframe and spacecraft structural joining techniques

ROADS
RTH HIGHWAYS
Pavement evaluation and overlay design using vibratory destructive testing and layered elastic theory. Volume 1: Development procedure

ROCKET CHAMBERS
RTH THRUST CHAMBERS
ROCKET ENGINE DESIGN
Liquid hydrogen engines

A comparison of interstellar propulsion methods

ROCKET ENGINES
RTH HYDRAULIC ENGINES
RTH LIQUID PROPELLANT ROCKET ENGINES
RTH NUCLEAR ROCKET ENGINES
RTH SOLID PROPELLANT ROCKET ENGINES
Introduction to aerospace technology --- Russian book

Organizing multistage energy conversion systems

Description of an experimental (hydrogen peroxide) rocket system and its use in measuring aileron and rudder effectiveness of a light airplane

Spin profile tailoring for the improved 2.75-inch rocket

Rocket Firing
Spin profile tailoring for the improved 2.75-inch rocket

Rocket Flight
Spin profile tailoring for the improved 2.75-inch rocket

Rocket Launchers
Spin profile tailoring for the improved 2.75-inch rocket

Rocket Nozzles
Analysis of experiments on the effects of jet plumes on pressure distribution over a cylindrical afterbody at transonic speeds

Rocket Propellants
RTH LIQUID ROCKET PROPELLANTS
RTH SOLID PROPELLANTS
RTH SOLDIETY PROPELLANTS
Rocket Test Facilities
GBRA test facility

Rocket Thrust
Rockets for spin recovery

Rocket Vehicles
RTH ARMY LAUNCH VEHICLE
RTH MULTISTAGE ROCKET VEHICLES

ROCKETS
RTH COIL
RTH EAGLE ROCKETS
S. FLEXIBLE ROCKETS
ROCKET WINGS
Measurement of dynamic direct and cross-coupling derivatives due to oscillatory roll

A-342
BOTABI BUGS

SUBJECT IBDBI

Botary balance data for a typical single-engine
general aviation design for an angle—of-attack
range of 8 degrees to 35 degrees, 3. Effect of
wing leading-edge modifications, model A
[HASA-CB-3102]
p0068 H80-12060
The response of turbine engine rotors to
interference rubs
[HASA-TH-81518]
• p0501 B80-27696
Analysis and identification of snbsynchronons
vibration for a high pressure parallel flow
centrifugal compressor
p0557 B80-29710
Snbsynchronons instability of a geared centrifugal
compressor of overhung design
p0557 B80-29711
The parameters and measurements of the
destabilizing actions of rotating machines, and
the assumptions of the 1950's
,
p0557 B80-29712
Asynchronous vibration problem of centrifugal
compressor
. p0557 B80-29713
Evaluation of instability forces of labyrinth
seals in turbines or compressors
p0557 B80-29715
Damping in ring seals for compressible fluids
p0557 B80-29716
Flow induced spring coefficients of labyrinth
seals for application in rotor dynamics
p0557 B80-29717
Effect of fluid forces on rotor stability of
'centrifugal compressors and pumps
pOSSS B80-29720
Hon-synchronous whirling due to fluid-dynamic
forces in axial turbo-machinery rotors
p0558 H80?-29721
Fluid forces on rotating centrifugal impeller with
whirling motion
p0558 B80-29724
Botary balance data for a typical single-engine
general aviation design for an angle-of-attack
range of 8 deg to 90 deg. 2: Bigh-wing model c
[BASA-CB-3201]
p0628 H80-32335

Application of existing roll response criteria to
transport aircraft with advanced flight control
systems
[AIAA 80-1572]
p0516 A80-45871
Experiments in sensing transient rotational
acceleration cues on a flight simulator
[BASA-TP-1537]
p0027 H80-10193
Light airplane crash tests at three roll angles
[BASA-TP-1477]
p0033 H80-10512
Beal tine digital model of a rolling airframe
[AD-A073456]

p0069 H80-12075

Boll control of an attitude-controlled aerodynamic
vehicle which has strong roll-yaw coupling
[SABD-79-1940]
.
p0422 B80-24330

BOLL COBTBOL
0 LATBBAL COBTBOL
BOLL FOBBING
Fabrication of double-curvature skins by rolling
for aircraft structures
p0376 A80-36780
BOLLBB BBABIBGS
Operation of an all-ceramic mainshaft roller
bearing in a J-102 gas-turbine engine
[ASLB PBEPRINT 80-AH-3C-1]
p0467 A80-43166
Endnrance and failure characteristics.of modified
Vasco x-2, CBS 600 and AISI 9310 spur gears
p0524 A80-46411
Hybrid bearings for aircraft engines
p0616 A80-S1897
Improved capabilities to detect incipient -bearing
failures
[AD-A073123]
p0074 880-12416

Development of mainshaft high-speed cylindrical
roller bearings for gas turbine engines
[AD-A073381]
p0084 B80-13475
Quiet Clean Short-haul Experimental Engine (QCSEE)
main redaction gears bearing development program
[BASA-CB-134890]
p0134 B80-15105
Study of rolling element dynamic interactions with
separator and raceway paths. Boiler skewing
measurements in roller bearings
[HASA-CB-163186]
p0426 B80-24622
Botor-bearing dynamics technology design guide.
Part 4; Cylindrical roller bearings
[AD-A082355]
p04<IO H80-25662
Ceramics in rolling element bearings
p0553 B80-29351
Effect of cage design on characteristics of
high-speed-jet-lubricated 35-millimeter-bore
ball hearing
turbojet engines

BOTABI BIHG AIBCBAFT
BT BO-105 HBLICOPTEB
BT CH-46 HELICOPTEB
BT CH-«7 HEIICOPTEB
BT CH-54 HELICOPTBB
BT H-53 HELICOPTBB
BT H-54 BELICOPTEB
BT HEAVY LIFT HELICOPTEBS
BT HBIICOPTBBS
BT HILITABY HBLICOPTEBS
BT OH-6 HELICOPTEB
BT OH-58 HELICOPTBB
BT P-531 HELICOPTBB
BT BISID BOTOB HELICOPTBBS
BT BOTOB SYSTEMS BESEABCH AIBCBAFT
BT SH-3 HBLICOPTEB
ST TAHDEM BOTOB HBLICOPTEBS
BT TILT BOTOB AIBCBAFT
BT DH-1 HELICOPTBB
BT DH-60A BELICOPTEB
BT IV-15 AIBCBAFT
Botorcraft identification experience

[HASA-TP-1732]
p0653 B80-33749
BOUIHG CO8TACT LOADS
Boiling of a loaded rotor around a rigid bearing
p0395 A80-38664
BOLLIIG HOBSHIS
Departure and uncoordinated roll reversal
boundaries for fighter configurations •
[AIAA 80-1566]
p0515 A80-45865
Parametric study of the Orbiter rollout using an
approximate solution
[HASA-TH-80837]
p0082 H80-13148
Effect of spanwise gust variations
p0125 N80-14639
Experimental investigation of a circulation
control aileron
[AD-A07.8825]
p0233 B80-19046
BOOH TBHPBHATOBB
Fracture analysis of ductile materials
p0618 A80-52182
BOTABT DBIVBS
D HECHAHICAL DBIVES
BOIABI STABILITY
HI GIBOSCOPIC STABILITY
Experimental determination of pure rotary
stability derivatives using curved and rolling
flow vind tunnel
[ A I A A PAPEB 80-0309]
p0094 A80-18308

p0241 S80-19101

Botorcraft flight simulation, computer program
C81.
Volume 1: Engineer's manual
[AD-A079631]
p03«8 B80-22312
Botorcraft flight simulation, computer program
C81.
Volume 2: User's manual
[AD-A079632]
p0348 B80-22313

BOTABY BIH6S
BT CIBCOLATIOB COBTBOL BOTOBS
BT LIFTIBG BOTOBS
BT BIGID BOTOBS
HT TILTIHG BOTOBS
<^
BT X RIBG BOTOBS
Large-amplitude fluctuations of velocity and
incidence of an oscillating airfoil
p0009 A80-11432
Examination of the flap-lag stability of rigid
articulated rotor blades
p0054 A80-1S123
Helicopter vibrations
p0056 ABO-15630

Experimental investigation of flutter in mid-stage
compressor designs
for aircraft axial flow
gas turbine engines
[AIAA 80-0786]
. p0333 A80-35073
A dynamic analysis of the motion of a low-wing
general aviation aircraft about its calculated
equilibrium flat spin mode
[AIAA 80-1565]
p0515 A80-45864
Botor dynamics
structural analysis software
review

Analysis of rotor-fuselage coupling and its effect
on rotorcraft stability and response
p0089 A80-17716

p0624 A80-53468

A-343


The design, testing and evaluation of the HIT Cooparison of calculated and measured oodel rotor 
Sensor for measuring instantaneous angle of attack 
Surface pressure measurements at tvo tips of a 
Banges and critical values of advance ratio for 
A comprehensive analytical model of rotorcraft 

On the use of vibration self-damping materials in 

The design, development and operation of gas 

Validiation of the rotorcraft flight simulation 
program (C81) using operational loads survey 
flight test data 
Stability of nonuniform rotor blades in hover 
using a mixed formulation 
An evaluation of a computer code based on linear 
aoustic theory for predicting helicopter main 
rotation noise -- CH-53A and S-76 helicopters 

The design, development and operation of gas 
turbine radio telemetry systems 

An aerodynamic method for control and range 
improvement of rotary compressors 
Investigations on unsteady pressure distribution 
measurements in rotating systems 

On the use of vibration self-damping materials in 
the manufacture of parts for rotating machinery
The Kirs ten rotor as a wind turbine

Theoretical and experimental parameter-studies of applied aerodynamics of helicopters --- Russian book

Airfoil performance of a centrifugal impeller cascade vibrating in a complex mode

Determination of the loading capacity of wave transmissions with a slide generator

Effect of tip vortex strength on helicopter noise due to blade-vortex interaction

Experimental and theoretical studies on helicopter blade tips at OHEBA

Characteristic of lightly loaded fan rotor blade wakes

Unsteady flow in turbomachines, volume 3

Effect of tip planform on blade loading characteristics for a two-bladed rotor in hover

Acoustically swept rotor --- helicopter noise reduction

Effects of primary rotor parameters on flapping dynamics

Synthesis of unsteady aerodynamic problems concerning helicopters

Experimental study of the aerodynamics of a helicopter rotor blade model in an unsteady flow regime during wind tunnel tests

Aerodynamic performances of three fan stator designs operating with rotor having tip speed of 337 meters per second and pressure ratio of 1.54:

1. Experimental performance

2. Aerodynamic and acoustic investigations of axial flow fan and compressor blade rows, including three-dimensional effects

3. Performance of single-stage axial-flow transonic compressor with rotor and stator aspect ratios of 1.19 and 1.26 respectively, and with design pressure ratio of 2.05

The effect of shaft angle on performance of a centrifugal high-speed rotor at an advance ratio of 0.7

The design, testing and evaluation of the RIT individual-blade-control system as applied to gust alleviation for helicopters

Forward acoustic performance of a shock-swallowing high-tip-speed fan (QT-13)

Axial flow rotor unsteady performance

Comparison of calculated and measured model rotor loading and wake geometry

---
Experimental investigation of compressor rotor wakes
(AD-A081911) p0926 N80-24582
Development and validation of a combustor rotor tuneful induction test field computational method
--- Langley VSTOL tunnel
[NASA-TP-16565] p0831 N80-25296
A comprehensive analytical model of rotoicaft aerodynamics and dynamics. Part 1: Analysis development
[NASA-TR-81182] p0529 N80-28296
A comprehensive analytical model of rotoicaft aerodynamics and dynamics. Part 2: User's manual
A comprehensive analytical model of rotoicaft aerodynamics and dynamics. Part 3: Program manual
Analytical design and evaluation of an active control system for helicopter vibration reduction and gust response alleviation
Dynamic stall on advanced airfoil sections
[AD-A085809] p0541 N80-29252
Comparison of calculated and measured blade loads on a full-scale tilting propeller in a wind tunnel
[NASA-TR-81228] p0602 N80-31386
The Shock and Vibration Digest, volume 12, no. 7
[AD-A0678505] p0616 N80-31662
Stability problems of rotor systems
[NASA-TR-8118a] p0608 N80-31663
Rotor-bearing dynamics technology design guide.
Part 1: Flexible rotor dynamics
[AD-A087066] p0611 N80-31802
Development of flexible rotor balancing techniques
Analysis and correlation of test data from an advanced technology rotor system --- helicopter performance prediction
Calculation of three-dimensional unsteady transonic flows past helicopter blades
[NASA-TP-7171] p0642 N80-33536
Validation of the rotorcraft flight simulation program (CFI) using operational loads survey flight test data
[AD-A0890098] p0650 N80-33422
The aerodynamics of conra-rotating axial flow wind power turbines
[CSIB-HB-1638] p0654 N80-33868

**ROTOR BLADES (TURBOMACHINERY)***

On the acoustic power emitted by helicopter rotor blades at low tip speeds
p0012 A80-12375
Fatigue data on a variety of nonwoven glass composites for helicopter rotor blades
p0148 A80-21136
Advanced research on helicopter blade airfoils
[ONERA, TP NO. 1979-120] p0325 A80-34928
Helicopter rotor thickness noise
[ATAA PAPER 80-1012] p0339 A80-35970
Noise due to tip vortex formation on isolated rotor blades
[ATAA PAPER 80-1010] p0393 A80-38636
Flapping response of lifting rotor blades to spanwise nonuniform random excitation
p0618 A80-52321
Effect of tip vortex structure on helicopter noise due to blade-vortex interaction
p0619 A80-52645
Design and investigation of static pressure compressor cascades behind isipale-rotors
[ONY-TP-79-17] p0353 A80-22351
Non-contacting electro-optical contouring of helicopter rotor blades
[AD-A085820] p0546 N80-29293

**ROTOR BLADES (TURBOMACHINERY)***

The Kirsten rotor as a wind turbine
p0506 A80-15330
Rotating stall in a varless diffuser of a centrifugal fan
p0510 A80-27736
Calibration of a two probe synchronized sampling technique for measuring flows behind rotors
p0261 A80-29481
Calculation of axysmetrical flows in the flow section of turbomachines in solving the problem of optimisation of stages
p0268 A80-29988
Experimental investigation of flutter in mid-stage compressor designs --- for aircraft axial flow gas turbine engines
[AIAA 80-0769] p0333 A80-35073
Experimental investigations on the vibration of blades due to a rotating stall
p0337 A80-35912
Vibration measurements on turbomachine rotor blades with optical probes
p0343 A80-36146
Rotor blade cooling in high pressure turbines
p0380 A80-36998
Solving Paribus rotors
p0466 A80-31033
Investigation of the thermal state of longitudinally cooled rotor blades
p0475 A80-83784
Investigation of some features of film cooling of fired and moving blades
p0508 A80-48774
Calculation of radial-axial turbine wheel thermal and stress states
p0565 A80-48720
Influence of upper and lower overlap on efficiency of partial-admission axial air microturbine
p0586 A80-48738
Design of blade attachment in compressor rotor annular slot
p0615 A80-51079
Long-lift GE operation based on technical condition --- fatigue and service life monitoring of turbine blades in aircraft engines
p0617 N80-10027
On the influence of short shroud platforms on turbine stage operation --- performance tests for shrouded rotor blades on gas turbine engines
p0620 N80-10083
Monotonicity of heat transfer in axial turbine blade during engine startup
p0621 N80-10089
Characteristics of lightly loaded fan rotor blade wakes
[NASA-CR-3100] p0835 N80-11034
Blade wake interference: Temperature effect --- on cascade flow
p0773 N80-12335
Experimental evaluation of active and passive means of alleviating rotor impulsive noise in descent flight
[NASA-CR-159186] p0774 N80-16839
Aerodynamic-structural analysis of dual bladed helicopter systems
Design study of prestressed rotor spar concept
[NASA-CR-159086] p0778 N80-17062
Axial flow rotor unstable performance
p0784 N80-23308
A numerical and experimental study of the turbulent wakes of turbomachinery rotor blades, isolated airfoils, and a cascade of airfoils
p0466 N80-27777
Nature of inlet turbulence and stryst flow disturbances and their effect on turbomachinery noise
[AD-A084355] p0497 N80-27369
The response of turbine engine rotors to interference rubs
[NASA-TR-81516] p0501 N80-27696
Off-design correlation for losses due to part-span dampers on transonic rotors
[NASA-TP-1693] p0534 N80-28352
Effect of fluid forces on rotor stability of centrifugal compressors and pumps
[NASA-TP-1693] p0534 N80-28352
Non-synchronous whirling due to fluid-dynamic forces in axial turbo-machinery rotors
p0558 N80-29720
Fluid forces on rotating centrifugal impeller with whirling motion
p0558 N80-29724
Stabilization of aerodynamically excited turbomachinery with hydrodynamic journal bearings and supports
p0558 N80-29731
Bifilar analysis study, volume 1
[NASA-CR-159227] p0602 N80-31382
Bifilar analysis users manual, volume 2
Comparisons of calculated and measured blade loads on a full-scale tilting propotor in a wind tunnel
[NASA-TR-81228] p0602 N80-31386
High bypass turbofan component development.  
[AD-1089067]  
Rotor disks  
[NO48 B80-33413]  

Rotor disks  
U turbine wheels  
U hub  
U rotors  

Analysis and correlation with theory of rotor lift-limit test data  
[NASA CR-159139]  
P0078 B80-13028  

Comparative performance measurements on a Saubion rotor with ancillary surfaces  
[AD-1089999]  
P0368 B80-23309  

Synthesis of rotor test data for real-time simulation  
[NASA CR-122311]  
P0222 B80-10029  

A new approach to active control of rotorcraft vibration  
[AlAA 80-1778]  
P0511 B80-45556  

Experimental investigation of the strength of rotor materials in the presence of surface cracks  
P0001 B80-10124  

Design of elastomer dampers for a high-speed flexible rotor  
[ASNB PAPER 75-DEF-86]  
P0057 B80-15736  

Comparative performance measurements on a Saubion rotor with ancillary surfaces  
P0059 B80-16085  

A rotary inverter system for a multiple-electrode MHD generator  
P0190 B80-25093  

Experimental investigation of the strength of rotor materials with surface cracks  
P0278 B80-32044  

Rolling of a loaded rotor around a rigid bearing  
P0395 B80-30666  

Shock absorption for rotating parts of mechanisms  
P0395 B80-30670  

Demonstration of a unified approach to the balancing of flexible rotors  
[ASNB PAPER 80-GT-87]  
P0600 B80-42213  

Incidence of acceleration on the critical speed of a Jeffcott rotor  
[ASNB PAPER 80-GT-88]  
P0600 B80-42214  

Contribution to the theory of a rotor spinning on a flexible shaft  
P0615 B80-51510  

Rotor dynamics --- structural analysis software review  
P0617 B80-51993  

Fracture and fatigue properties of 1Cr-6Mo-V bainitic turbine rotor steels  
[EPRI-MP-1023]  
P0043 B80-11201  

Oil whirl and critical instabilities in rotor-bearing systems  
P0076 B80-12012  

An analytical investigation of three-dimensional vibration in gear-coupled rotor systems  
P0088 B80-13071  

Statistical techniques for automating the detection of anomalous performance in rotating machinery  
[CONF-790335-2]  
P0086 B80-13481  

Dynamic analysis of complex multi-level flexible rotor systems --- vibration calculations  
P0086 B80-13509  

Direct integration of transient rotor dynamics  
[NASA TP-1597]  
P2083 B80-15128  

Prediction of dynamic properties of a rotor supported by hydrodynamic bearings using the finite element method  
[CEIE-1-31-29-01]  
P0185 B80-17882  

Liquid metal slip ring --- aerospace environments  
P0220 B80-18300  

Dynamics of flexible rotors partially filled with a viscous incompressible fluid  
P2027 B80-20513  

Rotor modal parameters estimation and rotor balancing studies with quadratic programming  
P2027 B80-20587  

Dynamics of a flexible rotor-tower system  
[NASA CR-15951]  
P0371 B80-23862  

Advanced composite rotor hub preliminary design --- 8-60 helicopter  
[AD-1085151]  
P0416 B80-24032  

Evaluation of new materials for rotor hub journal bearings --- self lubricating materials  
P0440 B80-25662  

Coupled bending-torsion flutter in cascades with applications to fan and compressor blades  
P0495 B80-27354  

Rotor-bearing dynamics technology design guide. Part 4: Cylindrical roller bearings  
[AD-1082355]  
P0440 B80-25662  

Development of an integral ceramic blade metal disk with circumferential blade attachment  
P0553 B80-29349  

The parameters and measurements of the destabilizing actions of rotating machines, and the assumptions of the 1950's  
P0557 B80-29712  

Bifilar analysis study, volume 1  
[NASA CR-159227]  
P0602 B80-31382  

Bifilar analysis users manual, volume 2  
[NASA CR-159228-VOL-2]  
P0602 B80-31383  

Effects of rotor parameter variations on handling qualities of uninstalled helicopters in simulated terrain flight  
[NASA CR-81190]  
P0605 B80-31407  

Active feedback control for stabilization of vibration in rotating machinery (24.034)  
P0624 B80-31725  

A modeling technique for design and simulation of hydrostatic journal bearings  
P0653 B80-33785  

Roulettes  
U surface roulettes  
U EPW  
U remotely piloted vehicles  
U EPS  
U ELASTOSERS  
U BEEHIVE ROLLERS  
U AIRBALL ROLLERS  

Fundamentals of design. V - Fin design for combat aircraft  
P2010 B80-27725  

Thrust augmented spin recovery device  
[Rotorcraft-80-11760-2]  
P2025 B80-18048  

Description of an experimental (hydrogen peroxide) rocket system and its use in measuring aileron and rudder effectiveness of a light airplane  
P2025 B80-18048
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>RUNWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simulator results of an F-104 airplane utilizing an aileron-rudder interconnect during carrier approaches and landings p0554 N80-29368</td>
<td>cushion runway delay p0100 A80-11653</td>
</tr>
<tr>
<td>[BIBL-TR-91813]</td>
<td>Application of the design diagram for a layered viscoelastic medium to the evaluation of the stress-strain state of road and runway surfaces for moving loads p0012 A80-12537</td>
</tr>
<tr>
<td>RULES</td>
<td>Airport capacity and delays p0147 A80-21212</td>
</tr>
<tr>
<td>NT FLIGHT RULES</td>
<td>An approach to the runway denial problem [SAP PAPER 791107] p0196 A80-26549</td>
</tr>
<tr>
<td>NT VISUAL FLIGHT RULES</td>
<td>Technology to increase airport capacity [ATA PAPER 80-0920] p0320 A80-32890</td>
</tr>
<tr>
<td>RUNWAYS</td>
<td>Application of the calculation scheme for a layered viscoelastic medium to the estimation of the stressed state of highway airport pavements with moving loads p0395 A80-38775</td>
</tr>
<tr>
<td>E DRAINAGE</td>
<td>New turnoffs for 'optimum runway occupancy times' p0050 A80-44111</td>
</tr>
<tr>
<td>RUNWAY CONDITIONS</td>
<td>Technology solutions to the runway denial problem [ATA PAPER 80-1821] p0567 A80-47672</td>
</tr>
<tr>
<td>Method of determining the load classification number, LCR, of a semirigid composite runway surface p0002 A80-10237</td>
<td>Use of separate short runways for commuter and general aviation traffic at major airports [SAR PAPER 800762] p0577 A80-49707</td>
</tr>
<tr>
<td>Have Bounce — validation of computer simulations of F-4 dynamic response to multiple runway repairs p0200 A80-27362</td>
<td>Prestrained pavements for airports [SAR PAPER 800764] p0577 A80-49709</td>
</tr>
<tr>
<td>Emergency landings on a carpet of foam p0322 A80-33292</td>
<td>Representativeness of wind observations at airports p0584 A80-50685</td>
</tr>
<tr>
<td>The importance of runway capacity — an analytical approach p0322 A80-33290</td>
<td>'A literature search and review of the dynamics of aircraft-surface interaction' [AD-A070940] p0027 A80-10199</td>
</tr>
<tr>
<td>Problems with the use of chemicals on runways during winter use p0375 A80-36767</td>
<td>Reflection cracking of bituminous overlays for airport pavements: A state of the art [AD-A073884] p0122 A80-14144</td>
</tr>
<tr>
<td>ICAO develops new pavement strength reporting system p0398 A80-37245</td>
<td>Effect of weather conditions on airport operations p0179 A80-14638</td>
</tr>
<tr>
<td>Condition evaluation of jointed concrete airfield pavement p0406 A80-41001</td>
<td>Infrared runway collision avoidance system analysis --- carbon dioxide lasers [AD-A070811] p0171 A80-16069</td>
</tr>
<tr>
<td>Results from O'Hare pavement demonstration-validation study [SAR PAPER 800763] p0577 A80-49708</td>
<td>A computer program for estimating aircraft landing distance [AD-A077169] p0239 A80-19088</td>
</tr>
<tr>
<td>The friction classification of runways — using measurements made with the continuous recording runway friction meter [S/T-HM-6-75] p0423 A80-24339</td>
<td>Runway surface roughness p0433 A80-25325</td>
</tr>
<tr>
<td>Aircraft dynamic response to damaged runways [AGAB-6-685] p0483 A80-25326</td>
<td>UK approach to aircraft dynamic response on damaged and repaired runways p0434 A80-25326</td>
</tr>
<tr>
<td>Runway surface roughness p0434 A80-25327</td>
<td>Parameters affecting aircraft performance on runways in bad condition p0434 A80-25328</td>
</tr>
<tr>
<td>UK approach to aircraft dynamic response on damaged and repaired runways p0434 A80-25328</td>
<td>Parameter affecting aircraft performance on runways in bad condition p0434 A80-25328</td>
</tr>
<tr>
<td></td>
<td>Easy maintenance improved airfield lighting economy p0504 A80-13483</td>
</tr>
<tr>
<td>Installation criteria for the approach lighting System improvement Program (ALISP) [AD-A070076] p0082 A80-13057</td>
<td>Theallocaiton of runway slots by auction. Volume 1: Executive summary p0583 A80-29269</td>
</tr>
<tr>
<td></td>
<td>A method for administrative assignment of runway slots [AD-A086118] p0545 A80-29285</td>
</tr>
<tr>
<td>SUBJECT INDEX</td>
<td>SCALE MODELS</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>SAMPLED DATA</strong></td>
<td><strong>AIRCRAFT-TO-SATELLITE DATA COMMUNICATIONS</strong></td>
</tr>
<tr>
<td><strong>U DATA SAMPLING</strong></td>
<td><strong>SATELLITE OBSERVATION</strong></td>
</tr>
<tr>
<td><strong>SAMPLED DATA SYSTEMS</strong></td>
<td><strong>AEROSPACE VEHICLE DETECTION /AVD/ - DESIGN TRADE-OFFS</strong></td>
</tr>
<tr>
<td><strong>U DATA SAMPLING</strong></td>
<td><strong>SATELLITE TRACKING</strong></td>
</tr>
<tr>
<td><strong>SAMPLING</strong></td>
<td><strong>A SIMPLE NAVSTAR RECEIVER</strong></td>
</tr>
<tr>
<td><strong>U DATA SAMPLING</strong></td>
<td><strong>AIR DEPLOYMENT OF SATELLITE-TRACKED DRIFTERS</strong></td>
</tr>
<tr>
<td><strong>U PARTICULATE SAMPLING</strong></td>
<td><strong>NOVA SATELLITE TIME EXPERIMENT —— GLOBAL TIME SYNCHRONIZATION USING CS Clock Transfer</strong></td>
</tr>
<tr>
<td><strong>SANDWICH CONSTRUCTION</strong></td>
<td><strong>THE NAVSTAR SYSTEM</strong></td>
</tr>
<tr>
<td><strong>U SANDWICH STRUCTURES</strong></td>
<td><strong>A POSSIBLE EFFECT OF ATMOSPHERIC WAVES ON 100 KHZ LOCAN-C SIGNALS</strong></td>
</tr>
<tr>
<td><strong>SANDWICH STRUCTURES</strong></td>
<td><strong>SATELLITE-DERIVED INSTRUMENTS</strong></td>
</tr>
<tr>
<td>Design and operation of multi-specimen fully reversed fatigue systems for advanced composite materials</td>
<td><strong>AIRCRAFT TO SATELLITE DATA COMMUNICATIONS</strong></td>
</tr>
<tr>
<td>Technology of adhesive bonding of aircraft parts 2nd revised and enlarged edition/ Russia</td>
<td><strong>SATELLITE OBSERVATION</strong></td>
</tr>
<tr>
<td>Measurement of stress distribution in sandwich beams under four-point bending</td>
<td><strong>AEROSPACE VEHICLE DETECTION /AVD/ - DESIGN TRADE-OFFS</strong></td>
</tr>
<tr>
<td>Failure mechanisms for advanced composite sandwich structures in hostile environments —— naval aircraft structures</td>
<td><strong>SATELLITE TRACKING</strong></td>
</tr>
<tr>
<td>Transverse bending of elastically rim-stiffened three-layer cantilever plates of variable layer thickness</td>
<td><strong>AIR DEPLOYMENT OF SATELLITE-TRACKED DRIFTERS</strong></td>
</tr>
<tr>
<td>Honeycomb sandwich joints for primary structure --- of aircraft</td>
<td><strong>NOVA SATELLITE TIME EXPERIMENT —— GLOBAL TIME SYNCHRONIZATION USING CS Clock Transfer</strong></td>
</tr>
<tr>
<td>Transverse bending of castellated three-layer plates with layers of variable thickness stiffened along the contours by elastic diaphragms</td>
<td><strong>THE NAVSTAR SYSTEM</strong></td>
</tr>
<tr>
<td>High temperature resin matrix composites for aerospace structures</td>
<td><strong>A POSSIBLE EFFECT OF ATMOSPHERIC WAVES ON 100 KHZ LOCAN-C SIGNALS</strong></td>
</tr>
<tr>
<td><strong>SATNAV (SENSOR)</strong></td>
<td><strong>SATELLITE-BORNE INSURANCE</strong></td>
</tr>
<tr>
<td><strong>U TERRAIN ANALYSIS</strong></td>
<td><strong>SATellite navigation for helicopters</strong></td>
</tr>
<tr>
<td><strong>SATELLITE ANTENNAS</strong></td>
<td><strong>SATELLITE NAVIGATION SYSTEMS</strong></td>
</tr>
<tr>
<td>UHF coplanar-slot antenna for aircraft-to-satellite data communications</td>
<td><strong>AERIAL EXPERIMENTS ON SCALE EFFECTS ON ONSIGHTING AIRFOILS AT TRANSONIC SPEEDS</strong></td>
</tr>
<tr>
<td><strong>SATELLITE ATTITUDE DISTURBANCE</strong></td>
<td><strong>AN INVESTIGATION OF SCALE EFFECTS ON THE TRANSONIC FLOW OVER SWEPED WINGS. PART 1: MEASUREMENTS ON A MODEL OF A TRANSPORT AIRCRAFT</strong></td>
</tr>
<tr>
<td><strong>U ATTITUDE STABILIZATION</strong></td>
<td><strong>THE SCALING OF BIRD IMPACT LOADS</strong></td>
</tr>
<tr>
<td><strong>SATELLITE COMMUNICATIONS</strong></td>
<td><strong>SCALE (RATIO)</strong></td>
</tr>
<tr>
<td><strong>U SPACECRAFT COMMUNICATION</strong></td>
<td><strong>THE SCALING OF BIRD IMPACT LOADS</strong></td>
</tr>
<tr>
<td><strong>SATELLITE CONFIGURATIONS</strong></td>
<td><strong>SCALE MODELS</strong></td>
</tr>
<tr>
<td>Aerothermal analysis of a wing-elevator cove with variable leakage</td>
<td><strong>LARGE SCALE MODEL TESTS OF A NEW TECHNOLOGY / V/STOL CONCEPT</strong></td>
</tr>
<tr>
<td>Navigation error using rate of change of signal time of arrival from space vehicles</td>
<td><strong>SCALE MODEL PERFORMANCE TEST INVESTIGATION OF EXHAUST SYSTEM MIXERS FOR AN ENERGY EFFICIENT ENGINE / ( /3 ) PROPELLION SYSTEM</strong></td>
</tr>
<tr>
<td>The Russian satellite navigation system</td>
<td><strong>DETERMINATION OF THE AERODYNAMIC CHARACTERISTICS OF A FLIGHT VEHICLE FROM ONBOARD MEASUREMENT DATA</strong></td>
</tr>
<tr>
<td>The Global Positioning System</td>
<td><strong>SPACECRAFT ATTITUDE STABILITY</strong></td>
</tr>
<tr>
<td>On the NSP application research in Japan —— Navy Navigation Satellite System [AIAA 80-0780]</td>
<td><strong>AN INVESTIGATION OF SCALE EFFECTS ON THE TRANSONIC FLOW OVER SWEPED WINGS. PART 1: MEASUREMENTS ON A MODEL OF A TRANSPORT AIRCRAFT</strong></td>
</tr>
<tr>
<td>The Transit system in radio navigation [SEE PAPER 79-1205]</td>
<td><strong>THE SCALING OF BIRD IMPACT LOADS</strong></td>
</tr>
<tr>
<td>Receivers for the NavStar global positioning system [AIAA 80-0780]</td>
<td><strong>SCALE MODELS</strong></td>
</tr>
<tr>
<td>A navigation algorithm for single channel low-cost GPS receiver</td>
<td><strong>LARGE SCALE MODEL TESTS OF A NEW TECHNOLOGY / V/STOL CONCEPT</strong></td>
</tr>
<tr>
<td>Satellite navigation in man's activity on sea and in air</td>
<td><strong>SCALE MODELS</strong></td>
</tr>
<tr>
<td>Civil aviation and the NAVSTAR/GPS</td>
<td><strong>LARGE SCALE MODEL TESTS OF A NEW TECHNOLOGY / V/STOL CONCEPT</strong></td>
</tr>
<tr>
<td>Precision navigation for air traffic management [NAVSTAR-BEURO-3220]</td>
<td><strong>SCALING THE SHOCK PROTECTION PERFORMANCE OF LARGE TRANSIT PACKS BY MEANS OF SMALL SCALE LABORATORY MODELS --- APPLICABLE TO AIRCRAFT ENGINE POWER PLANT DESIGN</strong></td>
</tr>
<tr>
<td>Precision navigation for air traffic management</td>
<td><strong>LARGE SCALE MODEL TESTS OF A NEW TECHNOLOGY / V/STOL CONCEPT</strong></td>
</tr>
<tr>
<td><strong>SATELLITE NETWORKS</strong></td>
<td><strong>AN INVESTIGATION OF SCALE EFFECTS ON THE TRANSONIC FLOW OVER SWEPED WINGS. PART 1: MEASUREMENTS ON A MODEL OF A TRANSPORT AIRCRAFT</strong></td>
</tr>
<tr>
<td>UHF coplanar-slot antenna for aircraft-to-satellite data communications</td>
<td><strong>THE SCALING OF BIRD IMPACT LOADS</strong></td>
</tr>
<tr>
<td>Aircraft-to-satellite data communications</td>
<td><strong>SCALE MODELS</strong></td>
</tr>
<tr>
<td>Acoustic measurements of three Prop-Fan models [AIAA PAPER 80-0995]</td>
<td><strong>LARGE SCALE MODEL TESTS OF A NEW TECHNOLOGY / V/STOL CONCEPT</strong></td>
</tr>
<tr>
<td>Low-speed wind-tunnel tests of a 1/10-scale model of an advanced arrow-wing supersonic cruise configuration designed for cruise at Mach 2.2 --- Langley Full Scale Wind Tunnel [NAS-A0-00512]</td>
<td><strong>ACOUSTIC MEASUREMENTS OF THREE PROPERT-WING MODELS</strong></td>
</tr>
<tr>
<td>Low-speed wind-tunnel tests of a 1/10-scale model of an advanced arrow-wing supersonic cruise configuration designed for cruise at Mach 2.2 --- Langley Full Scale Wind Tunnel</td>
<td><strong>LARGE SCALE MODEL TESTS OF A NEW TECHNOLOGY / V/STOL CONCEPT</strong></td>
</tr>
<tr>
<td>Investigation of ground effects on large and small scale models of a three fan V/STOL aircraft configuration</td>
<td><strong>AN INVESTIGATION OF SCALE EFFECTS ON THE TRANSONIC FLOW OVER SWEPED WINGS. PART 1: MEASUREMENTS ON A MODEL OF A TRANSPORT AIRCRAFT</strong></td>
</tr>
<tr>
<td>Low speed test of the aft inlet designed for a tandem fan V/STOL nacelle [NAS-A0-159752]</td>
<td><strong>THE SCALING OF BIRD IMPACT LOADS</strong></td>
</tr>
<tr>
<td><strong>AERIAL EXPERIMENTS ON SCALE EFFECTS ON ONSIGHTING AIRFOILS AT TRANSONIC SPEEDS</strong></td>
<td><strong>LARGE SCALE MODEL TESTS OF A NEW TECHNOLOGY / V/STOL CONCEPT</strong></td>
</tr>
</tbody>
</table>
SUPPRESSION OF SELF-OSSILATIONS IN COMBUSTION CHAMBERS BY MEANS OF RESONANCE SOUND ABSORBERS

P0326 A80-39400

SELF REGULATING

IN AUTOMATIC CONTROL

SIGNALS (TRADEMARK)

6 SERVOMOTORS

6 SEMICONDUCTOR DEVICES

BT CHARGE COUPLED DEVICES

Airborne semiconductor radiometers P0049 A80-14196

Integrated circuit characteristics at 260°C for aircraft engine-control applications P0103 A80-20112

Aircraft radiometers based on semiconductor devices P0618 A80-52205

SENSORS

6 TRANSISTORS

SENSITIVITY

BT IMPACT RESISTANCE

SOUND PERCEPTION

BT AUDITORY PERCEPTION

BT SPACE PERCEPTION

BT VISUAL PERCEPTION

SEPARATION FLOW

6 BOUNDARY LAYER SEPARATION

A Laser Doppler Velocimeter system to investigate unsteady flow separation P0014 A80-12634

Statistical characteristics of pressure fluctuations in the flow-separation zone on a plate behind a splitter P0049 A80-13695

Certain types of separated flow over slotted wings P0056 A80-15475

Analytical investigation of aerodynamic characteristics of highly swept wings with separated flow P0068 A80-17697

Experimental study of confluence with separation on an afterbody of revolution [NASA, TP. NO. 1979-151] P0103 A80-20088

Analysis of the nonuniformity of solutions to the problem of flow separation for small-aspect delta wings P0202 A80-27127

Diagnosis of separated flow regions on wind-tunnel models using an infrared camera P0264 A80-29494

The delta wing in oscillatory gusts P0272 A80-30564

Noise due to tip vortex formation on lifting rotors [AIAA PAPER 80-1010] P0393 A80-36836

Numerical study of separated turbulent flow over airfoils [AIAA PAPER 80-1441] P0413 A80-41623

The states of theoretical methods for calculation of detached flows [NASA-PB-1222-2-PUB-12] P0467 A80-42924

A vortex-lattice method for the calculation of the nonsteady separated flow over delta wings [AIAA PAPER 80-1803] P0465 A80-43206

An experimental investigation of a wing with controlled mid-span flow separation [AIAA PAPER 80-1804] P0469 A80-43207

Structures of flow separations over swept wings [AIAA, TP. NO. 1980-27] P0521 A80-46227

An investigation of corner separation within a thrust augmenter having Coanda jets [MAC-76153-30] P0023 A80-10122

The gumi-vortex-lattice method for wings with edge vortex separation [NASA-CR-16257] P0114 A80-14052

High angle of attack characteristics of different fighter configurations [NASA-PB-1465(0)] P0114 A80-14058


Control of forebody three-dimensional flow separations [NASA-TM-81605] P0118 A80-15164

Identification of noise sources in FC centrifugal fan rotors P0229 A80-18395

Three-dimensional interactions and vortical flows with emphasis on high speeds [NASA-TM-81609] P0302 A80-21286

LEeward flow over delta wings at supersonic speeds [NASA-CR-145362] P0210 A80-20269

Simple turbulence models and their application to boundary layer separation [NASA-CR-145362] P0416 A80-20269

A computer program for calculating aerodynamic characteristics of low aspect-ratio wings with partial leading-edge separation [NASA-CR-145362] P0477 A80-26268

The analytical prediction of the separation behaviour of external stores after release from the carrier aircraft. Part 2: Applications [CSIR-NIAT-79/103-P1-2] P0477 A80-26292


Concerning the separated flow about an inflating parachute [ASE-TRANS-2031] P0628 A80-32336

SEPARATORS

6 BT AIR FILTERS

FLUID FILTERS

New separator materials for nickel-cadmium aircraft batteries P0571 A80-48488

SEQUENCING

Data utilization in automating the sequencing of aircrafts in terminal areas P0011 A80-14071

SEQUENTIAL ANALYSES

Use of sign statistics for sequential signal detection in a pulse radar system P0011 A80-12031

SEQUENTIAL CONTROL

A simulation model for aircraft sequencing in the near terminal area P0502 A80-14839

SERIES EXPANSION

Solution of boundary layer equations with the aid of series --- for supersonic gas flow P0376 A80-36791

SERVICE LIFE

Life prediction of turbine blades under low-cycle fatigue and creep P0056 A80-15089

Reliability and life of aircraft gas turbine engines P0056 A80-15090

Is the structural life of an aircraft wing limited? P0063 A80-17335

Handling problems through compressor deterioration --- in-flight stalling P0063 A80-17380

Technology of the Rolls-Royce RB211 engine P0090 A80-18864

Opportunistic maintenance policies for economic replacement of internal life-limited components in modular aircraft engines [AIAA PAPER 80-2611] P0195 A80-26477

Advanced composite serviceability program --- Status review --- inspection of aircraft structures P0197 A80-26890

Determination of aircraft life factors according to MILS-2 requirements P0073 A80-32224

ECONOMIC LIFE CRITERIA FOR METALLIC AIRFRAMES

[AIAA-PAPEB 80-GT-5] P0331 A80-35046

High pressure turbine blade life sensitivity [AIAA PAPER 80-1112] P0396 A80-38920

Life and utilization criteria in design for balanced life and performance --- of aircraft gas turbine engines [AIAA PAPER 80-1009] P0447 A80-41177

Effect of aircraft power plant usage on turbine engine relative durability/life [AIAA PAPER 80-1115] P0449 A80-41183

Naval operational and support cost model --- of aircraft engines [AIAA PAPER 80-1249] P0460 A80-41205

Time between overhaul vs premature removal rates as turbine design considerations [AIAA PAPER 80-0748] P0460 A80-41205

Fuel property effects on life characteristics of aircraft gas turbine engine combustors [AIAA PAPER 80-2629] P058 A80-42186

Experience in extending the life of gas turbine blade [AIAA PAPER 80-280-1] P0645 A80-42285

A-354
Structure and service life verification for the Tornado
Concerning the design of spherical bearings
Some applications of the methods of failure mechanics in analyzing the strength and service life of aircraft structures
Influence of fitting jobs on the quality and prime cost of aircraft assembly
Living with the ageing structures—aircraft inspection and maintenance
Airline view of long life structures
Routine maintenance of high life structures
Continuing structural airworthiness of civil transport aircraft
Designing for long-life aircraft structures
The relevance of service experience data in the fatigue evaluation process of the P27
The inspectable aeroplane
Long-life GTE operation based on technical conditions

Factors affecting the retirement of commercial
transport jet aircraft
JT9D-7A (SB) jet engine performance deterioration trends
Performance deterioration based on existing (historical) data: JT9D jet engine diagnostics program
Performance deterioration based on in-service engine data: JT9D jet engine diagnostics program
Significance of a rotor blade failure for fleet operation, inspection, maintenance, design and certification
Reassessment of service life by comparative specimen tests—fighter aircraft structures
Process modifications for improved carbon fiber composites: Allvaluation of the electrical hazards problems

Improvement of control system dynamics of means of additional hydraulic load feedback

A hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands
Electrical servo actuator bracket—for jet engine fuel control valves
The design, testing and evaluation of the MIT individual-blade-control system as applied to gust alleviation for helicopters
Single-stage electrohydraulic servosystem for actuating on airflow valve with frequencies to 500 hertz
The logic of the electric flight control system experiment on the Concorde—achieving low speed longitudinal stability by active control

Aircraft torque motors—Russian book
SHOCK RESISTANCE

Subject Index

- Shock testing of reinforced splice joints of ultra high modulus graphite/epoxy cone structures — advanced interceptor structures
- Shock wave attenuation
- Forward acoustic performance of a shock-swallowing high-tip-speed fan (Q"-13)
- Shock wave control
- Inlet drag and stability considerations for R/0 = 2.00 design
- Turboprop-exhaust nozzle-secondary-airflow panning as an exit control of an inlet-stability bypass system for a Mach 2.5 axisymmetric mixed-compression inlet --- Lewis 10- by 10-ft. supersonic wind tunnel test
- Shock wave interaction
- Separation due to shock wave-turbulent boundary layer interaction
- Analysis of two-dimensional interactions between shock waves and boundary layers
- The interaction of three shock waves
- Separation pressure of a turbulent boundary layer in transonic interactions
- A linearised theory for swirling supersonic jets and its application to shock-cell noise
- Sonic-boom wave-front shapes and curvatures associated with maneuvering flight
- Shock wave profiles
- Steady flow over the pressure side of a piecewise-flat delta wing with supersonic leading edges
- Stationary flow past the lower surface of a piecewise-planar delta wing with supersonic leading edges
- Measurement of shock waves around a delta-wing sesquiplane
- Shock wave propagation
- Approximate method of determining the wave drag of a profile in the presence of a local supersonic region
- Experiments on the diffraction of weak blast waves — the von Neumann paradox
- Numerical method for calculating supersonic flow past a plane air intake with detached shock wave
- Steady-state entrainment of a body by a shock wave
- A simplified shock-fitting solution to a supersonic internal corner flowfield
- Inlet drag and stability considerations for a Mach 2.5 axisymmetric mixed-compression inlet --- Lewis 10- by 10-ft. supersonic wind tunnel test
- Shock loads
- Shock loading on reinforced splice joints of ultra high modulus graphite/epoxy cone structures — advanced interceptor structures
- Measurement and correlation of structural response to inlet hammerhead phenomena on an F-16 airplane
- Shock wave resistance
- Shock impact resistance
- Simulating the shock protection performance of large transit packs by means of small scale laboratory models — applicable to aircraft engine power plant design

A-356
Subject Index

CLASS OF SHOCKFREE AIRFOILS PRODUCING THE SAME SURFACE PRESSURE
p0216 A80-28057

NON-EQUILIBRIUM FLOW OVER DELTA WINGS WITH DETACHED SHOCK WAVES
[AIAA PAPER 80-14224]
p0452 A80-41610

LOW-FREQUENCY AND SMALL PERTURBATION EQUATION FOR TRANSSONIC FLOW PAST WINGS
p0567 A80-47766

SUPERSONIC COMBUSTION, AIR DISSOCIATION THROUGH SHOCK WAVES AND AERODYNAMICS OF CHEMICALLY REACTING GASES IN A PLANE CONVERGING-DIVERGING NOZZLE... SUPERSONIC COMBUSTION RAWJET ENGINES
[AD-A073135]
p0071 N80-12097

SUBSONIC AND TRANSSONIC FLOWS ON A VARIABLE SWEEP WING
p0316 N80-22240

SHOCK WAVE THERMOMECHANICAL PROPERTIES OF AIRCRAFT GAS TURBINE DISK ALLOYS
[AD-A002080]
p0420 N80-24319

CALCULATION TECHNIQUES FOR INVISCID TWO-DIMENSIONAL SUPERSONIC AIRFLOW
[AD-A085327]
p0542 N80-29257

Short-Haul Aircraft

MT-J-300 AIRCRAFT

MT C-8A ARGUS II/10 WING AIRCRAFT

MT EUROPEAN AIRBUS

Short-haul transport for the 1990s
p0154 A80-22046

de Havilland - The changes ahead
p0159 A80-23306

Improved MPG for the BAE 146 feeder-jet
p0192 A80-25499

The Quiet Short-Haul Research Aircraft /QSHRA/
p0200 A80-27300

Upper surface blowing noise of the NASA-Amd Quiet short-haul research aircraft
[AIAA PAPER 80-10664]
p0341 A80-36002

Short distance multipurpose aircraft Am-28
p0374 A80-36766

QCSSH UTV engine powered-lift acoustic performance --- Quiet Short-Haul Experimental Engine
[ATL PAPER 80-10655]
p0394 A80-38651

Potential benefits for propfan technology on derivatives of future short- to medium-range transport aircraft
[ATL PAPER 80-10900]
p0397 A80-38905

An experimental aircraft to test new technologies
p0466 A80-42910

The CF56 - High bypass technology for standard body aircraft
[SAB PAPER 8007730]
p0574 A80-49662

The future of short-haul transport aircraft
[SAB PAPER 8007730]
p0576 A80-89703

Small transport aircraft technology - A report for the committee on commerce, science, and transportation, United States Senate
[NASNM-TH-00813]
p0045 N80-11953

Quiet short-haul research aircraft familiarization document - G-100
[NASNM-TH-01119]
p0116 N80-14100

Quiet Clean Short-Haul Experimental Engine (QCSSH) acoustic and aerodynamic tests on a scale model, over-the-wing thrust reverser and forward thrust nozzle
[BASA-CR-135254]
p0116 N80-14115

Quiet Clean Short-Haul Experimental Engine (QCSSH), Under-the-Wing (UTW) engine bolloplate nozzle test report. Volume 2: Aerodynamic and performance
[BASA-CR-135250]
p0119 N80-14116

Quiet, Clean, Short-haul, Experimental Engine (QCSSH) Under-the-Wing (UTW) engine acoustic design
[BASA-CR-135267]
p0119 N80-14117

Quiet, Clean, Short-Haul Experimental Engine (QCSSH) Over-The-Wing (OTW) engine acoustic design
[BASA-CR-135268]
p0119 N80-14110

Quiet Clean Short-Haul Experimental Engine (QCSSH) Under-The-Wing (UTW) graphite/PtPt cowl development
[BASA-CR-135279]
p0119 N80-14119

Static test-stand performance of the TP-102 turbofan engine with several exhaust configurations for the Quiet Short-Haul Research Aircraft (QSHRA)
[BASA-TP-1556]
p0119 N80-14121

Demonstration of short-haul aircraft aft noise reduction techniques on a twenty inch (50.8 cm) diameter fan, volume 1
[BASA-CR-134899]
p0131 N80-15083

Demonstration of short-haul aircraft aft noise reduction techniques on a twenty inch (50.8 cm) diameter fan, volume 2
[BASA-CR-134850]
p0131 N80-15084

Demonstration of short-haul aircraft aft noise reduction techniques on a twenty inch (50.8 cm) diameter fan, volume 3
[BASA-CR-134851]
p0131 N80-15085

Quiet Clean Short-Haul Experimental Engine (QCSSH) Over The Wing (OTW) design report
[BASA-CR-134848]
p0131 N80-15086

Quiet Clean Short-Haul Experimental Engine (QCSSH) Aerodynamic and aeromechnical performance of a 50.8 cm (20 inch) diameter 1.34 diameter variable pitch fan with core flow
[BASA-CR-135017]
p0131 N80-15087

Quiet Clean Short-Haul Experimental Engine (QCSSH) preliminary under the wing flight propulsion system analysis report
[BASA-CR-134868]
p0131 N80-15088

Quiet Clean Short-Haul Experimental Engine (QCSSH) under-the-wing engine digital control system design report
[BASA-CR-134892]
p0132 N80-15090

Quiet Clean Short-Haul Experimental Engine (QCSSH) over-the-wing control system design report
[BASA-CR-135337]
p0132 N80-15092

Quiet Clean Short-Haul Experimental Engine (QCSSH) Core engine noise measurements
[BASA-CR-135160]
p0132 N80-15093

Quiet Clean Short-Haul Experimental Engine (QCSSH) Under-The-Wing (UTW) engine composite nacelle test report. Volume 1: Summary, aerodynamic and mechanical performance
[BASA-CR-135971]
p0132 N80-15094

Quiet Clean Short-Haul Experimental Engine (QCSSH) preliminary over-the-wing flight propulsion system analysis report
[BASA-CR-135294]
p0132 N80-15095

Quiet Clean Short-Haul Experimental Engine (QCSSH) Under-The-Wing (UTW) engine bolloplate nacelle test report, volume 1
[BASA-CR-135249]
p0132 N80-15096

Quiet Clean Short-Haul Experimental Engine (QCSSH) Under-The-Wing (UTW) engine bolloplate nacelle test report. Volume 3: Mechanical performance
[BASA-CR-135251]
p0132 N80-15097

Quiet Clean Short-Haul Experimental Engine (QCSSH) Under-The-Wing (UTW) composite nacelle subsystem test report --- to verify strength of selected composite materials
[BASA-CR-135075]
p0133 N80-15100

Quiet Clean Short-Haul Experimental Engine (QCSSH) Ball spline pitch change mechanism design report
[BASA-CR-134073]
p0133 N80-15101

Acoustic analysis of aft noise reduction techniques measured on a subsonic tip speed 50.8 cm (20 inch) diameter fan - quiet engine program
[BASA-CR-134891]
p0133 N80-15102

Quiet Clean Short-Haul Experimental Engine (QCSSH) noise reduction acoustic test program
[BASA-CR-134869]
p0133 N80-15103

Quiet Clean Short-Haul Experimental Engine (QCSSH) clean combustor test report
[BASA-CR-134916]
p0133 N80-15104

Quiet Clean Short-Haul Experimental Engine (QCSSH) noise reduction fan bearing development program
[BASA-CR-134890]
p0134 N80-15105

Quiet Clean Short-Haul Experimental Engine (QCSSH) Ball spline pitch change mechanism drive variable pitch fan actuation system detail design report
[BASA-CR-138552]
p0134 N80-15107

Quiet Clean Short-Haul Experimental Engine (QCSSH) under-the-wing engine composite fan blade design report
[BASA-CR-135046]
p0134 N80-15108.
SUBJECT INDEX

[SASA-TN-78591] p0225 N80-19047
Flight evaluation of configuration management system concepts during transition to the landing approach for a powered-lift STOL aircraft

[SASA-TN-8101] p0285 N80-19127
Development of the A-6/circulation control wing flight demonstrator configuration

[SAD-A080124] p0355 N80-22365
Estimation of wind shear and thrust loss during STOL aircraft landing approach

[SIDE-LOOKING BOXING] p0363 N80-23256
Large-scale wind-tunnel tests of inverting flaps on a STOL utility aircraft model

[SIDE-LOOKING BOXING] p0341 N80-23130
Phase 1 wind tunnel tests of the J-97 powered, external augmentor V/STOL model

[VPCTA-IM-152125] p0529 N80-20303
A piloted simulator analysis of the carrier landing capability of the quiet short-haul research aircraft

[IVASA-IM-70050] p0532 N80-20338
A summary of joint US-Canadian augmentor wing powered-lift STOL research programs at the Ames Research Center, NASA, 1975-1980

[SASA-TA-810115] p0536 N80-29373
Design of an adaptive control system for the V/STOL aircraft with provisions for eigenvalue and eigenvector selection

[V/SWFL-NEGATIVE] p0605 N80-31405
V/STOL equivalent systems analysis

[AD-A087726] p0606 N80-31414
Development of a nozzle to improve the turning of supersonic Coanda jets

[AD-A0877709] p0610 N80-31765
A comparison of flight and simulation data for three automatic landing system control laws for the augmenter wing jet STOL research airplane

[SASA-CR-152365] p0623 N80-32338
Development of high lift devices for application to advanced Navy aircraft

[AD-A0809226] p0633 N80-32382
SHORT WAVE RADIATION BY MILLIMETER WAVES
SHORT WAVE RADIO TRANSMISSION
A method for measuring an aircraft's velocity from the spectrum of its RF transmissions

[SIDE-LOOKING BOXING] p0510 N80-18495
SHEARFIELD
Shrinkage-compensating cement for airport pavement, phase 2

[SIDE-LOOKING BOXING] p0173 N80-16197
SHEARED BODIES
U SHROUDS
SHEARED TURBINES
On the influence of short shroud platforms on turbine stage operation

[DYN4-A-07409] p0094 A80-10627
Dynamic analysis of rotating asymmetric cross-section blade packet

[IVASA-PAPER-79-DIV-93] p0057 A80-15701
Gas path seal

[SASA-CASE-HP-12131-3] p0230 N80-18900
The response turbine shroud study

[AD-A080981] p0353 N80-22352
Composite seal for turbomachinery

[SASA-CASE-12131-2] p0405 N80-26658
The response of turbine engine rotors to interference rubs

[SASA-TA-01518] p0501 N80-27696
SHROUDS
On the pressure losses due to the tip clearance of centrifugal blowers

[SASA-PAPER-80-17-39] p0462 A80-42252
On the influence of short shroud platforms on turbine stage operation --- performance tests for shrouded rotor blades on gas turbine engines

[AD-A080849] p0244 N80-19120
Investigation of fan blades shroud mechanical damping

[SIDE-LOOKING BOXING] p0225 N80-19047
SIGNAL PROCESSING
Tradeoff between picture element dimensions and noncoherent averaging in side-looking airborne radar

[SIDE-LOOKING BOXING] p0553 A80-14949
SIDELOBE REDUCTION
Frequency independent sidelobe suppression and lobesharpening using broad beam antennas

[SIDE-LOOKING BOXING] p0523 A80-30178
Adaptive main-beam nulling for narrow-beam antenna arrays

[SIDE-LOOKING BOXING] p0521 A80-46136
SIDE-SLIP
Comment on 'Handling quality criterion for heading control'

[SIDE-LOOKING BOXING] p0089 A80-17698
Note on the yawing moment due to side slip for swept-back wings

[SIDE-LOOKING BOXING] p0322 A80-33280
Calculation of the supersonic flow past a slender delta wing at angles of attack and sideslip

[SIDE-LOOKING BOXING] p0524 A80-46626
Wing-body yawing moment and sideslip force derivatives due to sideslip: Nv and Ny

[SIDE-LOOKING BOXING] p0521 A80-10097
Application of the Estimation-Before-Modeling (EBM) system identification method to the high angle of attack/sideslip flight of the T-2C jet trainer aircraft. Volume 2: Simulation study using T-2C wind tunnel model data

[SIDE-LOOKING BOXING] p0235 N80-19061
Application of the Estimation-Before-Modeling (EBM) system identification method to the high angle of attack/sideslip flight of the T-2C jet trainer aircraft. Volume 3: Identification of T-2C aerodynamics stability and control characteristics from actual flight test data

[SIDE-LOOKING BOXING] p0237 N80-19073
Application of the Estimation-Before-Modeling (EBM) system identification method to the high angle of attack/sideslip flight of the T-2C jet trainer aircraft. Volume 1: Executive summary

[SIDE-LOOKING BOXING] p0152 A80-21429
SIGNAL PROCESSING
U VISUAL PERCEPTION
Experimental study of airfoil trailing edge noise: Instrumentation, methodology and initial results

[SIDE-LOOKING BOXING] p0345 N80-22264
SIGNAL DETECTION
FT CORRELATION DETECTION
SIGNAL MEASUREMENT
Design of a wind shear detection radar for airports

[SIDE-LOOKING BOXING] p0152 A80-21429
SIGNAL PROCESSING
Antennas /Current status and problems/ --- Russian book

[SIDE-LOOKING BOXING] p0011 A80-11890
Optical receivers and discrete-signal processors for hyperbolic radar navigation systems

[SIDE-LOOKING BOXING] p0011 A80-12030
Controlling adaptive antenna arrays with the sample matrix inversion algorithms

[SIDE-LOOKING BOXING] p0159 A80-22283
The arousal of false alarms in surveillance radar

[SIDE-LOOKING BOXING] p0213 A80-27902
Digital processing of unsteady periodic signals with application to the turbulence structure around oscillating airfoils

[SIDE-LOOKING BOXING] p0265 A80-29505
Receivers for the Navstar global positioning system

[SIDE-LOOKING BOXING] p0273 A80-30787
A simple Navstar receiver

[SIDE-LOOKING BOXING] p0279 A80-32120
Applications of LSI to digital systems - An overview of expectations and reality --- signal processing in avionics

[SIDE-LOOKING BOXING] p0280 A80-32422
An LSI digital signal processor for airborne applications --- onboard computer for radar systems

[SIDE-LOOKING BOXING] p0281 A80-32424
LSI radar signal processor

[SIDE-LOOKING BOXING] p0281 A80-32425
TMS --- An integrated CNI system in hardware feasibility demonstration Communication, Navigation and Identification

[SIDE-LOOKING BOXING] p0283 A80-32451
Advanced signal processing concepts for multi-function radio systems --- in airborne
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>SLENDER WINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WT LANDING SIMULATION</td>
<td>测量在滚珠轴承上的摩擦力</td>
</tr>
<tr>
<td>WT SYSTEMS SIMULATION</td>
<td>滑行道着陆器在低空飞行时的特性</td>
</tr>
<tr>
<td>Simulate Mission Endurance Test (SMMT) for an aircraft engine to be used in a fighter/attack role</td>
<td>防护涂层</td>
</tr>
<tr>
<td>[AD-A071907]</td>
<td>对飞机发动机的热防护性能进行比较分析</td>
</tr>
<tr>
<td>Air traffic control/full beacon collision avoidance system, Knoxville simulation</td>
<td>后向推力</td>
</tr>
<tr>
<td>[AD-A074555]</td>
<td>着陆面</td>
</tr>
<tr>
<td>Simulation for integration with dynamic tests of the logical elements of principal onboard computers</td>
<td>对服务环境的测量</td>
</tr>
<tr>
<td>p0256 880-19824</td>
<td></td>
</tr>
<tr>
<td>Wessex modernization: A preliminary simulation study</td>
<td>对改进后的计算机系统进行实时测量</td>
</tr>
<tr>
<td>[AD-A087799].</td>
<td></td>
</tr>
<tr>
<td>STABILIZER TRAINING</td>
<td></td>
</tr>
<tr>
<td>UV TRAINING SIMULATORS</td>
<td></td>
</tr>
<tr>
<td>VT COCKPIT SIMULATORS</td>
<td></td>
</tr>
<tr>
<td>VT CONTROL SIMULATION</td>
<td></td>
</tr>
<tr>
<td>VT ENVIRONMENT SIMULATORS</td>
<td></td>
</tr>
<tr>
<td>VT FLIGHT SIMULATORS</td>
<td></td>
</tr>
<tr>
<td>VT LANGLEY COORDINATOR</td>
<td></td>
</tr>
<tr>
<td>VT MOTION SIMULATORS</td>
<td></td>
</tr>
<tr>
<td>VT TARGET SIMULATORS</td>
<td></td>
</tr>
<tr>
<td>VT TRAINING SIMULATORS</td>
<td></td>
</tr>
<tr>
<td>VT VIBRATION SIMULATORS</td>
<td></td>
</tr>
<tr>
<td>Aircraft fuel system simulator tests with antiicing kerosene (Jet A fuel with PM-9 additive) -- flammability tests</td>
<td>航空燃料系统</td>
</tr>
<tr>
<td>[AD-A073237]</td>
<td></td>
</tr>
<tr>
<td>Crew station design facility feasibility study</td>
<td>喷气式发动机在飞行中的影响</td>
</tr>
<tr>
<td>[AD-A070138]</td>
<td></td>
</tr>
<tr>
<td>K-3A navigational computer system real-time environmental simulator</td>
<td>航空器</td>
</tr>
<tr>
<td>STIMULATING IMAGE CORRELATOR</td>
<td></td>
</tr>
<tr>
<td>SINGLE SIDEBAND MODULATION</td>
<td></td>
</tr>
<tr>
<td>SINGLE SIDEBAND TRANSMISSION</td>
<td></td>
</tr>
<tr>
<td>New conmutated doppler microwave landing system</td>
<td></td>
</tr>
<tr>
<td>[AIAA PAPER 80-13027]</td>
<td></td>
</tr>
<tr>
<td>SINGULARITY (MATHEMATICS)</td>
<td></td>
</tr>
<tr>
<td>GSIABEO computer program development, versions B and C</td>
<td></td>
</tr>
<tr>
<td>[NASA-CR-3227]</td>
<td></td>
</tr>
<tr>
<td>The SII description of interaction of a transient electromagnetic wave with an object</td>
<td></td>
</tr>
<tr>
<td>p0313 880-21991</td>
<td></td>
</tr>
<tr>
<td>SIONDING</td>
<td></td>
</tr>
<tr>
<td>KPF silicon nitride</td>
<td></td>
</tr>
<tr>
<td>p0558 880-29360</td>
<td></td>
</tr>
<tr>
<td>SITES</td>
<td></td>
</tr>
<tr>
<td>On site determination of vertical beam location and characteristics using statistical method --- radar tracking antennas</td>
<td>中音文</td>
</tr>
<tr>
<td>p0322 880-32393</td>
<td></td>
</tr>
<tr>
<td>Methodology for the evaluation of a radar site</td>
<td></td>
</tr>
<tr>
<td>p0115 880-14067</td>
<td></td>
</tr>
<tr>
<td>SIZE (DIMENSIONS)</td>
<td></td>
</tr>
<tr>
<td>Technology requirements and readiness for very large aircraft</td>
<td>翼尖</td>
</tr>
<tr>
<td>[AIAA PAPER 80-0935]</td>
<td></td>
</tr>
<tr>
<td>Study of heat-pipe heat exchanger in the small gas turbine engine system</td>
<td></td>
</tr>
<tr>
<td>p0017 880-10022</td>
<td></td>
</tr>
<tr>
<td>Subsonic aircraft: Evolution and the matching of size to performance</td>
<td></td>
</tr>
<tr>
<td>[NASA-RL-1060]</td>
<td></td>
</tr>
<tr>
<td>p0540 880-29245</td>
<td></td>
</tr>
<tr>
<td>SIZE DETERMINATION</td>
<td></td>
</tr>
<tr>
<td>WT PRECIPITATION PARTICLE MEASUREMENT</td>
<td></td>
</tr>
<tr>
<td>SIZE SEPARATION</td>
<td></td>
</tr>
<tr>
<td>Possible methods for removing small airborne particles from the flow in the 5 meter pressurized low-speed wind tunnel</td>
<td></td>
</tr>
<tr>
<td>[NASL-TR-460-1826]</td>
<td></td>
</tr>
<tr>
<td>p0606 880-31416</td>
<td></td>
</tr>
<tr>
<td>SIZE (SEPARATION)</td>
<td></td>
</tr>
<tr>
<td>U SIZE SEPARATION</td>
<td></td>
</tr>
<tr>
<td>SIZE (SHAPE)</td>
<td></td>
</tr>
<tr>
<td>The impact of propulsion performance parameters on V/STOL design and sizing</td>
<td></td>
</tr>
<tr>
<td>[AIAA PAPER 80-1875]</td>
<td></td>
</tr>
<tr>
<td>p0472 880-03318</td>
<td></td>
</tr>
<tr>
<td>SLIDERS</td>
<td></td>
</tr>
<tr>
<td>Study of rolling element dynamic interactions with separator and raceway paths. Roller skewing</td>
<td></td>
</tr>
</tbody>
</table>

A-361
SLIDING FRICTION

Calculation of the supersonic flow past a slender delta wing at angles of attack and sideslip p0524 A80-46826
Investigation of the influence of the parameters of a wing/engine combination on the critical flutter speed p0525 A80-46871
Experimental and theoretical investigation of the lifting properties of a wing of deformable profile p0560 A80-47393
Low-frequency and small perturbation equation for transonic flow past wings p0567 A80-47768
Selecting rational high-aspect-ratio wing structural stiffening scheme p0582 A80-50482
Technical evaluation report on the fluid dynamics panel program on high angle of attack aerodynamics -- slender wings, bodies of revolution, and body-wing configurations p0011 A80-10147
Some measurements of buffeting on an aeroelastic model of a slender wing aircraft p0081 A80-13055
Means for controlling aerodynamically induced twist --- equipment to control twisting of slender wings due to aerodynamic loads [NASA-CR-121757-1] p0169 A80-16055
On the swelling of rolled up vortex surfaces and the breakdown of the vortex core for slender wings [NASA-TM-75862] p0641 A80-33346
SLIDING FRICTION
Dynamics of the braking system of transport aircraft p0563 A80-47368
Determination of the loading capacity of wave transmissions with a slide generator p0563 A80-47382
SLIP FLOWS
Supersonic slipflow of a viscous gas over a slender delta wing p0150 A80-21286
SLIPSTREAMS
BT PROPELLER SLIPSTREAMS
SLOPES
BT GLIDE PATHS
SLOT ANTENNAS
UHF coplanar-slot antenna for aircraft-to-satellite data communications p0214 A80-28254
Boresight errors induced by missile radomes p0081 A80-13055
Radiation characteristics of printed slot antennas with a switchable parasitic slot p0058 A80-15889
Buoyant module UHF antenna design for subsurface systems/aircraft communications p0081 A80-13055
SLOTS
BT WING SLOTS
Design of blade attachment in compressor rotor annular slot p0615 A80-51879
Wind tunnel force and pressure tests of a 21% thick general aviation airfoil with 20% silicaon, 25% slotted flap and 10% slot-lip spoiler [NASA-CR-30811] p0067 H80-12053
The influence of blade profile and slots on the performance of a centrifugal impeller [AD-A082278] p0425 H80-24581
SLOTTED ANTENNAS
U SLOT ANTENNAS
SLOTTED WIND TUNNELS
Design of slotted transonic wind tunnels for supercruise flow development p0275 A80-30976
A simplified model for the viscous crossflow in a slotted test section [NASA-CR-3206] p0074 H80-12372
SLURRY PROPULSANTS
Carbon slurry fuels for volume limited missiles [AD-A085710] p0500 H80-27512
SLOW REYNOLDS NUMBER FLOW
Flutter analysis of a NASA 64006 airfoil in small disturbance transonic flow p0217 A80-28051
Numerical solution of three-dimensional unsteady transonic flow over swept wings [AIAA PAPER 80-1369] p0506 A80-44143
SUBJECT INDEX
Low-frequency and small perturbation equation for transonic flow past wings p0567 A80-47768
Allowance for unsteady boundary layer effects in two-dimensional transonic calculations [NASA, TP No. 1980-199] p0623 A80-53298
SHOCKS
Size distribution and surface area measurements of gas turbine combustor ashoke p0060 A80-16949
SMOOTHING
BT DATA SMOOTHING
SNAPPING
U LATERAL OSCILLATION
SONAER
Soaring flight optimization theory and an application in sailplane design p0063 A80-17330
SOCIAL FACTORS
Organization of regional airports p0155 A80-22725
SOCIOLOGY
BT SOCIAL FACTORS
SODIUM
Analysis of the response of a thermal barrier coating to sodium and vanadium doped combustion [NASA-TP-79205] p0032 H80-10344
SOFT LANDING SPACECRAFT
BT AEROSPACECRAFT
SOFTWARE (COMPUTERS)
U COMPUTER PROGRAMS
U COMPUTER SYSTEMS PROGRAMS
SOIL MECHANICS
Soil analyses and evaluations at the impact dynamics research facility for two full-scale aircraft crash tests [NASA-CR-159199] p0144 H80-15299
SOLAR CONVERTERS
U SOLAR GENERATORS
SOLAR GENERATORS
Concept definition study of small Brayton cycle engines for dispersed solar electric power systems [NASA-CR-159592] p0357 H80-22778
SOLAR HEATING
Future production of hydrogen from solar energy and water -- A survey and assessment of U.S. developments p0382 A80-37336
Novel ceramic receiver for solar Brayton systems [COO-4878-73] p0085 H80-13694
SOLAR POWER GENERATION
U SOLAR GENERATORS
SOLAR POWER SOURCES
U SOLAR GENERATORS
SOLAR PROPULSION
The sunship -- The case for a solar powered airliner p0080 A80-39286
SOLAR SENSORS
Improved Sun-sensing guidance system for high-altitude aircraft [NASA-CASE-PEC-11052-1] p0290 H80-20249
SOLDERS
Low-temperature solder for joining large cryogenic structures -- cooling coils for the National Transonic Facility [NASA-TP-936] p0637 H80-32690
SOLVENT VALVES
Digital electrohydraulic control surface actuator, positioned by means of quick-acting solenoid valves [DOLU PAPER 80-050] p0523 A80-46299
SOLID PROPELLANT ROCKET ENGINES
High energy i-ray study [AD-A0856279] p0591 H80-30311
SOLID PROPELLANTS
BT SOLID ROCKET PROPELLANTS
Experimental investigation of a solid fuel ramjet [SVLBR-FP-76-27] p0084 H80-13485
A primitive variable computer model for combustion within solid fuel ramjets [AD-1081001] p0365 H80-23319
SOLID ROCKET PROPELLANTS
The monopropellant isopropyl nitrate -- Its characteristics and uses, and possible future applications [AIAA PAPER 80-1293] p0075 A80-13064
SOLID ROTATION
U ROTATING BODIES
L-362
SOLID SOLUTIONS
State-of-the-art of SiAlON materials
Comparative resistance of beta-Si3N4 solid solutions to solute silicon attack

SOLID STATE DEVICES
NT Charge coupled devices
NT Solid-state devices
NT YAG lasers

SOLID SURFACES
Vibro-acoustic theory of surface noise interaction phenomena
[SASA-CR-3331]
p0639 B80-33176

SOLID-STATE INTERFACES
The role of aluminum segregation in the wear of aluminum/bronze-steel interfaces under conditions of boundary lubrication --- in aircraft fuel systems
[AD-A078629]
p0246 B80-19125

Solid state power controller verification studies
[AD-A079238]
p0249 B80-19529

Solid state power controllers (ISIM-2A)
[AD-A080482]
p0311 B80-21679

SOLID STATE LASERS
NT YAG lasers

SOLID SOLUTIONS
Vibro-acoustic theory of surface noise interaction phenomena
[SASA-CR-3331]
p0639 B80-33176

SOLID PROPAGATION
Soil
Dispersion of sound in a combustion duct by fuel droplets and soot particles
p0108 A80-20953

Fundamental characterization of alternative fuel effects in continuous combustion systems
p0099 B80-27382

Soot formation and burnout in flames
p0549 B80-29280

Effect of fuel molecular structure on soot formation in gas turbine combustion
p0549 B80-29232

SOUND
U ACOUSTICS
U ACOUSTIC VELOCITY

SOUND ABSORPTION
U SOUND TRANSMISSION
U SOUND APLIFICATION

SOUND GENERATORS
Some analytical consideration in jet noise prediction
p0161 A80-23910

SOUND INTENSITY
Prediction of jet noise in flight from static tests
p0062 A80-17713

SOUND MEASUREMENT
U ACOUSTIC MEASUREMENTS
U AUDITORY PERCEPTION

SOUND PRESSURE
Acoustic pressures on a prop-fan aircraft fuselage surface
[ATIA PAPER 80-1002]
p0338 A80-35965

Experimental study of acoustic loads on an upper-surface-blow STOL airplane configuration --- Langley full-scale wind tunnel tests
[ATIA PAPER 80-1577]
p0245 B80-19133

Advanced turbo-prop airplane interior noise reduction-source definition
p0805 B80-13882

SOUND PROPAGATION
Dispersion of sound in a combustion duct by fuel droplets and soot particles
p0108 A80-20953

A ray-theory approach for high-frequency engine-intake noise
p0161 A80-23910

Radiation in a wall jet flow environment --- mathematical models for noise reduction of STOL airplanes
p0161 A80-23916

A-363
SPECTRAL ANALYSIS

BY HARMAN SPECTRA
BY VIBRATIONAL SPECTRA
BY SPECTRAL ANALYSIS

SPECTRAL RESOLUTION
Processing noise and vibration data for gas
turbine engine development
p0013 A80-12612

SPECTRAL SIGNATURES
Propeller signatures and their use --- aircraft
noise and vibration measurements and analysis
[AIAA PAPER 80-1035] p0340 A80-35983

SPECTROMETERS
Frequency-scanning particle size spectrometer
Particle-size analysis of engine oils; a
supplement to spectrometric analysis
[AD-A062230] p0424 A80-29450

SPECTROMETERS
U SPECTROMETERS
SPECTROSCOPES
U FLAME SPECTROSCOPES
SPECTROSCOPIC ANALYSIS
BY FLAME SPECTROSCOPY
Chemical characterization and quality control for an
adhesive
[AD-A087739] p0347 B80-31558

SPECTROSCOPY
BY FLAME SPECTROSCOPY
BY SPECTROSCOPIC ANALYSIS
Ferrocraphic and spectrographic analysis of oil
sampled before and after failure of a jet engine
[NASA-TM-81430] p0265 B80-19497

SPECTRUM ANALYSIS
BY FLAME SPECTROSCOPY
The investigation of transient loads in gas
turbine engine blades using spectral analysis
methods
p0277 A80-31217

Narrow-band spectrum analysis techniques for
processing airplane flyover noise data
[AIAA PAPER 80-1053] p0394 A80-36667
A study of alternating stresses in gas-turbine
engine blades by spectral analysis
p0625 A80-53694

Spectral analysis of non-stationary random
processes. Application to noise of flyover type
[ONERA-PR-1979-a] p0371 B80-24134

SPEECH
BY CONVERSATION
BY SPEECH DISCRIMINATION
BY SPEECH RECOGNITION
Vocabulary specification for automatic speech
recognition in aircraft cockpits
[AD-A073703] p0123 B80-14303

SPEED
BY VELOCITY
SPEED CONTROL
Speed control of electrical pumps in aircraft and
military vehicle applications
p0583 A80-50681
Automation of flight on-line strategic control:
the case of speed control on pre-established
routes
p0115 B80-14070

SPEED INDICATORS
BY ANEMOMETERS
BY HOT-FILM ANEMOMETERS
BY HOT-WIRE ANEMOMETERS
BY LASER ANEMOMETERS
Software for a correlation velocity sensor --- for
aircraft
p0282 A80-32443
Experimental and analytical studies of a true
airspeed sensor

SPEED REGULATION
BY SPEED CONTROL
SPEEDMETERS
BY SPEED INDICATORS
SPIKE ANTENNAS
BY MONOPOLE ANTENNAS
SPIKE DYNAMICS
New directions in spin research
[AIAA PAPER NT 80-12] p0377 A80-36683
Analysis of the influence of structural parameters
on the properties of an aircraft in downward
spin. II

SUBJECT INDEX

Overview of stall/spin technology
[AIAA PAPER 80-1560] p0569 A80-88123

Spinning for safety's sake
p0579 A80-50099

Contribution to the theory of a rotor spinning on a
flexible shaft
p0580 A80-50225

Global stability and control analysis of aircraft
at high angles of attack
[AD-A004938] p0536 B80-28374

SPIN REDUCTION
Control system techniques for improved
departure/spin resistance for fighter aircraft
[SAE PAPER 791083] p0194 B80-26639

Hockets for spin recovery
[NASA-CR-159240] p0554 B80-29367

SPIN STABILIZATION
Stall/spin flight results for the remotely piloted
spin research vehicle
[AIAA 80-1563] p0151 A80-05862

Spool protection techniques
[AIAA 80-1564] p0151 A80-05863

A dynamic analysis of the motion of a low-wing
general aviation aircraft about its calculated
equilibria flat spin node
[AIAA 80-1565] p0151 A80-05864

SPOOL TESTS
A spin-recovery parachute system for light general
aviation airplanes
p017 A80-21122

Effects of discontinuous drooped wing leading-edge
modifications on the spinning characteristics of a
low-wing general aviation airplane
[AIAA PAPER 80-1043] p0470 A80-43301

Spin prediction techniques
[AIAA 80-1564] p0151 A80-05863

Hockets for spin recovery
[NASA-CR-159240] p0554 B80-29367

Rotary balance data for a typical single-engine
general aviation design for an angle-of-attack
range of 8 deg to 90 deg. 2: High-wing model C
[NASA-CR-3201] p0628 B80-32335

SPINAL ANTENNAS
Complementary cross-slot phased array antennas
[NASA-CASE-MSC-18532-1] p0556 B80-29543

SPINE PROJECTIONS
Spline curves and their application to the design
of turboshaft turbine blade profiles
p0512 A80-65704

Application of spline approximations to the
calculation of well pressures in three-dimensional
supersonic nozzles
p0526 A80-46873

SPOILERS
Statistical characteristics of pressure
fluctuations in the flow-separation zone on a
plate behind a spoiler
p0089 A80-13695

Full scale test of a stall proof device
[AIAA PAPER 80-1899] p0373 A80-63330

A hydraulic actuating mechanism to control aircraft
spoilers superimposed by dual input commands
[NASA-CASE-LAR-12412-1] p0318 B80-11065

Wind tunnel force and pressure tests of a 2% thick
general aviation airfoil with 20% aileron,
25% slotted flap and 10% slot-lip spoiler.
[NASA-CR-3083] p0067 B80-12053

Roll control by digitally controlled segment
spoilers
p0160 B80-15156

In-flight measured characteristics of combined
flap-spoiler direct lift controls
p0182 B80-15165

Unsteady aerodynamics of two-dimensional spoilers
at low speeds
p0182 B80-15170

The 737 graphite composite flight spoiler flight
service evaluation
[NASA-CR-159094] p0182 B80-17147

SPOT WELDS
Contribution on resistance spot welding of
aluminum alloys in airframe manufacturing
p0651 A80-16568

Developments in ultrasonic welding for aircraft
p0328 A80-34797

Loading tests of a wing structure for a hypersonic
aircraft
[NASA-TP-1596] p0129 B80-15068
The development of inflow control devices for improved simulation of flight noise levels during static testing of a BBPB turbofan engine
[AIAA PAPER 80-2406] p0393 880-38639

The history of static test and Air Force structures testing
[AD-A0770292] p0286 880-19136

An improved prediction method for the noise generated in flight by circular jets
[NASA TP-81700] p0318 880-22048

Static and transient performance of TF-102 engine with up to 14 percent core blended for the quiet short-haul research aircraft
[NASA TP-16602] p0435 880-25339

Phase 2 and 3 wind tunnel tests of the J-97 powered, external augmentor VSTOL model — at low 40 by 90 wind tunnel
[NASA CR-163578] p0598 880-31530

Static thrust
An experimental study of static thrust augmentation using a 2-d variable ejector
[AD-A079857] p0294 880-20279

Static thrust
NT AEROSTATICS
NT ELECTROSTATICS
NT HYDROSTATICS
NT STATIONS
NT CREW STATIONS
NT GROUND STATIONS
NT TRACKING STATIONS
NT WEATHER STATIONS
STANZLICAL ANALYSIS
NT COVARIANCE
NT FACTOR ANALYSIS
NT MULTIVARIATE STATISTICAL ANALYSIS
NT PROBABILITY DISTRIBUTION FUNCTIONS
NT REGRESSION ANALYSIS
NT SEQUENTIAL ANALYSIS
NT STATISTICAL CORRELATION
NT STATISTICAL TESTS
On site determination of vertical beam location and characteristics using statistical methods — radar tracking antennas

A statistical method applied to pilot behavior analysis in multiloop systems
p0058 A80-15864

A simple design synthesis method used to estimate aircraft gross weight
[NASE PAPER 1313] p0105 A80-20647

Design of a wind shear detection radar for airports
p0152 A80-21424

Experimental survey of the statistical properties of dynamic clutter in BIC primary radars
p0396 880-38844

An evaluation of statistical methods for the prediction of various time-variant integral total pressure distortion
[AIAA PAPER 80-1110] p0397 880-18537

Evaluation of a statistical method for determining peak inlet flow distortion using F-15 and F-18 data
[AIAA PAPER 80-1109] p0408 A80-41102

Statistical diagnostics aircraft engines
p0033 880-11006

Application of modified profile analysis to function testing of the motion/no-motion issue in an aircraft ground-handling simulation — statistical analysis procedure for man machine systems flight simulation
[NASA TP-1560] p0078 880-13024

Statistical techniques for assessing the degree of anomalous performance in rotating machinery
[COMP-90835-2] p0084 880-13481

Airport activity statistics of certificated route air carriers
[AD-A076194] p0181 880-17048

Reduction of measured data and a method of early detection of sensor breakdown
p0430 880-25283

Statistical aspects of carbon fiber risk assessment modeling — fire accidents involving aircraft
[NASA CR-159318] p0555 880-29432

Atmospheric turbulence simulation techniques with application to flight
p0559 880-29961

Production oriented maintenance organization: A critical analysis of sortie-generation capability and maintenance quality
[AD-A0807095] p0595 880-31223

Atmospheric turbulence simulation techniques with application to flight analysis
[NASA CR-3309] p0612 880-32025

A review and analysis of fiber counting methods
[AD-A088200] p0637 880-32448

Statistical communication theory
STANZLICAL DISTRIBUTIONS
NT PROBABILITY DISTRIBUTION FUNCTIONS
Statistical characteristics of pressure fluctuations in the flow-separation zone on a plate behind a spoiler
p0049 A80-13695

Further analyses of position errors in navigation
p0621 A80-82949

Statistical review of counting accelerometer data for Navy and Marine fleet aircraft
p0388 880-22308

Statistical probability
NT PROBABILIT11 THEORY
Statistical tests
Determination of the safety in a North Atlantic organized track system with reduced lateral separation... statistical tests
p0492 880-27332

Statue BLADES
Three-dimensional velocity distribution between stator blades and unstable force on a blade due to passing wakes
p0091 880-10011

Influence of turbine first stator row cooling on turbine inlet gas temperature
p0616 A80-51896

Aerodynamic performance of three fan stator designs operating with rotor having tip speed of 337 meters per second and pressure ratio of 1.54.

1: Experimental performance
[NASA TP-1610] p0179 880-17071

Aerodynamic performance of three fan stator designs operating with rotor having tip speed of 337 meters per second and pressure ratio of 1.54.

1: Statistical analysis of analytical code calculations to experimental performance
[NASA TP-1614] p0306 880-21324

Performance of single-stage axial-flow transonic compressor with stator and stator aspect ratios of 1.19 and 1.26 respectively, and with design pressure ratio of 2.05
[NASA TP-1625] p0306 880-21325

Design and investigation of static pressure compressor cascades behind impulse-rotors
p0353 880-22353

STATORs
On axial turbine stage rotor blade twist with tangential kilt of the stator vanes
p0004 880-10630

The effect of interblade phase angle and solidity on the time variant aerodynamic response of a compressor stator
[AD-A071878] p0041 880-11092

Liquid metal slip ring — aerospace environments
[NASA CASE-LEW-12777-3] p0228 880-18300

STEADY FLOW
Calculation of the aerodynamic characteristics of an aircraft at supersonic speeds
p0198 A80-21255

Flow of a compressible fluid over an isolated airfoil and through a cascade
p0151 A80-21302

Numerical solution of the steady flow in turbomachinery blades and ducts of arbitrary shape
p0390 880-38253

Optimization of the relaxation drag of slender profile arrangements in steady subsonic flow. I - Single profile
p0044 880-40895

Analysis of nonlifting and lifting airfoils in transonic flow by parametric differentiation
[AIAA PAPER 80-13943] p0452 880-41590

Experimental determination of unsteady blade element aerodynamics in cascades. Volume 1:
A-369
STEADY STATE FLOW

Torsion mode cascade
[NASA-CR-159831] p034a H80-25335

Steady, Oscillatory, and Unsteady Subsonic and Supersonic Aerodynamics, production version
[S0058A9 1.1] Volume 1: Theoretical manual

STEADY STATE FLOW
U EQUILIBRIUM FLOW

STEADY TURBINES
Gas and steam turbines, general: Corrosion and erosion. Citations from the engineering index data base
[F880-000672] p0435 H80-25393

STEEL STRUCTURES
Friction characteristic of steel skids equipped with skugs on a lakebed surface — landing gear
[NASA-TV-81347] p0078 H80-13027

STEELS
ST CARBON STEELS
ST HIGH STRENGTH STEELS
The role of aluminum segregation in the wear of aluminum-bronze-steel interfaces under conditions of boundary lubrication — in aircraft fuel systems
[ASLE PEP56-79-AR-5R-1] p0011 A80-12110

Corrosion fatigue behavior of coated 4300 steel for blade retention bolts of the AH-1 helicopter
[p0572 H80-88935

Fracture analysis of ductile materials
[p0618 A80-52182

Fracture and fatigue properties of TcKni-V biaxial turbine rotor steels
[EPRI-JR-1023] p0043 H80-11201

Establishment of engineering design data for hybrid steel/ceramic ball bearings
[AD-A078934] p0250 H80-19509

STEEL GRADIENT AIRCRAFT
ST V/STOL AIRCRAFT
STEERABLE ANTENNAS
Reactance-controlled short-backfire array
A broadband, circularly polarized, phase steered array
Electronically steered antennas
A cavity-type broadband antenna with a steerable cardiod pattern
[AD-A083226] p0485 H80-26585

STEERING
Predictive guidance for interceptors with time lag in acceleration
[AD-A083226] p0319 A80-32682

STELLAIR DOPPLER SHIFT
ST DOPPLER EFFECT
STEP FUNCTIONS
Flying qualities research for highly augmented aircraft
[S8-562] p0027 H80-10194

STEREOGRAPHY
ST STEREOPHOTOGRAPHY
STEREOPHOTOGRAPHY
Study of a stereo electro-optical tracker system for the measurement of model deformations at the national transonic facility
[p0333 H80-10476

STEREOSCOPIC PHOTOGRAPHY
ST STEREOGRAPHY
STEREOSCOPY
ST STEREOPHOTOGRAPHY
STERILISATION EFFECTS
ST CHEMICAL EFFECTS
ST THERMAL DEGRADATION
STEELS
ST ARTICLES
STIFF STRUCTURES
ST RIGID STRUCTURES
STIFFNESS
Calculation of minimum-weight and maximum-rigidity structures in the presence of design constraints
[AD-A080426] p0290 B80-20247

On thin-wafl effective stiffness
[p0204 A80-27165

The influence of bending-torsional coupling on the buckling load of general orthotropic, midplane symetric and elasitic plates
[S8-78-77126-U] p0357 H80-22753

SUBJECT INDEX

Rotor-bearing dynamics technology design guide
Part 4: Cylindrical roller bearings
[AD-A082355] p0440 H80-25662

STIFFNESS MATRIX
Construction of stiffness matrices of thin-wall systems using sliding interpolation
[AD-A082355] p0376 H80-36783

STIMULATED EMISSION
A study of production and stimulated emission of sound by vortex flows
[AD-A082355] p0161 H80-23903

STIMULATED EMISSION DEVICES
ST ARGON LAMPS
ST CARBON DIOXIDE LASERS
ST LAMPS
ST NEODYMIUM LASERS
ST PULSED LASERS
ST YAG LAMPS

STOCHASTIC PROCESSES
ST NAVY PROCESSES
Stochastic response secondary surveillance radar
[AD-A082355] p0047 H80-13212

Application of stochastic optimal reduced state feedback gain computation procedures to the design of aircraft gust alleviation controllers
[AD-A082355] p0051 H80-14822

A survey of the stochastic filtering techniques for data processing in air-traffic control and surveillance systems
[AD-A082355] p0051 H80-14822

Maximum likelihood identification of linear discrete stochastic systems — estimating and parameter identification in stochastic processes
[AD-A082355] p0051 H80-10229

STOOL AIRCRAFT
ST SHORT TAKEOFF AIRCRAFT
STOPPING
ST THREAT TERMINATION
STOPLIGHT PROPELLANTS
ST AIRCRAFT FUELS
STORAGE BATTERIES
ST LEAD ACID BATTERIES
ST NICKEL CADMIUM BATTERIES
ST NICKEL SODIUM BATTERIES
STORAGE STABILITY
Stability survey of hydrocarbon fuels
[BYTC-1778-4] p0256 H80-20424

STORMS
ST HURRICANES
ST STORMS (METEOROLOGY)
ST THUNDERSTORMS
A 96/183 GHz aircraft radiometer system for Project Storm Fury
[NASA-CR-16009] p0485 H80-26638

STORMS (METEOROLOGY)
ST HURRICANES
ST THUNDERSTORMS
Nowcast and short-range (0-2 hour) forecasts of thunderstorms and severe convective weather for use in air traffic control
[AD-A086026] p0250 H80-20267

STRAIGHT WINGS
ST RECTANGULAR WINGS
STRAIGHT DISTRIBUTION
STRESS DISTRIBUTION
STRESS CONCENTRATION
STRESS CONCENTRATIONS
STRESS ENERGY METHOD
Investigation of vibration reduction through structural optimization
[AD-A088917] p0647 H80-33403

STRAIN
ST FATIGUE (MATERIALS)
STRAIN ENERGY BALANCE
STRAIN ENERGY BARTES
Investigation of vibration reduction through structural optimization
[AD-A088917] p0647 H80-33403

STRAIN GAGES
STRAIN GAGES
Mechanical strain gages for use in the measurement of mechanical deformation and strain gage elements
[AD-A082355] p0019 H80-10057

Low profile strain gage applications telemetered from rotating machinery
[p0343 A80-36153

Determination of strain fields near concentrators from strain gage indicators
[p0343 A80-36153

Specification for the installation of electrical resistance strain gauges on strain pairs counter
STRESS CONCENTRATION

Selected data from a transonic flexible walled test section.

STRENGTHS OF MATERIALS

U MECHANICAL PROPERTIES

STRESS (PHYSIOLOGY)

Human factors in high-speed low-level accidents: A 15 year review.

STRESS ANALYSIS

Fatigue life prediction of a bonded splice joint

Effects of idealizing three-dimensional geometry with two-dimensional models in temperature and stress analysis of engine components

Influence of interface on composite failure

Numerical strain and stress analysis of radial compressor impellers with riveted cover discs

The investigation of transient loads in gas turbine engine blades using spectral analysis methods

Structural design loads for future airplanes

The influence of prior engine usage data on the selection of structural design criteria

Calculation of radial-axial turbine wheel thermal and stress states

Green's functions in fracture mechanics

Pre-stressed pavements for airports

Design of blade attachment in compressor rotor annular slot

Fracture mechanics in engineering application; Proceeding of the International Conference, Bangalore, India, March 26-30, 1979

A study of alternating stresses in gas-turbine engine blades by spectral analysis

Contact stress analysis of ceramic-to-metal interfaces — in gas turbine engine

Thermo-mechanical stress analysis of advanced turbine blade cooling configuration

Additional information about PALSTAFF —— fighter aircraft loading standard for fatigue evaluation

Structural analysis of hollow blades: Torsional stress analysis of hollow fan blades for aircraft jet engines

Analysis of residual stresses and displacements due to radial expansion of fastener holes ——— aircraft engine blades using spectral analysis

Analysis of ground calibration data from strain gauges attached to the airframe of CTA-1 airtrainer A19-031 number 1979-3

Le Recherche Aerospatiale Bi-monthly Bulletin number 1979-3

Analysis of ground calibration data from strain gauges attached to the airframe of CTA-1 airtrainer A19-031

STRESS CALCULATIONS

Determination of the stress intensity factor of composite structural members

Variations in crack growth rate behavior

Stress-intensity factors for two symmetric corner cracks

Measurement of stress distribution in sandwich beams under four-point bending

Distribution of forces and stresses along rows of bolted connections

Investigation of the stress distribution in the surface layer of aircraft engine components

B-371
Determination of stress intensity factors in composite structural elements [p0325 A80-34235]

Determination of strain fields near concentrators from strain gage indicators [p0382 A80-37289]

Collection and analysis of in-service flight histories of the initiation of fatigue damage [BNW-PFW-79-10] [p0186 B80-17518]

On the fatigue life evaluation of jointed specimens undergoing load transfer with regard to stress concentration [BNW-PFW-79-11] [p0186 B80-17519]

An investigation of residual stresses in simulated wing panels of 7075-T6 aluminum [p0370 B80-23693]

STRESS CORROSION

STRESS CORROSION CRACKING

Aircraft carrier exposure tests of aluminum alloys [AD-A080864] [p0368 B80-23433]

STRESS CORROSION CRACKING EXPERIMENTAL METHODOLOGY AND APPLICATION OF FRACTURE MECHANICS TO ALUMINUM CASTINGS AND ALLOYS [p0379 A80-36669]

STRESS CYCLES

Low cycle fatigue life model for gas turbine engine disks [p0168 A80-24140]

Applying pressure - - Relieving stress --- stress costing aircraft structures [p0207 A80-27257]

Low cycle fatigue testing, a necessary part of advanced development --- for military fighter aircraft gas turbine engines [AIAA PAPER 80-11153] [p0399 A80-38940]

STRESS DISTRIBUTION AND STRESS CONCENTRATION

STRESS INTENSITY FACTORS

Green's functions in fracture mechanics [p0573 A80-99466]

Propagation of edge cracks in laterally excited stiffened panels [p0623 A80-53465]

STRESS MEASUREMENT

Measurement of the Reynolds stress tensor using a single rotating slanting hot wire [p0523 A80-46366]

STRESS RATIO

A special crack tip element for three-dimensional crack problems [ABL/STURC-NOTE-374] [p0070 B80-12036]

STRESS RELAXATION

Study of the relaxation of the tightening force of bolted joints --- in supersonic transport aircraft [p0525 A80-46460]

STRESS RUPTURE STRENGTH

AEROSPACE RUPTURE STRENGTH [p0012 A80-10053]

STRESS TENSORS

Measurement of the Reynolds stress tensor using a single rotating slanting hot wire [p0523 A80-46366]

STRESS-STRAIN DIAGRAMS

Review of investigations into aeronautics related fatigue Federal Republic of Germany [DFI-5-142] [p0124 B80-14622]

STRESS-STRAIN DISTRIBUTION AND STRESS CONCENTRATION

STRESS-STRAIN RELATIONSHIPS

Application of the design diagram for a layered viscoelastic medium to the evaluation of the stress-strain state of road and runway surfaces for moving loads [p0012 A80-12537]

Application of the variational-difference method of straight lines to the calculation of wing middle surface deformation [p0199 B80-21276]

A study of the stress-strain state of shaped hollow blades for radial superchargers [p0326 A80-34351]

Application of the calculation scheme for a layered viscoelastic medium to the estimation of the stressed state of highway airport pavements with moving loads [p0395 A80-38775]

The use of holographic speckle interferometry to study the stress-strain state of a gas turbine engine disk near a scarf joint with a blade [p0012 A80-12537]
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>STRUCTURAL DESIGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>[NASA-CR-162473]</td>
<td>p0184 B80-17293</td>
</tr>
<tr>
<td>Structural analysis of hollow blades: torsional stresses</td>
<td>p0242 B80-19111</td>
</tr>
<tr>
<td>systems analysis of hollow fan blades for aircraft jet engines</td>
<td>p0246 B80-19136</td>
</tr>
<tr>
<td>The history of static test and Air Force structures testing</td>
<td>p0246 B80-21265</td>
</tr>
<tr>
<td>An aerodynamic analysis of the Sheriff wing</td>
<td>p0300 B80-22374</td>
</tr>
<tr>
<td>Improved packaging for the LH-31 inertial measurement unit (P-15 aircraft)</td>
<td>p0361 B80-23299</td>
</tr>
<tr>
<td>Decision analysis of Advanced Scout Helicopter candidates</td>
<td>p0363 B80-23299</td>
</tr>
<tr>
<td>Nonlinear transient analysis by energy minimization: A theoretical basis for the ACTION code</td>
<td>p0452 B80-27750</td>
</tr>
<tr>
<td>Mathematical modeling of linear and nonlinear aircraft structures</td>
<td>p0501 B80-27799</td>
</tr>
<tr>
<td>Response of nonlinear panels to random loads</td>
<td>p0595 B80-31326</td>
</tr>
<tr>
<td>Development and analysis of the Learjet 54/55 fuselage FASTRAN model using substructure techniques</td>
<td>p0635 B80-33794</td>
</tr>
<tr>
<td>Structural Beams S Beams (Supports) Structural Design</td>
<td></td>
</tr>
<tr>
<td>Mathematics for computer graphics — Book on numerical design engineering of aerospace systems</td>
<td>p0059 A80-16272</td>
</tr>
<tr>
<td>Design of damping systems and their application</td>
<td>p0059 A80-16272</td>
</tr>
<tr>
<td>Sonic fatigue design data for bonded aluminum aircraft structures</td>
<td>p0094 A80-18304</td>
</tr>
<tr>
<td>Assessment of analytic methods for the prediction of aerodynamic characteristics of arbitrary bodies at supersonic speeds</td>
<td>p0101 A80-19308</td>
</tr>
<tr>
<td>Some parametric relations for designing large-aspect wings</td>
<td>p0150 A80-21294</td>
</tr>
<tr>
<td>Principles of design of a carbon fiber composite aircraft wing</td>
<td>p0150 A80-21294</td>
</tr>
<tr>
<td>Calculation of minimum-weight and maximum-rigidity structures in the presence of design constraints</td>
<td>p0204 A80-27165</td>
</tr>
<tr>
<td>Structural design of transport airplanes for transient environments</td>
<td>p0210 A80-27726</td>
</tr>
<tr>
<td>Minimum-mass designs of stiffened graphite/polyimide compression panels</td>
<td>p0213 A80-27898</td>
</tr>
<tr>
<td>Selection of a rational structure diagram for a large-aspect-ratio wing</td>
<td>p0213 A80-27898</td>
</tr>
<tr>
<td>Development of a structural overload warning system for modern high-performance aircraft</td>
<td>p0263 A80-29227</td>
</tr>
<tr>
<td>CAD produced aircraft drawings</td>
<td>p0330 A80-34974</td>
</tr>
<tr>
<td>Preliminary design of composite wing-box structures for global damage tolerances</td>
<td>p0331 A80-35036</td>
</tr>
<tr>
<td>Structural design loads for future airplanes</td>
<td>p0332 A80-35099</td>
</tr>
<tr>
<td>Integrated thermal-structural finite element analysis — for applications to hypersonic transport design</td>
<td>p0335 A80-35098</td>
</tr>
<tr>
<td>Optimal design studies on composite wings with static and dynamic constraints</td>
<td>p0379 A80-36663</td>
</tr>
<tr>
<td>A new type of flap valve for generating sonic booms in a pyramidal horn</td>
<td>p0390 A80-38100</td>
</tr>
<tr>
<td>Low cycle fatigue testing, a necessary part of advanced development for military fighter aircraft gas turbine engines</td>
<td>p0399 A80-38900</td>
</tr>
<tr>
<td>Design, manufacturing, and operational behavior of helicopter composite blades</td>
<td>p0411 A80-40465</td>
</tr>
<tr>
<td>Gas turbine combustion design challenges for the 1980's</td>
<td>p0449 A80-41213</td>
</tr>
<tr>
<td>The economic impact of materials technology on supersonic transport selection</td>
<td>p0470 A80-43300</td>
</tr>
<tr>
<td>The objective necessity of the fail-safe design philosophy</td>
<td>p0511 A80-45697</td>
</tr>
<tr>
<td>Forward swept wing flight demonstrator</td>
<td>p0514 A80-45705</td>
</tr>
<tr>
<td>Optimal designing of shells and plates with discrete stiffeners</td>
<td>p0526 A80-47184</td>
</tr>
<tr>
<td>Considerations of some critical ejector problems — for the V/STOL aircraft</td>
<td>p0527 A80-47187</td>
</tr>
<tr>
<td>Use of wagner functions in airfoil design optimization</td>
<td>p0525 B80-10139</td>
</tr>
<tr>
<td>Aerodynamic from the viewpoint of the designer</td>
<td>p0655 B80-12002</td>
</tr>
<tr>
<td>Aerodynamic design of an extended-range guided bomb</td>
<td>p0655 B80-12002</td>
</tr>
<tr>
<td>Quiet Clean Short-haul Experimental Engine (QCSEE). The aerodynamic and mechanical design of the QCSEE over-the-wing fan</td>
<td>p0132 B80-15089</td>
</tr>
<tr>
<td>Quiet Clean Short-haul Experimental Engine (QCSEE) Over-The-Wing (OTW) helicopter diesel design report</td>
<td>p0133 B80-15099</td>
</tr>
<tr>
<td>Materials and structures research scientific report, 1978</td>
<td>p0133 B80-15099</td>
</tr>
<tr>
<td>The aerodynamic design of an advanced rotor airfoil</td>
<td>p0162 B80-17143</td>
</tr>
<tr>
<td>Design and test of a boron-aluminum high-temperature wing</td>
<td>p0223 B80-18034</td>
</tr>
<tr>
<td>Advanced composite airfoil for L-1011 transport aircraft</td>
<td>p0223 B80-18034</td>
</tr>
<tr>
<td>Design considerations for attaining 250-knot test velocities at the aircraft landing dynamics facility</td>
<td>p0225 B80-19132</td>
</tr>
<tr>
<td>Standard engineering installation package</td>
<td>p0290 B80-20254</td>
</tr>
<tr>
<td>Finite elements and the optimization of aeronautical structures</td>
<td>p0290 B80-20254</td>
</tr>
<tr>
<td>Turbopropulsion combustion technology assessment</td>
<td>p0301 B80-21268</td>
</tr>
<tr>
<td>A general panel method for the analysis and design of arbitrary configurations in incompressible flows — boundary value problem</td>
<td>p0301 B80-21268</td>
</tr>
<tr>
<td>High-temperature ceramic heat exchanger</td>
<td>p0366 B80-23323</td>
</tr>
<tr>
<td>Development of the Learjet 28/29 wing using FASTRAN analysis</td>
<td>p0366 B80-23323</td>
</tr>
<tr>
<td>[1111 PAPBB 80-1153]</td>
<td>p0389 A80-38900</td>
</tr>
<tr>
<td>[1111 PAPBB 80-1842]</td>
<td>p0449 A80-41213</td>
</tr>
<tr>
<td>[1111 PAPBB 80-1882]</td>
<td>p0514 A80-45705</td>
</tr>
<tr>
<td>[1111 PAPBB 80-1930]</td>
<td>p0526 A80-47184</td>
</tr>
<tr>
<td>[1111 PAPBB 80-1930]</td>
<td>p0526 A80-47184</td>
</tr>
<tr>
<td>[1111 PAPBB 80-1930]</td>
<td>p0526 A80-47184</td>
</tr>
</tbody>
</table>
SUBJECT INDEX


STRUCTURAL FATIGUE

G STRUCTURAL FATIGUE (MATERIALS)

Structural Influence COEFFICIENTS

Structural parameters that influence the noise reduction characteristics of typical general aviation materials [AIAA PAPER 80-0036] p0092 880-18248

Calculation of some aerodynamic characteristics of a flexible aircraft by an influence coefficient method [AD-A80-21343] p0152

STRUCTURAL MATERIALS

G CONSTRUCTION MATERIALS

STRUCTURAL MEMBERS

NT BEAMS (SUPPORTS)
NT BOX BEAMS
NT CARBON COMPOSITE BEAMS
NT CIRCULAR PLATES
NT FLAT PLATES
NT ORTHOTROPIC PLATES
NT PERFORATED PLATES
NT PLATES (STRUCTURAL MEMBERS)
NT REINFORCED PLATES
NT SKIN (STRUCTURAL MEMBER)
NT STRAIGHTS
NT TUBES
NT TUBULAR STRUCTURES
NT WING PANELS

Structural analysis of variable-sweep wings [AD-A80-10053] p0019

STRUCTURAL RELIABILITY

Reliability of aircraft disconnect joints — Russian book [AD-A80-16594] p0060

Is the structural life of an aircraft wing limited? [AD-A80-17335] p0063

Design for continuing structural integrity — commercial aircraft [AIAA PAPER 80-24138] p0164

Fatigue in machines and structures — aircraft [AD-A80-26731] p0196

Technical diagnosis and operation of engines according to technical condition [AIAA PAPER 80-36763] p0374

Application of fracture mechanics to 0587 aircraft structural integrity requirements [AD-A80-36860] p0378

Limits of application of the damage tolerance concept to combat aircraft [AIAA PAPER 80-36866] p0379

Current developments in aircraft fatigue evaluation procedures [AIAA PAPER 80-2931] p0379

The objective necessity of the fast-safe design philosophy [AD-A80-36867] p0511

Reliability assurance of aircraft structures [AD-A80-46838] p0573


Airline view of long life structures [AD-A80-50582] p0582

Continuing structural airworthiness of civil transport aircraft [AD-A80-50584] p0582

Airworthiness of long-life jet transport structures [AD-A80-50586] p0582

Build 2 of an accelerated mission test of a T-41 with block 76 hardware — investigation of structural reliability of engine parts of a turbofan engine [AD-A80-13050] p0081

Fatigue damage estimation for the BAE aircraft fatigue data analysis system [AD-A80-30301] p0089

Advanced structures concepts r and e cost assessments — helicopter airframe maintainability and life cycle costs [AD-A80-32374] p0632

STRUCTURAL RIGIDITY

G STRUCTURAL STABILITY

STRUCTURAL STABILITY

Transient, nearly periodic rotor oscillations — Russian book [AD-A80-10124] p0001

Experimental investigation of the strength of rotor materials in the presence of surface cracks [AD-A80-10482] p0003

Session on Vibration Control, Pennsylvania State University, University Park, Pa., October 8-12, 1979, Proceedings [AD-A80-16271] p0059

Evaluation of strength safety factors under multicomponent loading with consideration of material properties scatter [AD-A80-16831] p0060

An analytical method of testing pavement strength [AD-A80-17998] p0091

Some parametric relations for designing large-aspect wings [AD-A80-21294] p0150

The reliability of the mechanical components of flight vehicles — Russian book [AD-A80-23086] p0158

Minimum-weight wing in the presence of lift constraints [AD-A80-27136] p0203

Application of geometrical programming to problems of optimal design [AD-A80-27137] p0203

Distribution of forces and stresses along rows of bolted connections [AD-A80-27143] p0203

Selection of a rational structure diagram for a large-aspect-ratio wing [AD-A80-29227] p0263

Experimental investigation of the strength of rotor materials with surface cracks [AD-A80-32944] p0278

Active flutter suppression control law definition via least squares synthesis [AIAA 80-0765] p0332

P-66 flutter suppression system investigation [AIAA 80-0768] p0333

Elevated temperature structural testing of advanced missiles [AIAA 80-0812] p0335

Application of the integrating matrix method to solution of boundary-value problems with normal form of the differential equations and isoperimetric edge conditions — structural analysis [AIAA 80-36790] p0376

A review of nondestructive inspection reliability on aircraft structure [AIAA PAPER 80-37203] p0381

Effect of adding structural damping to a wing/nacelle nump flap type flutter node [AD-A80-41159] p0447

Study of the relaxation of the tightening force of bolted joints — in supersonic transport aircraft [AD-A80-46860] p0525

Experience in correcting dynamic designs on the basis of resonance test data — aircraft structures [AD-A80-46872] p0526

Selecting rational high-aspect-ratio wing structural stiffening scheme [AD-A80-50482] p0582

On the espenoage map-through problem [AD-A80-10047] p0019

An empirical approach for checking flutter stability of gliders and light aircraft [AD-A80-15144] p0139

On interfacing structural information and loading data in aeroelastic analysis — using computer techniques [AIAA 80-3633] p0187

Aircraft sonic boom: Effects on buildings. Citations from the HTIS data base [AD-A80-80633] p0341

Proposal: Driving system design guide. Part 1: Flexible rotor dynamics (AD-A807806) p0611

STRUCTURAL STRAIN

A review of Australian investigations on aeronautical fatigue during the period April 1977 to March 1979 — structural strain and fatigue life studies on aircraft structures and construction materials [AD-A80-31803] p0606
Experience in correcting dynamic designs on the basis of resonance test data aircraft structures

[ASHE PAPEB 80-1017] p0054 A80-15088

A new approach to active control of rotorcraft vibrations

[ASHE PAPEB 80-1017] p0054 A80-15088

A method of simplifying weight and balance for small aircraft

[SAVE PAPEB 1271] p0104 A80-20627

Evaluation of Aero Commander sidewall vibration
derivation of structural weight

[SAVE PAPEB 1271] p0104 A80-20627

Approximate method for calculating plane cascade
determination of aircraft take-off weight in the preliminary design stage

[ASHE PAPEB 80-1017] p0054 A80-15088

conditions characteristic of aircraft gas turbines

dynamic vibration exciter for full-scale structures

[SAVE PAPEB 1271] p0104 A80-20627

p0056 A80-67605

Practical aspects of the calculation of structural vibrations

[SAVE PAPEB 1271] p0104 A80-20627

p0065 A80-12207

Theoretical analysis of the transient response of a wing to non-stationary buffet loads

[SAVE PAPEB 1271] p0104 A80-20627

p0180 A80-17083

Vibrations of a compressor blade with slip at the root

[SAVE PAPEB 1271] p0104 A80-20627

p0183 A80-17263

Turbulent-boundary-layer excitation and response thereto for a high-performance conical vehicle

[SAVE PAPEB 1271] p0104 A80-20627

p0228 A80-18229

Symmetric variational formulation of harmonic vibrations problem by coupling primal and dual principles.

[SAVE PAPEB 1271] p0104 A80-20627

Application to fluid-structure coupled systems

[SAVE PAPEB 1271] p0104 A80-20627

p0316 A80-22245

Rotor-bearing dynamics technology design guide.

[SAVE PAPEB 1271] p0104 A80-20627

Part 1: Flexible rotor dynamics

[SAVE PAPEB 1271] p0104 A80-20627

[AD-A087806] A80-13571

Evaluation of Aaco Commander sidewall vibration and interior acoustic data: Static operations

[SAVE PAPEB 1271] p0104 A80-20627

p0645 A80-33392

Investigation on vibration reduction through structural optimization

[SAVE PAPEB 1271] p0104 A80-20627

p0647 A80-33403

VIBRATION CONTROL

Wind tunnel model deflection system

[ASHE PAPEB 80-1017] p0054 A80-15088

Stability derivatives of blunt slender cones at high Mach numbers

[ASHE PAPEB 80-1017] p0054 A80-15088

Design of damping systems and their application
to the weight-minimization problem for a finite-element inverse perturbation system

[ASHE PAPEB 80-1017] p0054 A80-15088

A single-step method of optimizing statically indeterminate minimum-volume systems

[ASHE PAPEB 80-1017] p0054 A80-15088

Evaluation of Aero Commander sidewall vibration estimating relationships to future transport aircraft

[ASHE PAPEB 80-1017] p0054 A80-15088

p0105 A80-20647

Weight impact of VTOL
design for high-performance conical vehicle

[ASHE PAPEB 80-1017] p0054 A80-15088

p0106 A80-20656

Weight minimization for a wing in the presence of constraints on the divergence speed

[ASHE PAPEB 80-1017] p0054 A80-15088

p0151 A80-21392

A single-step method of optimizing statically indeterminate minimum-volume systems

[ASHE PAPEB 80-1017] p0054 A80-15088

p0202 A80-27113

Analytical study of interior noise control by fuselage design techniques on high-speed propeller-driven aircraft

[ASHE PAPEB 80-1017] p0054 A80-15088

p0338 A80-35960

Preliminary design of a very advanced technology light twin for the mid-80's

[ASHE PAPEB 80-1017] p0054 A80-15088

p0471 A80-43309

The weight-minimization problem for a forward-swept wing with constraints on the rate of wing divergence

[ASHE PAPEB 80-1017] p0054 A80-15088

p0525 A80-46870

Determination of aircraft take-off weight in the preliminary design stage

[ASHE PAPEB 80-1017] p0054 A80-15088

p0527 A80-47186

Multilevel optimum design of wing box structures with fiber composite panel components

[ASHE PAPEB 80-1017] p0054 A80-15088

p0494 A80-27349

STDS

SUBSPACE ASSEMBLIES

Analytical modeling of the dynamics of aircraft powerplant subassembly units

[ASHE PAPEB 80-1017] p0054 A80-15088

p0504 A80-15088

SUBCARDER WAVES

SUBCIRCUITS

SUBCIRCUITS

SUBASSEMBLIES

SUBASSEMBLIES

Approximate method for calculating plane cascade flow at high subcritical Mach numbers

[ASHE PAPEB 80-1017] p0054 A80-15088

p0527 A80-32226

A-376
SUBJECT INDEX

**SUBCAVITY**
- Reduced Gravity

**SUBLATTICES**
- LATTICE (MATHEMATICS)

**SUBLATTICES**
- LATTICE (MATHEMATICS)

**SUBMERGED AIRCRAFT**
- A comparison of underwater helicopter-escape lights
  - p0085 A80-8209

**SUBSYSTEMS**
  - [NASA-CH-159159- VOL-2] p0171 H80-16066

**SEASAM**
- A system of equations for the simulation of aircraft in a modular environment
  - [RAE-TR-79008] p0179 H80-17069

**Easy ACIS dynamic analysis, volume 2: Part 2:**
- Configuration computer programs
  - [AD-A079403] p0237 H80-19076

**The VIBRA-8 subsonic aerodynamic nuclear gas vulnerability code**
- [AD-A0791722] p0359 H80-23256

**Bifilar analysis user's manual, volume 2**
- [NASA-CH-159228-VOL-2] p0062 H80-31383

**SUBSONIC AIRCRAFT**
- The case of subsonic jet aircraft -- noise reduction near airports
  - p0153 A80-21961

**Durability of foam insulation for LH2 fuel tanks of future subsonic transports**
- p0155 A80-22687

**Advanced high speed commercial aircraft - 2000**
- [AIAA PAPER 80-0937] p0320 H80-32998

**Subsonic transport noise**
- [AIAA PAPER 80-0858] p0373 H80-36322

**Multivariate optimum design of subsonic jet passenger airplane**
- p0380 A80-36999

**Hydrogen fueled high bypass turbofans in subsonic aircraft**
- p0384 A80-37348

**Experimental study of the interaction between a rapid subsonic aircraft wing and an engine nozzle at high dilution rate**

**Zero-length, clefted-lip inlet for subsonic military aircraft**
- [AIAA PAPER 80-1245] p0049 A80-41203

**Future trends in subsonic transport energy efficient turbofan engines**
- [ASM PAPER 80-07-177] p0064 A80-42283

**Development of the 'D' Vented thrust deflection nozzle**
- [AIAA PAPER 80-1656] p0471 A80-43308

**Sensitivity of an optimal preliminary design of a transport to operational constraints and performance index**
- [AIAA PAPER 80-0895] p0473 A80-43320

**A survey of the literature on surface roughness effects on the drag of subsonic aircraft**
- [TPA-AU-1224] p0026 H80-11049

**Wind tunnel investigation of an all flush orifice air data system for a large subsonic aircraft---conducted in a Langley 8 foot transonic pressure tunnel**
- [NASA-TP-1642] p0364 H80-23304

**SUBSONIC FLOW**
- Calculations of inviscid supercritical subsonic flow past a lifting profile of arbitrary thickness---German thesis
  - p0048 A80-13456

**Statistical characteristics of pressure fluctuations in the flow-separation zone on a plate behind a spoiler**
- p0009 A80-13695

**A numerical approach to subsonic viscous-inviscid interaction**
- p0099 A80-19070

**Summary of advanced methods for predicting high speed propeller performance**
- [AIAA PAPER 80-0225] p0108 A80-20956

**A panel method for calculating the loads acting on a wing that performs harmonic oscillations in subsonic flow**
- p0109 A80-21792

**Evaluation of the kernel of an integral equation for a wing perforating harmonic oscillations in subsonic flow**
- p0109 A80-21792

**SUBSONIC FLUTTER**
- Airfoil with minima relaxation drag
  - p0150 A80-21296

**Effect of non-rotating passages on performance of centrifugal pumps and subsonic compressors**
- p0157 A80-22914

**Experimental results on axial flow compressor stages with high subsonic Mach numbers**
- p0210 A80-27733

**Stability aspects of diverging subsonic flow**
- p0260 A80-29097

**A velocity potential panel method for the prediction of unsteady airloads on oscillating wings and bodies**
- p0275 A80-30859

**Influence of S-shaped air intake inlet section ellipticity on outlet flow uniformity---for aircraft engines**
- p0376 A80-36778

**Optimization of the relaxation drag of slender profile arrangements in steady subsonic flow. Y---Single profile**
- p0444 A80-40895

**Aerodynamics of wings in subsonic shear flow**
- p0452 A80-41162

**Perturbing influence of the probe on the characteristics of a subsonic wake behind a two-dimensional model**
- p0475 A80-43787

**Asymmetric trailing-edge flows at high Reynolds numbers**
- [AIAA PAPER 80-1396] p0506 A80-44151

**Visualization of the acoustic excitation of a subsonic jet**
- p0620 A80-52717

**Entrainment characteristics of unsteady subsonic jets---for V/STOL aircraft**
- p0233 H80-10124

**Two dimensional aerodynamic interference effects on oscillating airfoils with flaps in ventilated subsonic wind tunnels---computational fluid dynamics**
- [NASA-CH-3210] p0113 A80-18047

**Summary of advanced methods for predicting high speed propeller performance**
- [NASA-TR-81009] p0127 H80-15051

**Unsteady effects of a control surface in two dimensional, subsonic and transonic flow**
- p0102 H80-15068

**Average gust frequencies subsonic transport aircraft**
- [ESDO-69023-A-B-C] p0167 H80-16029

**Development of panel methods for subsonic analysis and design**
- [NASA-CH-3234] p0167 H80-16033

**Unsteady effects with control surfaces---measured in a wind tunnel**
- [AAPP-WT-79-01] p0225 H80-18049

**Transonic data memorandum: Numerical methods for solving the potential flow equations for two-dimensional aerofoils in subsonic and transonic flows, brief details, test cases and examples**
- [ESDO-79009] p0302 H80-21278

**Blade-to-blade flow of ideal fluid with wall injection**
- p0315 H80-22228

**Subsonic and transonic flows on a variable sweep wing**
- p0316 H80-22248

**The harmonically oscillating body in subsonic flow: Effect of compressibility**
- [ESA-PT-584] p0360 H80-23270

**Steady, Oscillatory, and Unsteady Subsonic and Transonic Aerodynamics, production version (S05SSA-P 1.1). Volume 2: Theoretical manual---Green function**
- [NASA-CH-159130] p0377 H80-25269

**A brief investigation of the two-dimensionality of the flow over an airfoil in the 8 foot by 6 foot transonic wind tunnel**
- [NASA-TR-ABHO-1828] p0600 H80-31368

**Method for inviscid subsonic flows about aircraft configurations**
- p0643 H80-33368

**SUBSONIC FLUTTER**
- The development of active control and its application to flutter suppressors---wind tunnel test results
Boundary layer control by means of suction
Improving the suction capability of vane pumps
Development and analysis of the Learjet 54/55
A proposal for aerodynamically actuated self
Unsteady aerodynamic forces on a subsonic
The acoustic characteristics of the BAB 1.5m wind
ten nent design for subsonic wind tunnel models
Aerofoil characteristics of moving
Sound plane effects on a contoured surface at low
Estimation of attainable leading-edge thrust for
Optimized aerodynamic design process for subsonic
Wind tunnel model
Aerodynamic characteristics of moving
Variation of density of air for space shuttle
Orbiter below supersonic speeds
SUBSONIC WIND TUNNELS
Numerical simulation of the wind tunnel
environment by a panel method
On the historical development of apparatus and
techniques for smoke visualization of subsonic
and supersonic flows
External stores technology in subsonic wind tunnels
--for separation characteristics testing
The acoustic characteristics of the BAR 1.5m wind
region--modifications and test results
Turbulence measurements in the boundary layer of a
supersonic wind tunnel using laser velocimetry
Unsteady aerodynamic forces on a
rectilinear cascade of blades
Analysis and testing to improve the flow from the
plenum of a subsonic cascade wind tunnel
A proposal for aerodynamically actuated self
streamlining subsonic wind tunnel walls
SUBSTRUCTURES
Development and analysis of the Learjet 54/55
fuselage NASTRAN model using substructure
SUCTION
Improving the suction capability of vane pumps
for aircraft fuel tanks
Boundary layer control by means of suction
Design studies of laminar flow control (LFC) wing
concepts using superplastics forming and
diffusion bonding (SFP/DB)
SBD AVIATION AIRCRAFT
ST CONCORDE AIRCRAFT
SUH AIRCRAFT
U SOLAR SENSORS
SUPER SABRE AIRCRAFT
P-100 AIRCRAFT
SUPERALLOYS
U HEAT RESISTANT ALLOYS

SUBJECT INDEX

SUPERCONDUCTING MAGNETS
High power density superconducting generator
SUPERCONDUCTING POWER TRANSMISSION
Permanent magnet and superconducting generators
in airborne, high power systems -- computer
program to predict weight of the generators and
component systems
SUPERCONDUCTORS
Program for the development of a superconducting
generator, phase 2 and 3
Superconductive flow
Controlled supercritical crossflow on supersonic
wings -- an experimental validation
Supercritical wing design studies for transport
aircraft. Volume 1: Wing design and wind
tunnel measurements
A comparison of various numerical methods for
calculating supercritical inviscid incompressible
flow over two-dimensional aerofoils
Supercritical pressure
Transonic data memorandum: The lift achievable by
efficiency with a particular form of
Super critical aerofoil with various high-lift
distribution that yields only small wave drag
Super critical wing design studies for transport
aircraft
Super critical upper-surface pressure
determination of the loading capacity of wave
traansitons for transport aircraft. Volume 1: Bing
design and wind tunnel measurements
Supercritical analysis
Transonic swept-wing analysis using asymptotic and
other numerical methods
Cooperative transonic analysis for a
supercritical transport wing-body configuration
AV-08 - A second generation V/STOL
A comparison of various numerical methods for
calculating supercritical inviscid incompressible
flow over two-dimensional aerofoils
Supercritical analysis
Computational methods for the design of adaptive
airfoils and wings
Development of a mission adaptive wing system for
a tactical aircraft
Active flow control using linear quadratic
time-domain control
The Forward Swept Wing -- A unique design challenge
Shock-free wing design
Design and performance evaluation of supercritical
airfoils for axial flow compressors
An artificial viscosity method for the design of
supercritical airfoils
Two-dimensional wind-tunnel tests of a NASA
supercritical airfoil with various high-lift
systems. Volume 1: Data analysis
Two-dimensional wind-tunnel tests of a NASA
supercritical airfoil with various high-lift
systems. Volume 2: Test data
The effects of sonic booms on the ecological environment  

Active controls for flutter suppression and gust alleviation in supersonic aircraft  

Sixteen years of Bach 3 flight  

Top inlet system feasibility for transonic-supersonic fighter aircraft applications  

The effects of turbine inlet temperature and engine complexity on V/STOL powered supersonic V/STOL aircraft — Variable-Cycle Engine/Remote Augmentor Lift System  

V/STOL supersonic fighter  

Advanced Olympus for the next generation supersonic transport aircraft  

Integration of ejectors into high-speed aircraft  

Airblast vulnerability envelopes for supersonic aerospace vehicles  

Application of supersonic linear theory and hypersonic flight methods to three-dimensional supersonic airplane concepts at Mach numbers from 1.10 to 2.66  

Hypersonic wing design studies for transport aircraft. Volume 2: Theoretical studies  

Potential environmental effects of aircraft emissions  

Hypersonic airplane concepts at Bach numbers 3–4  

FLighthworthy active control landing gear for a supersonic aircraft  

Supersonic wings with significant leading-edge thrust at cruise  

Supercritical wing design studies for transport aircraft. Volume 2: Theoretical studies  

A simplified shock-fitting solution to a supersonic internal corner flowfield  

Luminescence of a supersonic air stream with fuel combustion before the critical nozzle section  

Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet  

Supersonic combustion ramjet engines  

A simplified shock-fitting solution to a supersonic internal corner flowfield  

Luminescence of a supersonic air stream with fuel combustion before the critical nozzle section  

Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet  

Hypersonic combustion air dissociation through shock waves and aerodynamics of chemically reacting gases in a planar converging—diverging nozzles — supersonic combustion
**SUPersonic Commercial Air Transport**

ramjet engines  
[AD-4073135] p0071 880-12057

Thermal-structural design study of an airframe-integrated scramjet  
[NASA-CR-159039] p0434 880-25334

Conceptual model of turbulent flameholding for scramjet combustor  
[NASA-TP-1563] p0068 880-33469

**SUPersonic Commercial Air Transport**

supersonic propulsion technology — variable cycle engines  
[AD-4086160] p0029 880-10216

**Supersonic Compressors**

Inlet flow distortion in turbomachinery. I - Comparison of theory and experiment in a transonic fan stage. II - A parameter study  
[AIAA PAPER 80-1076] p0396 880-38895

Aerodynamic analysis of a supersonic cascade vibrating in a complex mode  
[DFYLR-8-07-17] p0353 880-22353

**Supersonic Cruise Aircraft Research**

Advanced technology duct burner for variable cycle engines  
[AIAA PAPER 80-1201] p0400 880-38966

Bach 2.2 F-16 development under way  
[AD-4068488] p0047 880-45374

Some effects of cruise speed and engine matching of supersonic inlet design  
[AIAA PAPER 80-1607] p0512 880-45374

Low-speed wind-tunnel tests of a 1/10-scale model of an advanced low-wing supersonic cruise configuration designed for cruise at Mach 2.2  
[NASA-TN-00152] p0024 880-10135

Transonic aerodynamic characteristics of a supersonic cruise aircraft research model with the engines suspended above the wings  
[NASA-TN-001455] p0076 880-12997

Economic study of multipurpose advanced high-speed transport configurations  
[NASA-CR-159126] p0086 880-13996

Flight control and configuration design considerations for highly maneuverable aircraft  
[DFYLB-FB-79-17] p0012 880-15154

Example of performance analysis using data obtained concurrently in air-path, body and engine axes  
[ESDO-79018] p0287 880-20225

Aerodynamic design and analysis of the AST-204, AST-205, and AST-206 blended wing-fuse large supersonic transport configuration concepts  
[NASA-CR-159223] p0268 880-20232

Supersonic cruise aircraft research: bibliography  
[ESDO-79016] p0305 880-21316

Time-temperature-stress capabilities of composite materials for advanced supersonic technology application, phase 1  
[NASA-CR-159227] p0651 880-33946

**Supersonic Drag**

An improved sensing element for skin-friction balance measurements — supersonic drag measuring instrument  
[AIAA PAPER 80-0049] p0092 880-18251

Inlet drag and stability considerations for 8/0 = 2.00 design  
[AIAA PAPER 80-1105] p0397 880-38916

Prediction of drag coefficients of a supersonic V/STOL configuration with various store arrangements  
[AD-107299] p0070 880-12055

**Supersonic Flight**

An experimental method for investigating the mutual aerodynamic interference of aircraft components at supersonic velocities  
[AD-4073135] p0056 880-15476

Investigation of leading-edge devices for drag reduction of a 60-deg. delta wing at high angles of attack  
[AIAA PAPER 80-0310] p0094 880-18309

Modern fluid dynamics of supersonic and hypersonic flight  
[AIAA PAPER 80-0562] p0321 880-33275

Calculation of pressure distribution on slender wings in supersonic flow  
[AD-1077299] p0376 880-36797

**SUPersonic Flow**

Installation for investigating the effect of non-steady-state supersonic gas flow on the blades of a plane cascade  
[AD-4086160] p0006 880-11255

On supersonic flow with attached shock waves over delta wings  
[AD-4086160] p0012 880-12598

Experimental check of a direct method for optimizing the aerodynamic shape of bodies in supersonic flows  
[AD-4086160] p0056 880-15477

An improved sensing element for skin-friction balance measurements — supersonic drag measuring instrument  
[AIAA PAPER 80-0049] p0092 880-18251

Injector solutions for wing and body-body combination at high-speed supersonic projection  
[AIAA PAPER 80-0126] p0096 880-16359

Mach 3 hydrogen external/base burning  
[AD-4086160] p0201 880-29069

Numerical simulation of supersonic inlets using a three-dimensional viscous flow analysis  
[AIAA PAPER 80-0386] p0101 880-29069

An analytical and experimental study of a short S-shaped subsonic diffuser of a supersonic inlet  
[AIAA PAPER 80-0386] p0090 880-20970

Calculation of the supersonic flow field with vortices behind a slender rectangular wing  
[AIAA PAPER 80-21320] p0152 880-21341

Delta wing of optimal configuration in supersonic flow  
[AD-4086160] p0012 880-21341

Calculation of the supersonic flow past a winged bielliptical body  
[AD-4086160] p0152 880-21342

The nonlinear supersonic potential flow over delta wings  
[AIAA PAPER 80-0269] p0162 880-23942

The experimental modeling of uninstalled supersonic turbine fan flutter  
[AIAA PAPER 80-0454] p0201 880-26963

Influence of the angle of attack on the thermal flow at the stagnation point at supersonic speeds  
[AIAA PAPER 80-27138] p0203 880-27137

Numerical modeling of supersonic flow near a thin delta wing with discontinuous edge  
[AIAA PAPER 80-27147] p0203 880-27147

Numerical method for calculating supersonic flow past a plane air intake with detached shock wave  
[AIAA PAPER 80-27148] p0204 880-27147

Similarity of the aerodynamic characteristics of delta wings at supersonic speeds  
[AIAA PAPER 80-27148] p0204 880-27148

Experimental investigation of the flow past a wing of finite width  
[AIAA PAPER 80-29222] p0262 880-30976

Design of slotted transonic wind tunnels for supersonic flow development  
[AIAA PAPER 80-30976] p0265 880-32526

Conically cambered delta wings in supersonic flow. I - Basic solutions  
[AD-4086160] p0265 880-32526

Conically cambered delta wings in supersonic flow. II - Optimal solutions  
[AD-4086160] p0286 880-32531

Solution of boundary layer equations with the aid of series for supersonic gas flow  
[AD-41510] p0376 880-36791

Numerical solution of the Navier-Stokes equations for a family of three-dimensional corner geometries  
[AIAA PAPER 80-1349] p0451 880-41570

Complete viscous flowfield solutions about a blunt parabolic body in a supersonic stream  
[AIAA PAPER 80-1351] p0451 880-41576
A simplified shock-fitting solution to a supersonic internal corner flowfield
[AIAXE PAPER 80-1525] p0525 ABO-41615

Three dimensional supersonic flow through a cascade of twisted flat plates
[AIAXE PAPER 80-TP-3] p0470 ABO-43333

Calculation of the supersonic flow past a slender delta wing at angles of attack and sideline
p0524 ABO-48265

Limiting values of the lift coefficient of lifting bodies with a flat surface at supersonic speed
p0525 ABO-48661

Application of spline approximations to the calculation of wall pressure in three-dimensional supersonic nozzles
p0526 ABO-46973

Experimental facility for studying the thermal effect of supersonic gas jets on targets
p0526 ABO-47178

Calorimetric sensor for measuring temperature fields generated by intense heat sources
p0526 ABO-47179

Analog modeling in studying supersonic flow around a wing and its governing analog-criteria
p0518 ABO-10038

Investigation of the boundary condition at a lifting-wing-body model at low supersonic speed
[AIAXE PAPER 80-1072901] p0525 ABO-10141

Summary of advanced methods for predicting high speed propeller performance
[AIAXE PAPER 80-9405] p0527 ABO-15051

steady, Oscillatory, and Unsteady Subsonic and Supersonic Aerodynamics, production version
[SODUET-P 1.] Volume 1: Theoretical manual

--- Green function

[AIAXE-CH-159130] p0777 ABO-26269

Effect of Reynolds number on stability characteristics of a cruciform wing-body
[AIAXE-TP-1683] p0407 ABO-27203

Calculation of high-speed inflow flows using the Navier-Stokes equations. Volume 2: User's guide and programmer's guide
[AIAXE PAPER 80-94095] p0530 ABO-28319

Calculation techniques for inviscid two-dimensional supersonic airflow
[AIAXE PAPER 80-5527] p0542 ABO-29257

Basic studies of wing-body interference at high angles of attack and supersonic speeds
[AIAXE-TP-1731] p0599 ABO-31355

Calculations by a first order theory of supersonic flow around delta wings
[AIAXE-TP-8801] p0599 ABO-31362

Pressure data for four analytically defined arrow wings in supersonic flow --- Langley Unitary Plan Wind Tunnel tests
[AIAXE-TP-81135] p0620 ABO-32332

A comprehensive investigation into the supersonic viscous flow about a slender cone at high angle of attack: Experimental and theoretical results
p0640 ABO-33340

Linearised methods in supersonic flow
p0648 ABO-33380

SUPERSONIC FLOW INLETS
U SUPERSONIC INLETS

The experimental modeling of uninstalled supersonic turbofan flutter
[AIAXE PAPER 80-0468] p0201 ABO-26963

Active controls for flutter suppression and gust alleviation in supersonic aircraft
p0201 ABO-26963

Aerodynamic analysis of a supersonic cascade vibrating in a complex mode
p0514 ABO-45644

SUPERSONIC INFLETS

Improved numerical simulation of high speed inlets
using the Navier-Stokes equations

[AIAXE PAPER 80-0983] p0984 ABO-18340

Inlet flow distortion in turbomachinery. I. - Comparison of theory and experiment in a transonic fan stage. II. - A parametric study

[AIAXE PAPER 80-1976] p0396 ABO-38995

Inlet drag and stability considerations for \(\alpha/\alpha = 2.00\) degree

[AIAXE PAPER 80-1105] p0397 ABO-38916

Small-scale supersonic inlet test facility
[AIAXE PAPER 80-1145] p0398 ABO-38937

Calculation of the flow in a supersonic air intake with allowance for the boundary layer on the fairings
p0525 ABO-46487

Dynamic response of a Mach 2.5 axi-symmetric inlet and turbojet engine with a poppet-value controlled inlet stability bypass system when subjected to internal and external airflow transients
[AIAXE-TP-1531] p0120 ABO-14123

Turbojet-exhaust-nozzle secondary-airflow purging as an exit control of an inlet-stability bypass system for a Mach 2.5 axi-symmetric mixed-compression inlet --- Lewis 10- by 10-ft. supersonic wind tunnel test
[AIAXE-TP-1532] p0120 ABO-14124

An overall and experimental study of a short s-shaped subsonic diffuser of a supersonic inlet
[AIAXE-TP-81406] p0137 ABO-15134

Wind tunnel tests of a tabular supersonic inlet for projectiles
[DIPL-TP-79-26] p0436 ABO-25367

Luminescence of a supersonic air stream with fuel combustion before the critical nozzle section

[AIAXE PAPER 80-1646] p0532 ABO-16462

Excess noise from supersonic underexpanded jets in flight I.

p0526 ABO-23923

Numerical investigation of unstable interaction of a supersonic jet with a plane barrier
p0527 ABO-31362

Acoustic effects on the flow and the noise spectrum of supersonic jets
p0526 ABO-34042

A linearized theory for swirling supersonic jets and its application to shock-cell noise
[AIAXE PAPER 80-16497] p0532 ABO-16482

Location and propagation of shock associated noise from supersonic jets
[AIAXE PAPER 80-9583] p0574 ABO-35999

Conceptual design and performance estimates for a supersonic aerodynamic window for the NASA vacuum system aperture
[OCHL-15051] p0144 ABO-15183

An experimental study of two-dimensional supersonic jet impingement in a flat plate
p0520 ABO-17996

SUPERSONIC MODILES

Aircraft engine nozzle
[AIAXE-ACS-10-1977] p0635 ABO-32392

SUPERSONIC SPEEDS

Assessment of analytic methods for the prediction of aerodynamic characteristics of arbitrary bodies at supersonic speeds
[AIAXE PAPER 80-0071] p0101 ABO-19308

Induced drag and lift-drag ratio of swept wings at supersonic speeds
p0204 ABO-27175

Estimation of attainable leading-edge thrust for wings at subsonic and supersonic speeds
[AIAXE-TP-1500] p0204 ABO-10105

Overall aerodynamic characteristics of caret and delta wings at supersonic speeds
p0384 ABO-11022

SUPERSONIC TRANSPORTS
U CONCORDE AIRCRAFT

Concorde commercial air transport
The next supersonic transport
p0103 ABO-20214

Platinf and wind tunnel test results of the mechanical jet noise suppressor nozzle
[AIAXE PAPER 80-0165] p0109 ABO-20971

The changing horizons for technical progress. II
p0207 ABO-27270

Some unique characteristics of supersonic cruise vehicles and their effect on airport community noise
[AIAXE PAPER 80-0859] p0519 ABO-32661

Prediction of noise constrained optimum takeoff procedures
[AIAXE PAPER 80-1055] p0340 ABO-35996

Current problems and the future in advanced supersonic transport noise
[AIAXE PAPER 80-1056] p0341 ABO-35997

The economic impact of materials technology on supersonic transport selection
[AIAXE PAPER 80-1828] p0470 ABO-43300
A wind tunnel demonstration of the principle of aeroelastic tailoring applied to forward swept wings

Aerodynamic design of a forward swept wing aircraft [AIAA PAPER 80-1158]

Aeroelastic tailoring of a forward swept wing [AIAA PAPER 80-1158]

Forward swept wing flight demonstration [AIAA PAPER 80-1682]

The Forward Swept Wing - A unique design challenge [AIAA PAPER 80-1685]

The weight-minimization problem for a forward-swept wing with constraints on the rate of wing divergence

Illustration of airfoil shape effect on forward-swept wing divergence

Swept Wings

VT ARROW WINGS

VT DELTA WINGS

VT SWEPT FORWARD WINGS

VT SWEPTBACK WINGS

VT TRAPEZOIDAL WINGS

Transition in the infinite swept attachment line boundary layer

Resonant wave interactions on a swept wing

Analytical investigation of aerodynamic characteristics of highly swept wings with separated flow

Experimental and computational study of transonic flow about swept wings [AIAA PAPER 80-0005]

Investigation of leading-edge devices for drag reduction of a 60-deg. delta wing at high angles of attack

A computer code to model swept wings in a large wall transonic wind tunnel [AIAA PAPER 80-0156]

Hybrid vortex method for lifting surfaces with free-vortex flow

Transonic swept-wing lift and drag analysis using asymptotic and other numerical methods [AIAA PAPER 80-0342]

Local skin friction and static pressure on a swept wing in flight [AIAA 80-0463]

Induced drag and lift-drag ratio of swept wings at supersonic speeds

Comparison of methods for prediction of transition by stability analysis [AIAA PAPER 80-1375]

Laminar boundary layer on swept wings of infinite span at an angle of attack

Numerical solution of three-dimensional unsteady transonic flow over swept wings [AIAA PAPER 80-1369]

Structures of flow separations over swept wings [AIAA PAPER 80-1413]

Selecting the geometric parameters and position of a nose flap on the root profile of a swept wing

Aeroelastic analysis of a forward swept wing [AIAA PAPER 80-0452]

Lifting surface divergence and control effectiveness

Verification of the experimentally determined laminar-turbulent transition on a swept wing
Experience from testing the Viggen electronic systems utilizing existing computer capacity p0206 A80-27235

Tactical navigation system testing p0206 A80-27237

The Tornado all-weather high-speed low-level system p0207 A80-27379

VFV-Poker-concept for a ground-attack-BPF p0265 A80-29655

Use of a simulator in the development of a BPF system p0267 A80-29668

Design of an integrated flight/fire control system including movable gun and slaved line of sight tracker p0253 B80-22355

Using vertical gust alleviation to improve the target tracking capability of the control configured TF-16 p0354 B80-22360

TARGET RECOGNITION

The 'Martello' 3D radar antenna --- for civil ATC and military technology p058 A80-15915

Wire obstacle warning system/WOWS/ - A real-time airborne sensor for automatic detection and recognition of wire-like objects p087 A80-17902

Bit slices in a radar processor --- for target detectability improvement p0160 A80-23530

Hybrid optical/digital processing for target identification p0197 A80-26667

Methodology for target discrimination p0207 A80-27347

Survey of radar data-processing techniques in air-traffic-control and surveillance systems p0385 A80-37500

Swept frequency scanning measurements of aircraft --- target identification [AD-A071674] p032 B80-10420

Aircraft program for target background, and sky radiance measurements [AD-A076959] p0231 B80-18624

Cooperative estimation of targets by multiple aircraft [AD-A080597] p0631 A80-32366

Airborne radar approach flight test evaluating various track orientation techniques [AD-A088626] p0631 A80-32368

TARGET SIMULATORS

Firebrand anti-ship missile target - flight test program objectives and vehicle instrumentation requirements p0206 A80-27236

Acousto-optic devices for use in radio frequency target simulators p0508 A80-44514

SUBJECT INDEX

Technical challenges in developing the new wave of small and medium helicopters p0009 A80-11396

Future applications of welding technologies in the aerospace industry p0061 A80-16555

What brings us down tomorrow - landing guidance systems for the 1980s p0098 A80-18725

The next supersonic transport p0103 A80-20214

Application of parametric weight and cost estimating relationships to future transport aircraft [SAE PAPER 1292] p0105 A80-20637

Locking ahead --- in aircraft design p0154 A80-22146

Single rotor options for heavy lift and potential of multi lift technology p0195 A80-26642

Multirole cargo aircraft options and configurations [SAE PAPER 791096] p0195 A80-26645

Fokker multi-role transport aircraft - Requirements and design possibilities [SAE PAPER 791097] p0195 A80-26646

Advanced computer program --- for future automation and system performance improvements p0197 A80-26680

Future large cargo aircraft technology p0207 A80-27269

The changing horizons for technical programs. II p0207 A80-27270

The future development of air traffic as seen by airline companies p0216 A80-28487

Technological aspects of future very large airplanes p0216 A80-28490

Major areas of research in aeronautics and air traffic at the German Aerospace Research Establishment/DFVLR/ p0216 A80-28551

Advanced avionic architectures for the 1980's - A software view p0280 A80-32420

Military aerospace to 2000 p0285 A80-32510

Air transportation 2000 - A challenge for new technology p0320 A80-32699

The impact of fuels on aircraft technology through the 1980's [AIAA PAPER 80-0945] p0320 A80-32699

Overview of new engineering and development initiatives - Technology choices [AIAA PAPER 80-0923] p0380 A80-37006

General aviation propulsion for the nineties [AIAA PAPER 79-1159] p0391 A80-38396

Accelerating reliability growth of electronic propulsion controls in the 1980's [AIAA PAPER 80-11968] p0488 A80-41188

Gas turbine combustor design challenges for the 1980's [AIAA PAPER 80-1265] p0489 A80-41213

Advanced technology impact on future Navy aircraft [AIAA PAPER 80-1665] p0471 A80-43311

Europe's combat aircraft - will it happen p0509 A80-65498

An assessment of Sea Based Air Master Study p0513 A80-65739

Future fighter technologies p0527 A80-47323

Aircraft of the future [SAE PAPER 800743] p0575 A80-69693

A methodology for long range prediction of air transportation [SAE PAPER 800768] p0577 A80-69712


Multilrole cargo aircraft options and configurations - economic analysis [NASA TM-80177] p0037 B80-11053

Aeronautical systems technology needs: Escape, rescue and survival [AD-A074906] p0114 B80-14061


A-390
Measuring technological change in jet fighter aircraft
[AD-A077393] p0239 N80-19084
Air Force Flight Dynamics Laboratory fiscal year 1981. Technical objective document
[AD-A078973] p0250 N80-20020
The role of technology as air transportation faces the fuel situation
New opportunities for future, small, General-Aviation Turbine Engines (GATE)
[AD-A083352] p0351 N80-22335
The spark-ignition aircraft piston engine of the future
[AD-A083352] p0351 N80-22337
Outlook for advanced concepts in transport aircraft
[NASA-TB-81810] p0382 N80-23283
Turbopropulsion combustion technology assessment
[AD-A080748] p0366 N80-23323
Small ship-based VTOL aircraft - a design exercise
[PHB-153354] p0477 N80-26265
Aeronautical systems technology needs: Escape, rescue and survival
[AD-A083352] p0708 N80-26280
Control of the engines for the new Airbus family
[PM82 N80-26321]
Cargo Logistics Airlift Systems Study (CLASS)
Volume 5: Summary
[ASA-CH-158951] p0644 N80-33382

TECHNOLOGIES

WT ENERGY TECHNOLOGY
MT MILITARY TECHNOLOGY

Recent and future engineering developments in flight training simulators
p0005 A80-10776
Some novel design techniques for conformal antennas
p0506 A80-15692
Situation of welding in engine maintenance
p0611 A80-16966
Preparing aircraft propulsion for a new era in energy and the environment
p0909 A80-17737
Technology of the Rolls-Royce RB211 engine
p0899 A80-18864
Tilt rotor - An effective V/STOL concept
[SAAE PAPER 1273] p0104 A80-20628
Small ship-based VTOL aircraft - a design exercise
[SAAE PAPER 1296] p0105 A80-20639
Navy V/STOL - A continuing initiative
[SAAE PAPER 1325] p0106 A80-20655
Small Transport Aircraft Technology
p0148 A80-21225
Composite in aircraft manufacturing - An impressive rise --- in Western Europe
p0153 A80-21923
Mechanical fasteners dominating aerospace --- aircraft and spacecraft structural joining techniques
p0159 A80-23335
Breaking V/STOL free of Catch 22 --- utilization and assessment
p0193 A80-26342
AV-8B - A second generation V/STOL
[SAAE PAPER 791070] p0194 A80-26633
Multi rotor options for heavy lift
[SAAE PAPER 791089] p0195 A80-26643
The Federal aviation Administration navigation program
p0197 A80-26619
Avionics - The leading technology in flight guidance and air traffic control
p0216 A80-28492
Aeropropulsion in year 2000
[AIAA PAPER 80-0918] p0320 A80-32887
Technology to increase aircraft capacity
[AIAA PAPER 80-0920] p0320 A80-32890
Technology requirements and readiness for very large aircraft
[AIAA PAPER 80-0935] p0320 A80-32897
Big-fan engines - A new US generation
p0324 A80-34216
New developments in US military fighter engines
p0324 A80-34217
Development and application concepts for trainer and combat-trainer versions of combat jet aircraft
p0335 A80-35103
Optical advances in laser transit anemometry
p0342 A80-36139

Fluid and structural measurements to advance gas turbine technology
p0343 A80-36145
Evolution of aerospace materials and technologies.
Examples
[AIAA PAPER HT 79-22 II] p0370 A80-36587
Impact of modern materials on the development of aircraft
[AD-A083352] p0380 A80-36785
Future production of hydrogen from solar energy and water - a summary and assessment of U.S. developments
p0382 A80-37336
An assessment of gas turbine engine augmentor technology and needs for the 80's
[AIAA PAPER 80-1200] p0400 A80-38965
Combustion modeling needs for the 80's
[AIAA PAPER 80-1288] p0401 A80-39005
Economics and technology of airships
p0402 A80-39281
A summary of lighter-than-air technology development and applications in the United States
p0403 A80-39290
Airship - A modern transport system
p0406 A80-39312
Why have none of the airship projects conceived during the last fifteen years not been realized to the present
p0406 A80-39320
The economics and technology of LTA
p0406 A80-39321
Front office for the new technology transport - 1990 --- pilot-all electrical aircraft systems
p0410 A80-40339
Design for the future --- architecture of ATC
p0496 A80-40976
Installation trades for axisymmetric and nonaxisymmetric nozzles
[AIAA PAPER 80-0184] p0447 A80-41178
Hey, aircraft and systems of navigation - An evaluation for the 1980s
p0585 A80-41872
Joint technology demonstrator engine - The initial test
[AIAA PAPER 80-GT-47] p0585 A80-42179
The Energy Efficient Engine /83/ - Advancing the state of the art
[AIAA PAPER 80-GT-142] p0662 A80-42255
Advanced transport aircraft technology
p0505 A80-44114
Technological advances in the light of operational cost policies
[DGLR PAPER 80-025] p0522 A80-46280
Aircraft maintenance technologies. II
p0568 A80-47702
Modern Doppler navigation systems
p0621 A80-52996
Rotor dynamics --- structural analysis software review
p0628 A80-53468
Advanced missile technology. A review of technology improvement areas for cruise missiles --- including missile design, missile configurations, and aerodynamic characteristics
[BASA-CB-3187] p0022 A80-10103
Recent developments in ejector technology in the Air Force: An overview
p0022 A80-10108
Turbomachinery technology
p0029 A80-10212
Control technology
p0029 N80-10215
VSCE technology definition study
[AIAA-CR-159730] p0030 A80-10222
Small transport aircraft technology. A report for the committee on commerce, science, and transportation, United States Senate
[NASA-TM-80813] p0045 A80-11953
Technology options for an enhanced air cargo system
[NASA-TB-80173] p0069 A80-12076
Design assessment of advanced technology lightweight, low-cost mission-configured gondolas modules
[AD-A073554] p0070 A80-13029
A review of the research at NGT concerning the effects of flight on engine exhaust noise
A helmet-mounted sight using C.C.D. technology

Application of advanced technologies to small, F-16 co-production - An American point of view

Qualitative armament subsystem assessment

Hew Technology Transport for fuel critical economy

Parametric study of modern airship productivity

Impact of advanced air transport technology. Part 1: Advanced high-speed aircraft

Hydrogen technology: Foreign, change 1

Turbopropulsion combustion technology assessment

Continued study of HAVSTAB/GPS for general aviation

Aero-optics overview laser applications

First report of the HOD Aerospace Hon-Destructive

A case for VATOL flight demonstration

An overview of NASA research on positive control elements

Active control technology

An overview of NASA research on positive displacement general-aviation engines

A test of technology as air transportation faces the fuel situation

Overview of NASA battery technology program

Advanced technology airfoil research, volume 2 --- conferences

Active control technology

Turbopropulsion combustion technology assessment

A case for VAFOL flight demonstration

First report of the N O D Aerospace Non-Destructive Testing (NDT) Sub-Committee

Aero-optics overview --- laser applications

Advanced fuel system technology for utilizing hydrogen property aircraft fuels

Hydrogen technology: Foreign, change 1

Impact of advanced air transport technology. Part 1: Advanced high-speed aircraft

Supersonic transport: The past, the present, and the future

Parametric study of modern airship productivity

Qualitative assessment subsonic assessment

Application of advanced technologies to small, short-haul air transports

NT AEROSPACE TECHNOLOGY TRANSFER

The interrelationships between engineering development simulation and flight simulation --- drone design development simulator technology transfer to flight simulator and training program improvements

F-16 co-production - An American point of view

Airfield package - A help for developing countries --- in airport planning and construction

New Technology Transport for fuel critical economy

TECHNOLOGY UTILIZATION

A helmet-mounted sight using C.C.D. technology

Applied technology in turbofan engines

The role of technology in air transportation faces the fuel situation

A link between science and applications of unmanned technology --- automatic control; Proceedings of the Seventh Triennial World Congress, Helsinki, Finland, June 12-16, 1976. Volumes 1, 2, 3 & 4

Some applications of welding processes in the aerospace industry

Technologies conceived for the utilization of ceramics in turbine engines

Application of HST/FAS optical communications technology for aircraft to satellite links

Casing civil transport aircraft with active control elements

Operations of unmanned aircraft

Applications of LSI to digital systems - An overview of expectations and reality --- signal processing in avionics

Technologies of aircraft maintenance. I

Evolution of aerospace materials and technologies. I

Application prospects for the airship

Technology of graphite-resin composite materials and their applications in the aeronautical industry.

Controlling the technical services at an air technical base

Technology solutions to the runway denial problem (S A E PAPER 800747)


The CFR56 - High bypass technology for standard body aircraft

The potential use of helicopters in an airline role

Outlook for advanced concepts in transport aircraft (S A E PAPER 800746)

Civil applications of NAVSTAR GPS

The use of computer based optimization methods in aircraft studies

Advanced technology airfoil research, volume 2 --- conferences

Advanced technology airfoil research

The impact of global positioning system on guidance and controls systems design of military aircraft. Volume 2a: Specific application study no. 1, close air support

Cost/benefit tradeoffs available in aircraft noise technology applications in the 1980's

A flight investigation of performance and loads for a helicopter with MLB-TR main-rotor blade sections

NT AIRCRAFT COMMUNICATION

NT DATA LINES
Aerospace Environment, Vol. 76, No. 3-4, 1982

**SUBJECT INDEX**

**TELEMETRY**
- First experience with telemetry and real-time data reduction at Gates Learjet
- NIDS - The right tool for small test jobs ---
- Miniature Integrated Data Systems for inflight testing
- Low profile strain gage applications telemetered from rotating machinery
- The design, development and operation of gas turbine radio telemetry systems

**TELEVISION CAMERAS**
- A solid state /CCD/ cockpit television system

**TELEVISION EQUIPMENT**
- A solid state /CCD/ cockpit television system

**TELLENG THEORY**
- G NETWORK ANALYSIS
- G NETWORK SYNTHESIS

**TEMPERATURE**
- NT AERIAL TEMPERATURE
- NT ATOMIC TEMPERATURE
- NT AVERAGE TEMPERATURE
- NT BREAKDOWN TEMPERATURE
- NT COMBUSTION TEMPERATURE
- NT GAS TEMPERATURE
- NT HIGH TEMPERATURE
- NT INLET TEMPERATURE
- NT LOW TEMPERATURE
- NT ROOM TEMPERATURE
- NT SURFACE TEMPERATURE
- NT WALL TEMPERATURE

**TEMPERATURE CONTROL**
- Thermal control systems for pod-mounted avionics
- Design and characterization of an evaporative cold plate for thermal control of avionic equipment
- Heat pipe avionic thermal control systems

**TEMPERATURE DIFFERENCES**
- NT TEMPERATURE GRADIENTS
- TEMPERATURE GRADIENTS
- Study of homogeneous combustion chamber temperature field nonuniformity with primary zone parameter variation
- Computer calculation of stationary temperature fields in air-cooled turbine rotor blades
- Computer calculation of stationary temperature fields in cooled turbine discs

**TEMPERATURE MEASUREMENT**
- Computer-aided design of temperature fields for cooled gas-turbine blades
- Heat transfer phenomena in gas turbines
- Investigation of the thermal state of longitudinally cooled rotor blades
- Influence of quality of fuel-air mixture preparation in prechamber on correlation of temperature fields before and after combustion chamber mixer
- Temperature field as a means of evaluating excitation intensity of aircraft turbine blades
- Temperature distribution planning for a cooled gas-turbine blade using an electronic computer
- Use of the method of variable directions for numerical study of the temperature states of a turbine disk with blades --- temperature distribution of rotating disk turbine blades using linear transformation
- Study of homogeneous combustion chamber temperature field nonuniformity with primary zone parameter variation --- of fuel-air parameters
- Temperature distortion --- in a compressor inflow
- Aerostatic nondestructive evaluation by thermal field techniques

**TEMPERATURE EFFECTS**
- On the influence of steady state temperature and pressure distortion on the flow characteristics in an installed multistage jet engine compressor
- Integrated circuit characteristics at 260 C for aircraft engine-control applications
- Importance of jet temperature on the prediction of jet noise in flight
- Effect of temperature on surface noise
- Engine environmental effects on composite behavior --- moisture and temperature effects on mechanical properties
- The influence of prior engine usage data on the selection of structural design criteria
- A comparison of jet temperature effects on afterbody drag with those from jet molecular weight and nozzle area ratio variation
- Experimental facility for studying the thermal effect of supersonic gas jets on targets
- Blade wake interference: Temperature effect --- on cascade flow
- Fuel system technology overview
- Integral aircraft fuel tank leak classification

**TEMPERATURE FIELDS**
- G TEMPERATURE DISTRIBUTION
- TEMPERATURE GRADIENTS
- Propagation of acoustic waves in a nonuniformly heated medium
- On determining the temperatures at given points of cooled turbine blades made from multilayer perforated materials
- Nonstationarity of heat transfer in axial turbine blading during engine startup

**TEMPERATURE INDICATORS**
- G INDICATING INSTRUMENTS
- G TEMPERATURE INVERSIONS
- G INTERFACIAL TENSION
- G TEMPERATURE MEASUREMENT
- Failure accommodation in gas turbine engines with application to fan turbine inlet temperature
### Temperature Measuring Instruments

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature measurement of aircraft gas turbine engines for transient nodes</td>
<td>p0563 A80-47370</td>
</tr>
<tr>
<td>Temperature measurement of aircraft gas turbine engines for transient nodes</td>
<td>p0054 A80-15125</td>
</tr>
</tbody>
</table>

### Temperature Profiles

- **Temperature and flow measurements on near-freezing aviation fuels in a wing-task model**

- **Temperature sensors**
  - Combustion-gas temperature sensors for turbine and turbojet engines
    - [ASME PAPER 80-GT-63] p0492 A80-37349

### Terminal Strength

- **Blade tip and knife edge rub testing of F110TFAL seals**
  - [ASME PAPER 80-GT-154] p0463 A80-42266

- **High modulus/high strength organic fibers**
  - p0521 A80-40097

### Terminal Stress

- **A design study in crack patching**
  - [aml/STBC-997-376] p0654 N80-33798

### Test Systems

- **Designed of a strapdown navigator aided by position measurements**
  - Kalman-filter for terrain aided navigation
    - p0007 A80-11187

### Terminal Configured Vehicle Program

- **Flights performance of the TCV B-737 airplane at Jorge Newberry Airport, Buenos Aires, Argentina using TSB/MLS guidance**
  - [NASA-TM-80223] p0222 N80-18021

- **Terminal configured vehicle program: Test facilities guide**
  - [NASA-G-435] p0222 N80-18028

- **Flight performance of the TCV B-737 airplane at Montreal/Dorval International Airport, Montreal, Canada, using TSB/MLS guidance**
  - [NASA-TM-81085] p0630 N80-32361

- **Longitudinal stability and control in wind shear with energy height rate feedback**

### Terminal Facilities

- **Requirements for short instrument runways**
  - p0040 A80-11653

- **A simulation model for aircraft sequencing in the near terminal area**
  - p0052 A80-18439

- **Marseilles - Metaforisation of an airport**
  - p0091 A80-17999

- **Centralised ground power systems conserve energy**
  - p0091 A80-18000

- **Computer simulation of an air cargo small package sorting system**
  - p0106 A80-20866

- **Models for freight access to air terminals**
  - p0106 A80-20869

- **Hydrogen liquefaction, storage and transfer on an airport site**
  - p0384 A80-37349

- **Wind shear detection with Doppler radar**
  - p0384 A80-37707

- **The Air Products/Prodair helium infrastructure at airship bases**
  - p0405 A80-39305

- **Airport equipment and know-how from England - An airport form survey**
  - p0506 A80-44117
### SUBJECT INDEX

**TEST CHAMBERS**

- **BT AERONAUTIC CHAMBERS**
  - Investigation of noise hazards in the engine test cell, CFB Baden-Sörglingen [AD-A0749391] p0123 B00-14417
  - Climatic chamber testing aircraft, engines, armament and avionics; Test operations procedure — environmental test chambers and facility for testing aircraft construction materials and engines [AD-A0740497] p0144 B00-15181
  - A Combined Environments Reliability Test (CERT) facility for testing of airborne equipment [AD-A058974] p01426 B00-24137

**TEST FACILITIES**

- **TEST EQUIPMENT**
  - Application of the discrete-phase method /DPM/ to the study and control of aircraft turbine engine blade vibrations. [p0002 B00-10234]
  - Installation for investigating the effect of non-steady-state supersonic gas flow on the blades of a plane cascade [p0008 B00-11055]
  - Microprocessors as aircraft fatigue monitors [p0010 B00-12640]
  - Experimental techniques developed at ONERA for advanced compressor testing [ONERA TP 1749-129] p0015 B00-13060
  - A low cost airborne data acquisition system [p0025 B00-27311]
  - Measurement of dynamic direct and cross-coupling derivatives due to oscillatory roll [p0120 B00-59985]
  - The influence of test equipment during resonance tests of light structures — aircraft aeroelastic model [p0128 B00-32228]
  - Blade tip and knife edge rub testing of FELITEAL seals [p0146 B00-52266]
  - A simple apparatus for the experimental study of non-steady flow thrust-augmenter ejection configurations [p0023 B00-10125]
  - Impact of new instrumentation on advanced turbine engine research. [NASA-TM-79301] p0137 B00-15133
  - Transponder Performance Analyzer (TPA) [AD-A075783] p0168 B00-16008
  - Assessment of the flammability of aircraft hydraulic fluids [AD-A07512] p0183 B00-17227
  - Control of particulate emissions from turbine engine test cells by cooling water injection [AD-A075947] p0231 B00-18587
  - Computer simulation model of the logistic support system for electrical engineering test equipment [p0026 B00-19560]

- **A101 central integrated test subsystem evaluation** [AD-A086130] p0551 B00-29336

**TEST FACILITIES**

- **BT AERONAUTIC CHAMBERS**
  - Investigation of noise hazards in the engine test cell, CFB Baden-Sörglingen [AD-A0749391] p0123 B00-14417

### TEST STANDS

- Major areas of research in aeronautics and air traffic at the German Aerospace Research Establishment /DFVLR/ [p0216 B00-2840]
- Post-crash fuel fire hazard measurements in a wide body aircraft cabin [p0259 B00-29025]
- Recent developments in aerothermodynamic test techniques at the HBC von Karman gas dynamics facility [p0263 B00-29477]
- Instrumentation and techniques for parachute wind tunnel testing [p0264 B00-29498]
- Temperature and pressure measurement techniques for an advanced turbine test facility [p0044 B00-31577]
- The development and operation of the HIC anechoic acoustic test facility [p0032 B00-38633]
- Dynamic tests of a test bed for piston engines [p0052 B00-35705]
- Experimental facility for studying the thermal effect of supersonic gas jets on targets [p0260 B00-27178]

### TEST CHAMBERS

- Climatic chamber testing aircraft, engines, armament and avionics; Test operations procedure — environmental test chambers and facility for testing aircraft construction materials and engines [AD-A0740497] p0144 B00-15181
- A Combined Environments Reliability Test (CERT) facility for testing of airborne equipment [AD-A058974] p01426 B00-24137

### TEST FACILITIES

- Application of the discrete-phase method /DPM/ to the study and control of aircraft turbine engine blade vibrations. [p0002 B00-10234]
- Installation for investigating the effect of non-steady-state supersonic gas flow on the blades of a plane cascade [p0008 B00-11055]
- Microprocessors as aircraft fatigue monitors [p0010 B00-12640]
- Experimental techniques developed at ONERA for advanced compressor testing [ONERA TP 1749-129] p0015 B00-13060
- A low cost airborne data acquisition system [p0025 B00-27311]
- Measurement of dynamic direct and cross-coupling derivatives due to oscillatory roll [p0120 B00-59985]
- The influence of test equipment during resonance tests of light structures — aircraft aeroelastic model [p0128 B00-32228]
- Blade tip and knife edge rub testing of FELITEAL seals [p0146 B00-52266]
- A simple apparatus for the experimental study of non-steady flow thrust-augmenter ejection configurations [p0023 B00-10125]
- Impact of new instrumentation on advanced turbine engine research. [NASA-TM-79301] p0137 B00-15133
- Transponder Performance Analyzer (TPA) [AD-A075783] p0168 B00-16008
- Assessment of the flammability of aircraft hydraulic fluids [AD-A07512] p0183 B00-17227
- Control of particulate emissions from turbine engine test cells by cooling water injection [AD-A075947] p0231 B00-18587
- Computer simulation model of the logistic support system for electrical engineering test equipment [p0026 B00-19560]

### TEST STANDS

- Major areas of research in aeronautics and air traffic at the German Aerospace Research Establishment /DFVLR/ [p0216 B00-2840]
- Post-crash fuel fire hazard measurements in a wide body aircraft cabin [p0259 B00-29025]
- Recent developments in aerothermodynamic test techniques at the HBC von Karman gas dynamics facility [p0263 B00-29477]
- Instrumentation and techniques for parachute wind tunnel testing [p0264 B00-29498]
- Temperature and pressure measurement techniques for an advanced turbine test facility [p0044 B00-31577]
- The development and operation of the HIC anechoic acoustic test facility [p0032 B00-38633]
External fuel vaporization study, phase 1
[NASA CR-159850] p0437 880-25453
Fuel research: Fuel thermal stability overview
p0550 880-29324
Experimental study of turbine fuel thermal stability in an aircraft fuel system simulator
p0550 880-29325
Determination of jet fuel thermal deposit rate using a modified JPTOT
p0550 880-29326
Mechanisms of nitrogen heterocycle influence on turbine fuel stability
p0550 880-29327
Low temperature fuel behavior studies
p0550 880-29330
Some experience in the design and evaluation of ceramic combustion chambers
p0554 880-29357

THERMAL STRESSES
Thermostructural analyses of structural concepts for hypersonic cruise vehicles
[AIAA Paper 80-0607] p0162 880-23950
Effects of idealizing three-dimensional geometry with two-dimensional models in temperature and stress analysis of engine components
p0165 880-24310
Computer-aided designing of temperature fields for cooled gas-turbine blades
p0277 880-31208
Calculation of radial-axial turbine wheel thermal and stress states
p0565 880-47420
Temperature field as a means of evaluating excitation intensity of aircraft turbine blades
p0618 880-52193
Temperature distribution planning for a cooled gas-turbine blade using an electronic computer
p0625 880-53636
Application of fully stressed design procedures to redundant and non-isotropic structures
[NASA TM-81402] p0558 880-29767

THERMIEIC REACTORS
US NUCLEAR ROCKET ENGINES

THERMIEICAL PROPERTIES
Asymptotic integration of multicomponent chemical-inequilibrium boundary layer equations
--- hypersonic gas flow analysis
p0386 880-37552

THERMODYNAMIC CYCLES
NT BRADTON CYCLE
NT OTTO CYCLE
NT PARKINE CYCLE
Installation effects on cycle selection for small turbo-fan engines
[AIAA Paper 80-0106] p0059 880-15280
Fuel conservation benefits and critical technologies of recuperative and advanced conventional cycle turboshaft engines
[AIAA Paper 80-0224] p0100 880-19301
Turbopropulsion combustion - Trends and challenges
[AIAA Paper 80-1199] p0400 880-38964
Cycle optimization for a 10,000 SEP high efficiency gas turbine system
Some aspects of the thermodynamics of duct jet flows --- in turbofan engines
p0525 880-46864
AVCO Lycoming QCAT program design cycle, demonstrated performance and emissions
p0351 880-22332

THERMODYNAMIC EFFICIENCY
Full coverage film-cooled blading in high temperature gas turbines - Cooling effectiveness, profile loss and thermal efficiency
[ASME Paper 80-GT-37] p0457 880-42170
Cycle optimization for a 10,000 SEP high efficiency gas turbine system
Investigation of some features of film cooling of fixed and moving blades
p0508 880-44774
On calculating gas turbine efficiency reduction under the influence of air cooling
p0566 880-47415
Algorithms for calculating turbine cooling flow and the resulting decrease in turbine efficiency
[NASA TM-81453] p0257 880-19863

THERMODYNAMIC PROPERTIES
NT ENTHALPY

NT ENTROPY
NT SUPERCRITICAL PRESSURES
NT THERMAL CONDUCTIVITY
NT THERMAL EXPANSION
NT THERMAL STABILITY
NT THERMIEICAL PROPERTIES
Calculation of working process in 'slow-compression' piston-type aerodynamic tube
p0003 880-10607
Thermal state of structural members of aircraft engines --- Russian book
p0101 880-19412
Airfoil with minimum relaxation drag
p0157 880-22914
Thermodynamics of heavy fuels operation in gas turbine
Theoretical study of the thermodynamic parameters of the combustion products of solid gas jet generator fuels
p0565 880-47425
Dynamics of diesel fuel combustion in turbulent flow
p0020 880-10074
Thermal response and reusability tests of advanced flexible reusable Surface Insulation (RSI) and ceramic title RSI samples at surface temperatures to 1200 degrees F
[AB-40780] p0295 880-20399
Thermal response turbine shroud study
[AD-4080620] p0353 880-22352
Property screening and evaluation of ceramic turbine engine materials
[AD-4080663] p0366 880-23322
CF6 jet engine performance improvement program: High pressure turbine aerodynamic performance improvement
[NASA CR-159032] p0480 880-26302

THERMBMAGNETICS
NT AEROTHERMBMAGNETICS
NT COMBUSTION PHYSICS
NT NONEQUILIBRIUM THERMIEICALS
Parametric method of aircraft engine status diagnostics based on limited information
p0017 880-10003
Thermodynamics of organic compounds --- ramjet fuels
[AD-4080072] p0296 880-20410

THERMOGRADES
NT RECORDING INSTRUMENTS
NT THERMOEIEICAL TREATMENT
Thermo-mechanical stress analysis of advanced turbine blade cooling configuration
[AD-4074096] p0137 880-15126
Shock wave theromomechanical processing of aircraft gas turbine disk alloys
[AD-408280] p0420 880-24319

THERMOEIEICALS
NT THERMOEIEICALS

THERMODYNAMICS
NT TEMPERATURE MEASUREMENT
NT THERMOPHISICAL PROPERTIES
NT SUPERCRITICAL PRESSURES
NT THERMAL CONDUCTIVITY
NT THERMAL STABILITY
NT THERMOPHYSICS
NT THERMOEIEICALS

THERMOEIEICALS
NT THERMAL STABILITY
NT THERMOPHYSICS

THERMOEIEICALS
NT THERMAL EFFECTS

THICKNESS
Viscous thin airfoil theory
p0431 880-25299

THICKNESS RATIO
Airbus airfoils cut fuel burn — High aspect ratio, thickness, low sweep contribute
p0524 880-46682

THERM AIRFOILS
NT INFINITE SPAN WINGS
NT THEN WINGS

Aerodynamic coefficients in generalized unsteady thin airfoil theory
p0390 880-38034
On the unsteady, wake induced lift on a slotted airfoil
p0514 880-45840
Two dimensional aerodynamic interference effects on oscillating airfoils with flaps in ventilated

A-397
Three-dimensional interactions and vortical flows

Aerodynamic and acoustic investigations of axial flow fan and compressor blade rows, including three-dimensional effects

The development of rapid predictive methods for three-dimensional transonic flow fields about fighter bomber aircraft, part 1

Numerical flow field program for aerodynamic heating analysis. Volume 1: Equations and results

Three-dimensional flow investigation with a method of characteristics in the inlet region and the blade-to-blade channels of supersonic axial compressors

An improved panel method for the solution of three-dimensional leading edge vortex flows

Numerical method for predicting flow characteristics and performance of nonaxisymmetric nozzles. Part 2: Applications

WING: Computer program for calculation of three-dimensional potential compressible flow about wind turbine rotor blades

Three Dimensional Motion

THREE SECONDARY FLOW

THREE DIMENSIONAL FLOW

Method for calculating wing loading during maneuvering flight along a three-dimensional curved path

A velocity potential panel method for the prediction of unsteady airloads on oscillating wings and bodies

An analytical investigation of three-dimensional vibration in gear-coupled rotor systems

Three Dimensional Motion

THREE SECONDARY FLOW

THREE DIMENSIONAL FLOW

Method for calculating wing loading during maneuvering flight along a three-dimensional curved path

A velocity potential panel method for the prediction of unsteady airloads on oscillating wings and bodies

An analytical investigation of three-dimensional vibration in gear-coupled rotor systems

Three Dimensional Motion

Analysis of experimental indicators of the hydrodynamic force at a needle-type throttle

Jet Thrust

Rocket Thrust

Static Thrust

Studies of leading-edge thrust phenomena

The influence of the thrust direction on the level flight of light airplanes

An analysis of thrust-induced effects on the longitudinal aerodynamics of STOL fighter configurations

Estimation of attainable leading-edge thrust for wings at subsonic and supersonic speeds

Supersonic wings with significant leading-edge thrust at cruise

Estimation of wind shear and thrust loss during STOL aircraft landing approach

Investigation of axisymmetric and nonaxisymmetric nozzles installed on a 0.10 scale F-18 prototype airplane model — wind tunnel test results

Numerical optimization of circulation control airfoils

Jet Thrust Augmentation

Recent development of a jet-diffuser ejector

Large scale model tests of a new technology V/STOL concept

The structure-free thrust-doubling of insect-like aircraft - The possibility of using insect-flight/thrust-flight on a large technical scale

Dynamic modeling of augmentor fuel systems

Characteristics of afterburning bypass turbojet engine with oxygen injection into the afterburner chamber — study of fuel injection into thrust chambers for thrust augmentation

Workshop on Thrust Augmenting Ejectors

Recent developments in ejector technology in the Air Force: An overview

Some tests on small-scale rectangular thrust ejector — thrust augmentation for V/STOL aircraft

Augmenting ejector endwall effects — V/STOL aircraft

An investigation of corner separation within a thrust augmenter having Coanda jets

Entrainment characteristics of unsteady subsonic jets — for V/STOL aircraft

A simple apparatus for the experimental study of non-steady flow-thrust-ejector configurations

Pressure and velocity measurements in a three-dimensional wall jet

Considerations of some critical ejector problems — for the V/STOL aircraft

Reaction control system augmentation for V/STOL aircraft

Design and test of a prototype scale ejector wing

The external augmentor concept for V/STOL aircraft

The IFV-124 Thrust-Augmented Wing (TAW) prototype aircraft

Method and apparatus for rapid thrust increases in a turbofan engine

Thruster augmented spin recovery device

Effect of water injection and off scheduling of variable inlet guide vanes, gas generator speed and power turbine nozzle area on the performance of an automotive gas turbine engine

An experimental study of static thrust augmentation using a 2-d variable ejector

Theoretical performance for non-static ejector thrust augmentors

A comprehensive approach in-flight thrust determination

A rotator supported without contact - Theory and application

Jet Thrust Bearings

A rotator supported without contact - Theory and application

Jet Thrust Bearings

Hybrid thrust vector control

Identification and dual adaptive control of a turbojet engine

A singular perturbation analysis of optimal aerodynamic and thrust magnitude control
tuning and altitude requirements for fast inflating parachutes [AD-A0775568] p0233 880-19041

TIME MEASURING INSTRUMENTS

[MT ATRON ICLOCKS] [AERON, TP NO. 1979-163] p0102 880-19990

TIHE OPTIMAL CONTROL

Minimizing time transits with thrust reversal - high performance aircraft trajectory control [AAIA 80-1595] p0517 880-45088
Optimization of tactical aircraft maneuvers utilizing high angles of attack [AAIA 80-1596] p0517 880-45089
An approximate feedback solution of a variable speed non-linear pursuit- evasion game between two airplanes in a horizontal plane [AAIA 80-1597] p0517 880-45090
Preliminary analysis of minimum time and minimum noise landing approach trajectories [AAIA 80-1598] p0517 880-45091
A singular perturbation analysis of minimum time long range intercept [AIAA-78-1609] p0291 880-20261

TIME SERIES ANALYSIS

Excitation and analysis technique for flight flutter tests [HB-93-U-1446(0)] p0122 880-14140
A time-shared monopulse approach to air/surface radar ranging p0196 880-26791

TIME SIGNALS

Nova satellite time experiment - global time synchronization using Cs clock transfer [AO-4062572] p0002 880-10268
The Navstar Global Positioning System and time [AIAA 80-25146] p0190 880-25146
Applications of the spread-spectrum signals from the Nova satellites [AAIA-88-162895] p0190 880-25149
GPS NAVSTAR-4 and NTS-2 long term frequency stability and time transfer analysis [AD-A088902] p0631 880-32370

TIME MEASUREMENT

A-401

TIP SPEED

On the acoustic power emitted by helicopter rotor blades at low tip speeds [AAIA-88-162905] p0012 880-12375
Model rotor low frequency broadband noise at moderate tip speeds [AAIA PAPER 80-1013] p0330 880-35971
A flight investigation of performance and loads for a helicopter with 10-64C main rotor blade sections [NASA-87-051] p0641 880-33348

TIPS

MT BLADE TIPS
MT ROSE TIPS
MT WING TIPS

TIHE AIRCRAFT TIPS

Evaluation of nondestructive inspection methods for aircraft tires [AD-A082523] p0441 880-25681

TITANIUM

Built-up low-cost advanced titanium structures [AAIA 80-0745] p0331 880-35045
Titanium welding in aircraft maintenance [AD-A070726] p0375 880-36773
Impact damage on titanium leading edges from small soft body objects [AAIA 80-12095] p0071 880-12095

TITANIUM ALLOYS

Series EB welding of high-loaded titanium structures [AAIA PAPER 80-79-23] p0378 880-36858
Material considerations for gas turbine engines [AIAA 80-52127] p0618 880-25681
Impact damage on titanium leading edges from small hard objects - in compressor blades in jet engines p0618 880-52297
Titanium combustion in turbine engines [AD-A075657] p0170 880-16059
Consolidation of titanium powder to near net shapes [AD-A0700479] p0267 880-19239
Mechanical behavior of airframe materials [AD-A085684] p0545 880-25290

TOKAMAK DEVICES

Low-aspect-ratio limit of the toroidal reactor - The sphereak [AD-A080267] p0090 880-17876

TOLERANCES (MECHANICS)

Discontinuous registration of industrial radiographs using profile analysis and piecewise correlation techniques p0087 880-17521
USAF damage tolerant design handbook; Guidelines for the analysis and design of damage tolerant aircraft structures, revision A p0236 880-19065

TOLERANCES (PHYSICS)

MT ACCELERATION TOLERANCE
MT TURBO TOLERANCES


TONOHAK MISSILES

Environmental control system design for the Tomahawk Cruise Missile [AIAA 80-17597] p0055 880-15232

TOPOGRAPHY

E-ray radiography of gas turbine ceramics [AD-A088404] p0307 880-21335

TOPOGRAPHY

MT TERETAIN

TOPOLOGY

Mesh definition by the conversational topological method and optimization in finite element structural calculations [AAAF PAPER MT 79-30] p0379 880-36864

TORNADO AIRCRAFT

U SCA AIRCRAFT

TOROIDAL FLASHERS

Low-aspect-ratio limit of the toroidal reactor - The sphereak [AD-A080267] p0090 880-17876

TOROIDS

Airship morphology - The toroidal solution p0040 880-39295

TORQUE

Measurement of liquid pump torque in the starting regime [AD-A0802578] p0003 880-10611
Reduction of unsteady wind torques on an open port airborne optical turret p0460 880-25697
Measurement of external forces and torques on a large pointing system p0460 880-25610

TORQUE MOTORS

Airship torque motors - Russian book [AD-A080267] p0099 880-19199

TORSIONAL STRESS

Structural analysis of hollow blades: Torsional stress analysis of hollow fan blades for aircraft jet engines [NASA-79-75715] p0242 880-19111

TORSIONAL VIBRATION

Preliminary torsional vibrations of a wing p0525 880-46851

TOUCHDOWN

Development and flight evaluation of automatic flare laws with improved touchdown dispersion [AIAA 80-1757] p0510 880-45545
TOWED BODIES

Application of modified profile analysis to
function testing of simulated CTOL transport
touchdown-performance data

TOWED BODIES

[NASA-TP-1541] p0038 800-11069

Determination of the character of the
lateral-directional motion of an airborne towed
vehicle

[D-80187845] p0603 800-33189

TOXIC HAZARDS

Full-scale flammability tests with experiments on
aircraft in the Aeronautical Test Center of
Toulouse

[N05-267] p0047 800-13321

LIMITATION of the content of harmful substances in
aircraft engine exhaust gases - New requirements
on combustion chambers

[N05-303] p0053 800-15085

TOXICOLOGY

Medical and toxicological factors in aircraft
accidents

[A-7081590] p0601 800-31373

TRACKING (POSITION)

Some practical aspects of the calibration of air
data systems

[A-80114550] p0098 800-18865

A nonlinear observer/command generator tracker
approach to the XM-97 helicopter gun turret
control law design

[N05-20879] p0107 800-20879

The use of single-frequency Decca Navigator
signals for remote position monitoring

[N05-39562] p0040 800-11083

Avionics master plan data base mechanization
architecture

[AD-8071545] p0040 800-21479

Precision controllability of the YF-17 airplane

[N05-1677] p0266 800-23227

Detection and assessment of secondary sonic booms
in New England

[N05-188160] p0643 800-33362

A survey of the stochastic filtering techniques
for data processing in air-traffic control and
surveillance systems

[800-20867] p0106 800-20867

TRACKING NETWORKS

[800-21479] p0098 800-18865

Study of a stereo electro-optical tracker system
for the measurement of model deformations at the
national transonic facility

[NASA-CP-159114] p0033 800-10079

Design and simulation of a C3 system for
surveillance purpose

[N05-19821] p0250 800-19821

TRACKING RADAR

WESL - An international approach to range
instrumentation support --- Worldwide
Engineering and Logistics Support

[B-80-31249] p0277 800-31249

Cooperative estimation of targets by multiple
aircraft

[A-8095790] p0631 800-32366

SUBJECT INDEX

Airborne radar approach flight test evaluating
various track orientation techniques

[NASA-TP-3063] p0631 800-32368

TRACKING STATIONS

Measurement of radiation patterns of aircraft
antennas in non-steady flight

[800-17134] p0104 800-17134

TRACKING STUDIES

Evaluation of a high performance fixed-ratio
tracking drive

[NASA-TP-81425] p0230 800-18004

TRACKS

The application of design to cost and life cycle
cost to aircraft engines

[ADAG-15-107] p0597 800-31342

TRAFFIC

[800-20867] p0098 800-20867

Traffic Control

[800-11954] p0231 800-11954

Experiential study of confluence with separation
on an afterbody of revolution

[NASA-TP-79179] p0103 800-20888

Flow over a plate in the presence of a vortex sink

[NASA-TP-79180] p0150 800-21295

Aircraft wake structure and unsteady pressures at
trailing edges of airfoils --- as aerodynamic
sound generators

[NASA-TP-79181] p0161 800-23900

TRAILING EDGES

Investigation of trailing-edge noise

[NASA-TP-79182] p0161 800-23901

Prediction and measurement of turbulent
aerodynamic trailing edge flows

[AIAA PAPER-80-1395] p0642 800-41599

Blade trailing edge heat transfer

[AIAA PAPER-80-2079] p0058 800-42178

Computational transonic inverse procedure for wing
design with automatic trailing edge closure

[AIAA PAPER-80-1390] p0506 800-44149

Asymmetric trailing-edge flows at high Reynolds
numbers

[AIAA PAPER-80-1396] p0506 800-44151

Potential flow past a wing profile with a trailing
edge of finite thickness

[NASA-CP-162530] p0529 800-46827

The quasi-vortex-lattice method for wings with
edge vortex separation

[NASA-CP-162530] p0110 800-11954

Viscous flow in the region of a rounded trailing
edge

[AIAA PAPER-80-14052] p0392 800-19945

Asymmetrical trailing-edge flows at high Reynolds
numbers

[AIAA PAPER-80-1396] p0506 800-44151

Study of an edge vortex by means of ultrasound in
a close field behind a rectangular wing in a
wind tunnel

[NCAR-71/1979] p0587 800-30282

Circulation Control Wing (CCW) Flight Tests

[800-33339] p0640 800-33339

TRAILING-EDGE FLAPS

Predicted jet thickness-effects on the lift of an
augmentor wing

[800-12597] p0012 800-12597

On approximating the aerodynamic characteristics
of a wing with two-element trailing flap

[NASA-TP-3070] p0170 800-36779

Variable camber airfoils

[NASA-TP-3070] p0170 800-36779

Pressure and velocity measurements in a
three-dimensional wall jet

[NASA-TP-3070] p0023 800-10126

On a smooth approximation method and its
application to mathematical description of wing
aerodynamic characteristics

[NASA-TP-3070] p0034 800-11011

A-402
Influence of wing deformation on trailing-edge flap deflections

Unsteady effects of a control surface in two-dimensional, subsonic and transonic flow

Aerodynamic characteristics of moving trailing-edge controls at subsonic and transonic speeds

Unsteady effects with control surfaces measured in a wind tunnel

Aerodynamic characteristics of moving trailing-edge controls at subsonic and transonic speeds

TRAJECTORIES

Training Devices

Training Aircraft

Training Evaluation

Training Simulators

MT Cockpit Simulators

MT Flight Simulators

MT Flow Simulators

High bypass turbofan component development. Phase 1: Fan detail design
High bypass turbofan component development. Phase 2: Detailed design

Training Analysis

Digital Avionics Information System (DAIS): Life cycle cost impact modeling system, reliability, maintainability and cost model (RMC): User's guide

Cost-effectiveness of flight simulators for military training

Development of simulator instructional feature design guides

The use of simulators for training in-flight and emergency procedures

Airliner simulator census

High resolution intensified vidicon for low light level applications --- in aircraft flight simulators

A digital system for panoramic video display in flight training simulators

A mission training simulator for the Mirosor MR MK 2 and some aspects of the derivation and verification of its system models

Effects of criteria on flight simulation study 1: Heading deviation tolerance

TRAJECTORY OPTIMIZATION

High bypass turbofan component development. Phase 3: Detailed design

TRAJECTORY OPTIMIZATION

MT BALLISTIC TRAJECTORIES

MT DESCENT TRAJECTORIES

MT MISSILE TRAJECTORIES

MT PARTICLE TRAJECTORIES

Method for calculating wing loading during maneuvering flight along a three-dimensional curved path

Development of a program for controlling the angle of bank of an orbital aircraft during entry into the atmosphere

Aircraft store separation motion prediction via grid data trajectories

Objective control of pilotage accuracy --- Russian book

Wind tunnel study of flight trajectories after separation of airborne stores in flight

Theoretical investigations of the release and trajectories of aircraft stores

A singular perturbation analysis of minimum time maneuvers for powered-lift and CTOL jet aircraft

Aircraft model store trajectory testing at A.B.A.

Analysis of fuel-conservative curved decelerating approach trajectories for powered-lift and CTOL jet aircraft

trajectory behaviour of a control configured aircraft subjected to random disturbances

Full scale visualization of the wing tip vortices generated by a typical agricultural aircraft

Aircraft model store trajectory testing at A.B.A.

Equations for determining aircraft motions for accident data

Aircraft model store trajectory testing at A.B.A.

Store separation trajectory analysis

Store separation testing techniques at the Arnold Engineering Development Center. Volume 4: Description of dynamic drop store separation testing

Aircraft model store trajectory testing at A.B.A.

MT TRAJECTORY CONTROL

MT TRAJECTORY OPTIMIZATION

Fuzzy controls for maintenance scheduling in transportation systems --- aircraft flight trajectory regulation

Presentation of the STRADA trajectory system/landing trajectory system/

A singular perturbation analysis of minimum time long range intercept

Feasibility study for integrated flight trajectory control fighter

A survey of the stochastic filtering techniques for data processing in air-traffic control and surveillance systems

Optimal algorithms and secondary processing devices --- for aircraft trajectory measurement

Cooperative estimation of targets by multiple aircraft

A comparison of first and second order techniques for computing optimal horizontal gliding trajectories --- for low level weapons delivery

Constrained optimum trajectories with specified range

SUBJECT INDEX
A simple method for converting frequency domain aerodynamics to the time domain

transducers

AIRPLANE SHJUMP TOAK OFF
Airframe design study of a thin airfoil...p0097 A80-18538

MINIMUM TIME TURNS WITH THRUST REVERSAL...p0376 A80-36780
Performance aircraft trajectory control

NEW TASKS AND PROGRESSIVE INTEGRATION IN THE...p0517 A80-45800
Area of flight and power plant control

OPTIMAL ALGORITHMS AND SECONDARY PROCESSING DEVICES
...for aircraft trajectory measurement

Aircraft trajectory optimization using singular perturbation methods

NAVIGATION AND METEOROLOGICAL ERROR EQUATIONS FOR...
...some aerodynamic parameters

CONCEPTS FOR GENERATING OPTIMUM VERTICAL FLIGHT PROFILES

TRAJECTORY OPTIMIZATION IN HYPERSONIC FLIGHT

A SINGULAR PERTURBATION ANALYSIS OF MINIMUM TIME
...long range intercept

A wind factor simulation model: Model description

transducers

US TRANSMITTER RECEIVERS

US TRANSDUCERS

US IMAGE TRANSDUCERS

US MICROPHONES

US PIEZOELECTRIC GAGES

US PRESSURE SENSORS

US ULTRASONIC WAVE TRANSDUCERS

perturbing influence of the probe on the characteristics of a subsonic wake behind a two-dimensional model

APPLICATION OF ELECTROMAGNETIC METHODS AND MEANS OF NONDESTRUCTIVE INSPECTION IN SERIES PRODUCTION OF AIRCRAFT

transducers for engine control systems

A multiple transfer function model for air traffic control systems

SELECTION OF THE CHARACTERISTIC POLYNOMIAL OF A CLOSED-LOOP TRANSFER FUNCTION BY MINIMIZING INTEGRAL GRADIENT ESTIMATES

EXPERIMENTAL AND THEORETICAL DETERMINATION OF THE TRANSFER FUNCTION OF A COMPRESSOR

THE TRANSFER OF CARBON FIBERS THROUGH A COMMERCIAL AIRCRAFT WATER SEPARATOR AND AIR CLEANER

DIGITAL COMPUTER SIMULATION OF AIRCRAFT LONGITUDINAL AND LATERAL DIRECTIONAL DYNAMIC CHARACTERISTICS

METHODS FOR DETERMINING UNEQUALIZED NORMAL MODES AND TRANSFER FUNCTIONS FROM RECEPTANCE MEASUREMENTS...WITH POSSIBLE APPLICATION TO HELICOPTER STRUCTURES VIBRATION TESTING

A SIMPLE METHOD FOR CONVERTING FREQUENCY DOMAIN AERODYNAMICS TO THE TIME DOMAIN

TRANSFER OF TRAINING

Platform motion contributions to simulator training effectiveness: Study 3; Interaction of motion with fields-of-view

TRANSFERRING

A multiple drop transfer function model for air traffic control systems

US TRANSPORT INTERGRALS

US INTEGRAL TRANSFORMATIONS

US TRANSFORMATIONS (MATHEMATICS)

US INTEGRAL TRANSFORMATIONS

US TRANSFORMATIONS

Development of lightweight transformers for airborne high power supplies

US TRANSIENT HEATING

RECENT DEVELOPMENTS IN AEROTHERMODYNAMIC TEST TECHNIQUES AT THE AEDC von karman gas dynamics facility

method of studying the working-median temperature of aircraft gas-turbine engine blades using spectral analysis

TRANSIENT LOADS

US BLAST LOADS

US GUST LOADS

US IMPACT LOADS

US SHOCK LOADS

The investigation of transient loads in gas turbine engine blades using spectral analysis

A study of alternating stresses in gas-turbine engine blades by spectral analysis

TRANSIENT PRESSURES

MEASURING UNSTEADY PRESSURE ON ROTATING COMPRESSOR BLADES...WITH SEMICONDUCTOR STRAIN GAGES UNDER GAS TURBINE ENGINE OPERATING CONDITIONS

TRANSIENT RESPONSE

STRUCTURAL DESIGN OF TRANSPORT AIRPLANES FOR TRANSIENT ENVIRONMENTS

EVALUATION OF FINITE ELEMENT FORMULATIONS FOR TRANSIENT CONDUCTION FORCED-CONVECTION ANALYSIS...OF TRANSIENT HEAT EXCHANGE FOR ACTIVE COOLING OF HYPERSONIC AIRFRAME AND ENGINE STRUCTURES

ENHANCING DYNAMIC MODEL FIDELITY FOR IMPROVED PREDICTION OF TRANSITION OF AIRPLANE PERFORMANCE

COMPRESSOR RESPONSE TO SPATIALLY REPETITIVE AND NON-REPEATED TRANSIENTS

ACCOUNT FOR WORKING FLUID COMPRESSIBILITY IN THE GAS TURBINE ENGINE TRANSIENT OPERATING REGIMES

THEORETICAL ANALYSIS OF THE TRANSIENT RESPONSE OF A WING TO NON-STATIONARY BURST LOADS

TRANSENT EFFECTS ON A STALLED AIRFOIL IN A PULSATING FLOW: COMPARISON WITH RESULTS FROM A SIMILAR AIRFOIL UNDERGOING HORizontAL SHAKING...DURING WIND TUNNEL TESTS

US TRANSIENT RESPONSES

US MICROPHONES

US PIEZOELECTRIC GAGES

US PRESSURE SENSORS

US ULTRASONIC WAVE TRANSDUCERS
SUBJECT INDEX

TRANSMISSION POINTS
- Verification of the experimentally determined laminar-turbulent transition on a swept wing (p0067 N80-12046)

TRANSLATIONAL MOTION
- SECONDARY FLOW
- THREE DIMENSIONAL FLOW
- THREE DIMENSIONAL MOTION
- The development and use of large-motion simulator systems in aeronautical research and development (p0004 N80-19765)

TRANSMISSION
- ACOUSTIC PROPAGATION
- AERODYNAMIC HEAT TRANSFER
- CONDUCTIVE HEAT TRANSFER
- CONVECTIVE HEAT TRANSFER
- DATA TRANSMISSION
- DIFFRACTION PROPAGATION
- ELECTRIC POWER TRANSMISSION
- ELECTROMAGNETIC WAVE TRANSMISSION
- HEAT TRANSFER
- IONOSPHERIC PROPAGATION
- LAMINAR HEAT TRANSFER
- LIGHT SCATTERING
- LIGHT TRANSMISSION
- MICROWAVE TRANSMISSION
- MULTIPATH TRANSMISSION
- MULTIPLELEXING
- RADAR TRANSMISSION
- RADIO TRANSMISSION
- SATELLITE TRANSMISSION
- SHOCK WAVE TRANSMISSION
- SHORT WAVE RADIO TRANSMISSION
- SIGNAL TRANSMISSION
- SINGLE SIDED TRANSMISSION
- SOUND TRANSMISSION
- SPREAD SPECTRUM TRANSMISSION
- VAVE PROPAGATION

TRANSMISSION EFFICIENCY
- Error rate performance of 8-ary DPSK systems in satellite/aircraft communications (p0192 A80-25945)
- Communication to RPs --- data link design for information transfer from ground terminal or other RP (p0267 A80-29674)
- A simple Navstar receiver (p0279 A80-32120)
- Assessment of HF communications reliability (p0249 N80-19377)

TRANSMISSION LINES
- COMMUNICATION CABLES
- LOSS
- Tunable millimeter-wave communications (p0566 A80-97580)
- Analysis of tactical communications jamming problems (p0626 A80-33212)

TRANSMISSION (RADIO ELEMENTS)
- NASA year research and its probable effect on rotorcraft transmission design (p0016 A80-13068)
- Development of corrosion-inhibited lubricants for gas turbine engines and helicopter transmissions ([ASLE PREPRINT 80-AM-6C-3]) (p0047 A80-83160)
- Inertia and electron beam welded turbine engine power shaft (p0579 A80-50048)
- Evaluation of a high performance fixed-ratio traction drive system ([NASA-TR-81425]) (p0230 N80-18804)
- Cost analysis of a helicopter transmission and drive train ([AD-A080516]) (p0305 N80-21322)
- AR-15 high-survivable transmission system ([AD-A08056]) (p0348 N80-22311)

TRANSMITTERS
- Very lightweight air traffic management system using an electronic scan antenna (p0492 N80-27335)

TRANSMITTERS
- RADAR TRANSMITTERS
- RADIO BEACONS
- RADIO TRANSMITTERS
- TRANSMITTER RECEIVERS
- Minimum performance standards: Emergency locator transmitters: Automatic Fixed-ELT (AF), Automatic Portable-ELT (AP), Automatic Deployable-ELT (AD) operating on 121.5 and 243.0 megahertz ([IEEE/80-165]) (p0436 N80-25511)

TRANSMIS SION COMMUNICATION
- Theoretical feasibility of digital communication over ocean areas by high frequency radio ([AD-A079428]) (p0506 N80-27568)

TRANSMIS SION SYSTEMS
- TRANSOSCILLIC COMMUNICATION
- TRANSONIC AIRCRAFT
- TRANSONIC FLIGHT
- U SUPERSONIC AIRCRAFT
- TRANSONIC COMPRESSIONS
- Flow in transonic compressors ([AIAA PAPER 80-0124]) (p0096 A80-18357)
- Calibration of a two probe synchronized sampling technique for measuring flows behind rotors (p0236 A80-29681)
- Preliminary measurements of aerodynamic damping of a transonic compressor rotor (p0386 A80-36152)
- Comparison between optical measurements and a numerical solution of the flow field within a transonic airflow compressor rotor ([AIAA PAPER 80-1078]) (p0396 A80-38697)
- Shockless airfoils for wings, compressors, and turbines (p0581 A80-50311)
- Experimental study of low aspect ratio compressor blading ([NASA-TR-79280]) (p0035 N80-11037)
- Performance of single-stage axial-flow, transonic compressor with rotor and stator aspect ratios of 1.19 and 1.26 respectively, and with design pressure ratio of 2.05 ([NASA-TP-1659]) (p0306 N80-21325)

TRANSOSCILLIC FLYING
- The variable-geometry wing (p0002 A80-10235)
- Computational transonic analysis for a supercritical transport wing-body configuration (p0162 A80-23932)
- Modern fluid dynamics of subsonic and transonic flight ([AIAA PAPER 80-0861]) (p0371 A80-33274)
- The rapid prediction of aircraft store loading distribution at transonic speeds, part 2 ([AD-A082005]) (p0199 N80-24308)
- Transonic pitch damping of a delta wing aircraft determined from flight measurements (p0633 N80-32381)

_TRANSOSCILLIC FLOW
- Blow-down and sled-run simulation of transonic flow (p0012 A80-12823)
- A survey of laser Doppler velocimeter applications at the Arnold Engineering Development Center (p0164 A80-12639)
- Experimental and computational study of transonic flow about swept wings ([AIAA PAPER 80-0025]) (p0091 A80-18235)
- Engine aerodynamic installation by numerical simulation ([AIAA PAPER 80-0108]) (p0091 A80-18271)
- An inverse transonic wing design method ([AIAA PAPER 80-0330]) (p0095 A80-18319)
- Analysis of transonic flow about harmonically oscillating airfoils and wings ([AIAA PAPER 80-0149]) (p0097 A80-18367)
- A computer code to model swept wings in an adaptive wall transonic wind tunnel ([AIAA PAPER 80-0156]) (p0100 A80-19287)
- Separation due to shock wave-turbulent boundary layer interaction ([OMEA, TP NO. 1979-146]) (p0102 A80-20083)
- Transonic flow past oscillating airfoils ([AD-A08777]) (p0199 A80-21233)
- A nonlinear problem of static aeroelasticity ([AIAA PAPER 80-0156]) (p0100 A80-21233)
- Drag calculations for profiles at transonic speeds (p0151 A80-21303)
- Approximate method of determining the wave drag of a profile in the presence of a local supersonic region (p0151 A80-21319)
- Propeller slipstream/airfoil interaction in the transonic regime ([AIAA PAPER 80-0125]) (p0156 A80-22733)
- Transonic swept-wing analysis using asymptotic and other numerical methods ([AIAA PAPER 80-0342]) (p0156 A80-22751)
Simulated transonic flows for aircraft with nacelles, pylons, and winglets
(AIAA PAPER 80-0130) p0162 A80-23933
Stationary movement of wings in the transonic regime
--- Spanish thesis
Transonic inlet flow calculations using a general
grid-generation scheme
p0211 A80-27788
Flutter analysis of a NASA 54A006 airfoil in small
disturbance transonic flow
p0217 A80-20851
Class of shockfree airfoils producing the same
surface pressure
p0218 A80-20857
Direct computation of transonic solution for
Nieuwland aerofoils
p0259 A80-29023
Computation of steady inviscid transonic flows
using pseudo-unsteady methods
[ONERA, TP NO. 1979-156] p0260 A80-29083
The present state in the axial-flow transonic
compressor design
p0260 A80-29103
Laser anemometer measurements in a transonic axial
flow compressor rotor
p0342 A80-36141
Experimental study of transonic flows in an air
intake at high angle of attack
[AIAA PAPER 80-17] p0377 A80-36048
Separation pressure of a turbulent boundary layer
in transonic interactions
p0390 A80-38005
Evaluation of a minimum principle for transonic
flow computations by finite elements
p0391 A80-38260
Transonic flow over airfoils with tangential
injection
p0391 A80-38276
Computational methods for the design of adaptive
airfoils and wings
p0391 A80-40909
Experimental study of the interaction between a
rapid supersonic aircraft wing and an engine
nacelle at high dilution rate
Calculation of transonic viscous flows past wing
profiles
p0485 A80-40167
Analysis of nonlifting and lifting airfoils in
transonic flow by parametric differentiation
[AIAA PAPER 80-1096] p0552 A80-41598
Investigation of transonic flow in a cascade using
an adaptive mesh
[AIAA PAPER 80-1430] p0552 A80-41617
Results from tests on a high work transonic
machine for an energy efficient engine
[ASM PAPER 80-GT-146] p0463 A80-42250
A multi-grid code for 3-D transonic potential flow
about axisymmetric inlet at angle of attack
p0506 A80-44141
Calculations of transonic flow about an airfoil in
a wind tunnel
p0506 A80-44162
Numerical solution of three-dimensional unsteady
transonic flow over swept wings
p0506 A80-44182
Computational transonic inverse procedure for wing
design with automatic trailing edge closure
[AIAA PAPER 80-1390] p0506 A80-44189
Grid generation and transonic flow calculations
for three-dimensional configurations
p0506 A80-44150
Calculation of unsteady transonic aerodynamic
forces on a three-dimensional wing
[DLR PAPER 80-027] p0522 A80-46281
Heat transfer of the critical air flow in a
nozzle, IV - The flow and heat transfer
characteristics of an accelerated transonic air flow
in a divergent nozzle
p0556 A80-47843
Low-frequency and small perturbation
equation for transonic flow past wings
p0556 A80-47766
The aerodynamic interaction between a
close-coupled canard and a sweptback wing in
transonic flow
Shockless airfoils for wings, compressors, and
turbines
p0581 A80-50311
Allowance for unsteady boundary layer effects in
two-dimensional transonic calculations
[ONERA, TP NO. 1980-109] p0623 A80-53298
Remarks on the transonic flow past oscillating
airfoils
Calculation of transonic flows around wings
p0665 B80-12009
Aerodynamic response analysis of two-dimensional,
single and two degree of freedom airfoils in
low-frequency, small-disturbance unsteady
transonic flow
[AD-A073379] p0669 B80-12073
An investigation of several factors involved in a
finite difference procedure for analysing the
transonic flow about harmonically oscillating
airfoils and wings
[NASA CR-159143] p0714 B80-14056
A users guide for A344: A program using a finite
difference method to analyze transonic flow over
oscillating airfoils
[NASA CR-159141] p0727 B80-15052
Unsteady effects of a control surface in two-
dimensional, subsonic and transonic flow
p0742 B80-15168
Unsteady transonic flows in a two-dimensional
diffuser --- air breathing engines
[AD-A075261] p0745 B80-17033
Formulation of the three dimensional transonic
unsteady aerodynamic problem
[AD-A075403] p0745 B80-17034
Interaction of a two-dimensional strip boundary
layer with a three-dimensional transonic
swep wing code
[NASA TM-87640] p0753 B80-17988
Data report for a test program to study transonic
flow fields about wing-body/pylon/store
combinations. Volume 1: Tunnel empty flow
survey data, wing body force/moment/surface
pressure data, and pressure store force/moment/surface
pressure data
[AD-A077718] p0767 B80-18001
Data report for a test program to study transonic
flow fields about wing-body/pylon/store
combinations. Volume 2: Flow field survey data
for configurations 21 and 22
[AD-A077718] p0767 B80-18002
An investigation of F-16 nozzle-afterbody forces
at transonic Mach numbers with emphasis on
support system interference
[AD-A078693] p0775 B80-18046
Unsteady effects with control surfaces ---
measured in a wind tunnel
[IAAF-W-79-189] p0825 B80-18049
The development of rapid predictive methods for
three-dimensional transonic flow fields about
fighter bomber aircraft, part 1
[AD-A076683] p0837 B80-20236
Transonic data memorandum: A framework relating
the drag-rise characteristics of a finite
wing/body combination to those of its basic
aerofoil
[ESDU-78009] p0851 B80-21276
Transonic data memorandum: The lift achievable by
aerfoils having a particular form of
supercritical upper surface pressure
distribution that yields only small wave drag
[ESDU-78010] p0852 B80-21277
Transonic data memorandum: Numerical methods for
solving the flow potential equations for
two-dimensional airfoils in subsonic and
transonic flows, brief details, test cases and
examples
[ESDU-79009] p0852 B80-21278
Subsonic and transonic flows on a variable sweep
wing
p0316 B80-22248
Transonic wing DFLR-P9 as European test model
[RASA TN-75752] p0345 B80-22260
Transonic kernel function method for unsteady flow
calculations using a unified linear pressure
panel procedure
[AD-A080227] p0345 B80-22267
Summary of data required for the AGARD SNAP
activity standard aerodynamic configurations
--- two-dimensional configurations
A-406
Analysis of experiments on the effects of jet transonic flow field analysis for wing-fuselage configurations [NASA-CR-32403] 080-25295
Experimental studies of scale effects on oscillating airfoils at transonic speeds [NASA-TL-81216] 080-27287
Mutual interference of multiple bodies in the flow field of the F-4C aircraft in the transonic speed range — wind tunnel tests [AD-1008704] 080-27296
An approximate factorization solution of the body-fitted coordinates with application to NASA 64B010 airfoils [NASA-TM-80862] 080-28007
Acquisition and application of transonic wing and far-field test data for three-dimensional computational method evaluation, volume 1 [AD-1008522] 080-28063
Towards complete configurations using an embedded grid approach [NASA-CR-3030] 080-28125
Analysis of transonic swept wings using asymptotic and other numerical methods [NASA-TM-80752] 080-28255
An investigation of scale effects on the transonic flow over swept wings. Part 1: Measurements on a model of a transport-aircraft configuration [ARC-EM-3842-PT-1] 080-33164
Computational and simplified analytical treatment of transonic wing-fuselage-pylon-store interactions [AD-1008597] 080-33283
Unsteady transonic flow in a two-dimensional diffractor [AD-1008523] 080-34000
Experimental unsteady aerodynamics of conventional and supercritical airfoils --- conducted in the Ames 11 foot transonic wind tunnel [NASA-TL-61221] 080-33385
Calculation of three-dimensional unsteady transonic flow past helicopter blades [NASA-TL-17231] 080-33556
A compendium of computational fluid dynamics at the Langley Research Center [NASA-TM-81067] 080-33716
TRANSONIC FLUTTER
Active flutter control in transonic conditions [NASA, TP NO. 1979-100] 080-33805
Preliminary measurements of aerodynamic damping of a transonic compressor rotor [NASA-TM-81064] 080-34000
Experimental and analytical transonic flutter of a geared-elevator configuration [NASA-TM-16646] 080-34231
TRANSONIC INLETS
U SUPERSONIC INLETS
TRANSONIC SPEED
Evaluation of an ejection powered engine simulator at transonic Mach numbers [NASA-TP-81777] 080-11098
Aerodynamic characteristics of moving trailing-edge controls at subsonic and transonic speeds [NASA-TM-81788] 080-15159
Transonic unsteady airloads on an energy efficient transport wing with oscillating control surfaces [NASA-TM-81878] 080-20228
Analysis of effects of jet plumes on pressure distribution over a cylindrical afterbody at transonic speeds [AD-10081647] 080-20289
Use of nose cap and fuselage pressure orifices for determination of air data for space shuttle orbiter below supersonic speeds [NASA-TM-81565] 080-23289
TRANSONIC TURBINES
U SUPERSONIC TURBINES
TRANSONIC WIND TUNNELS
Real-time data acquisition system for the NASA Langley transonic dynamics tunnel [NASA-TP-81891] 080-24265
A computer code to model swept wings in an adaptive wall transonic wind tunnel [AIAA PAPER 80-0156] 080-12621
Full scale aircraft simulation with cryogenic tunnels and status of the National Transonic Facility [NASA-TM-81759] 080-01678
Progress report on a cryogenic pilot transonic wind tunnel driven by induction [NASA-TM-81756] 080-02278
The National Transonic Facility — Status and operational planning [AIAA 80-0415] 080-29092
Automatic control of NASA Langley's 0.3-meter cryogenic test facility [AIAA 80-0416] 080-29631
A comparison of experimental and theoretical turbulence reduction from screens, honeycomb and other combinations [AIAA 80-0433] 080-29693
Additional flow quality measurements in the Langley Research Center 8-Foot Transonic Pressure Tunnel [AIAA 80-0434] 080-29694
Selected wind tunnel testing developments at the Boeing Aerodynamics Laboratory [AIAA 80-0454] 080-29695
The development of a self-streamlining flexible walled transonic test section [AIAA 80-0440] 080-29696
Design and verification of an automatic Mach number control system [NASA-TP-16671] 080-29500
An experiment of lift interference on 2-dimensional wings in a wind tunnel with perforated walls [NASA-TM-80145] 080-12997
Experiments for the reduction of wind tunnel wall interference by adaptive-wall technology [AD-A075555] 080-17088
A perturbation theory of two-dimensional transonic wind tunnel wall interference [NASA-TM-801167] 080-17092
Programs for the transonic wind tunnel data processing installation. Part 7: Extended focal zone [NASA-TP-16646] 080-18054
A theoretical analysis of simulated transonic boundary layers in cryogenic-nitrogen wind tunnels [NASA-TP-16631] 080-19131
Toward new transonic wind tunnels [NASA-TP-81755] 080-19137
An investigation of the quality of the flow generated by three types of wind tunnel (Ludwig tube, Evans clean tunnel and injector driven tunnel) [NASA-TP-81755] 080-19138
Development of the cryogenic tunnel concept and application to the US National Transonic Facility [NASA-TP-81755] 080-19139
The cryogenic wind tunnel: another option for the European Transonic Facility [NASA-TP-81755] 080-19140
Aerodynamic characteristics of moving trailing-edge controls at subsonic and transonic speeds [NASA-TP-81755] 080-19141
TRANSONIC WIND TUNNELS
Evaluation of an ejection powered engine simulator at transonic Mach numbers [NASA-TP-81777] 080-11098
A computer code to model swept wings in an adaptive wall transonic wind tunnel [AIAA PAPER 80-0156] 080-12621
Full scale aircraft simulation with cryogenic tunnels and status of the National Transonic Facility [NASA-TM-81759] 080-01678
Progress report on a cryogenic pilot transonic wind tunnel driven by induction [NASA-TM-81756] 080-02278
The National Transonic Facility — Status and operational planning [AIAA 80-0415] 080-29092
Calculation of the interaction between an exhaust jet and a high-lift wing

Dynamics of the braking system of transport aircraft

Significance of the factors in a method for calculating direct operating costs for commercial aircraft

Power system design for an all electric airplane

Advanced Olympus for the next generation supersonic transport aircraft

Outlook for advanced concepts in transport aircraft

The future of short-haul transport aircraft

Prospects for hydrogen aircraft

Simulated vortex encounters by a twin-engine commercial transport aircraft during final approach

Safety priorities for new transport aircraft

Continuing structural airworthiness of civil transport aircraft

Airworthiness of long-life jet transport structures

Effect of winglets on a first-generation jet transport wing. 6: Stability characteristics for a full-span model at subsonic speeds --- conducted in Langley 8 foot transonic pressure tunnel

Factors affecting the retirement of commercial transport jet aircraft

Evaluation of laminar flow control system concepts applied to the integrated navigation system of a tactical transport

Propulsion and energetics panel working group 2 on aircraft fire safety. Volume 1: Executive summary

A study of the prediction of cruise noise and laminar flow control noise criteria for subsonic transport aircraft

Optimized aerodynamic design process for subsonic transport wing fitted with winglets --- wind tunnel model

Accident investigation

Average gust frequencies subsonic transport aircraft: [NASA-TH-81810] p0362 N80-23249

Preliminary design of graphite composite wing panels for commercial transport aircraft: [AGABD-CB-159337] p0633 B80-32377

LIMITED: A shortened version of TWIST

LPF-TB-146

Propulsion and energetics panel Working Group 11 on aircraft fire safety. Volume 2: Main report

A model-based technique for predicting pilot opinion ratings for large commercial transports

Calculation of the interference effects between the engine wing and the base wing of a civil and military aircraft by the vortex lattice method

Supercritical wing design studies for transport aircraft. Volume 1: Wing designs and wind tunnel measurements

Conceptual studies of a long-range transport with an upper surface blowing propulsion lift system

Outlook for advanced concepts in transport aircraft

Design, development and implementation of an active control system for load alleviation for a commercial transport airplane

Flight service evaluation of Kevlar-49 epoxy composite panels in wide-bodied commercial transport aircraft

Design options study --- commercial aircraft for military airlift operations

Parametric study of modern airship productivity

Seobionic aircraft: Evolution and the matching of size to performance

Evaluation of safety programs with respect to the causes of air carrier accidents

A head-up display format for application to transport aircraft approach and landing

Evaluation of the impact of towing B-9 transport airplanes at Boston-Logan Airport

Evaluation of the impact of towing the L-1011 airplane at Boston-Logan Airport

An investigation of scale effects on the transonic flow over swept wings. Part 1: Measurements on a model of a transport-aircraft configuration

An analysis of the future requirements for materials handling equipment in the military airlift command

Evaluation of laminar flow control system concepts known as Flatbed

Study of an advanced transport airplane design concept known as Plated

Study of methane fuel for subsonic transport aircraft

Evaluation of laminar flow control system concepts for subsonic commercial transport aircraft

Evaluation of the impact of towing OC-9 transport airplanes at Boston-Logan Airport

An investigation of scale effects on the transonic flow over swept wings. Part 2: Measurements on a model of a transport-aircraft configuration

Materials handling equipment in the military airlift command

Transport phenomena in labyrinth seals of turbomachines --- French thesis

Community annoyance with transportation noise

Demand evolution in heavy transport

Detailed design and fabrication of a Helicopter Ground Mobility System (HGMS)

An analysis of the future requirements for materials handling equipment in the military airlift command

The role of technology as air transportation faces the fuel situation

A plan for active development of L82 for use in aircraft

The energy problem - Its effect on aircraft design. II - The effects of fuel cost

Hydrogen in air transportation; Proceedings of the International Symposium, Stuttgart, West Germany
Light turbine helicopters to the year 2000

Runners of circumferential seals - Requirements and performance

[ASME PAPBB 79-DEE-95-1] p0051 B80-10026

Flow quality for Turbine Engine Loads Simulator (TELS) facility

[10-1085600] p0351 B80-22512

Aircraft operations

[10-1073018] p0030 B80-10223

The use of the Hauser factor for estimating the cost of a turbine engine in the early stages of development

[AD-1073167] p0018 B80-11995

Propulsion and energetics panel working group 2 on aircraft fire path seal components -- cost implications

[AGARD-AR-152-VOL-1] p0069 B80-12079

Compressor Modelling —— conference

[AGARD-CP-275] B80-23771

Remote sensing of turbine engine gaspaths

[AGARD-AP-80564] B80-28355

Materials for advanced turbine engines. Volume 1: Power metallurgy, phase 1: Rotating turbine engine parts

[BASA-CR-159802] p0539 B80-28899

Nasa/General Electric broad-spectrum fuels combustion technology program, phase 1

[10-1084544] p0534 B80-29355

Experimental study of turbine fuel thermal stability in an aircraft fuel system simulator

[10-1084544] p0534 B80-29355

Mechanisms of nitrogen heterocycle influence on turbine fuel stability

[10-1078436] p0029 B80-10213

Description of the core-core turbine facility recently installed at NASA Lewis Research Center

[BASA-TH-81562] p0551 B80-29333

Flow quality for Turbine Engine Loads Simulator (TELS) facility

[AD-1086804] p0598 B80-31343

An approach to the life cycle analysis of aircraft turbine engines

[10-1078910] p0598 B80-31343

Logistics forecasting for achieving low life cycle cost — aircraft maintenance

[10-1080046] p0598 B80-31343

Aviation turbine fuels, 1979

[1S1BD-1B-132-VOL-1] p0069 B80-12079

Turbine exhaust nozzles

Systematization of simple detail parts of regenerative nozzle of gas turbine engine

[AD-1076553] p0225 B80-18046

In an investigation of F-16 nozzle-afterbody forces at transonic Mach numbers with emphasis on support system interference

[AD-1076553] p0225 B80-18046

Laser-optical blade tip clearance measurement system

[AD-1076553] p0225 B80-18046

Low profile strain gage applications for an advanced turbine test facility

[AD-1076553] p0225 B80-18046

Experimental study of turbine fuel thermal stability in an aircraft fuel system simulator

[10-1078454] p0534 B80-29355

Power metallurgy benefits in rotating turbine engine designs

[AD-1076553] p0534 B80-29355

A high cycle fatigue life model for gas turbine engine discs

[AD-1076553] p0534 B80-29355

Free vibrations of a turbomachine rotor on a system of structural rotational symmetry

[10-1076553] p0164 B80-29410

The determination of deviation angles at exit from the nozzles of an inward flow radial turbine

[ASBE PAPBB 79-DEE-95-1] p0051 B80-22512

Calculation of radial-axial turbine wheel thermal and stress states

[10-1076553] p0164 B80-29410

Forced vibrations of turbine discs under nonuniform gas flow conditions

[10-1076553] p0164 B80-29410

Investigations of a hot-pressed silicon nitride turbine rotor

[10-1076553] p0164 B80-29410

Cold flow quality for Turbine Engine Loads Simulator (TELS) facility

[AD-1076553] p0225 B80-18046

Aviation turbine fuels, 1979

[1S1BD-1B-132-VOL-1] p0069 B80-12079

Temperature and pressure measurement techniques for an advanced turbine test facility

[10-1076553] p0225 B80-18046

Intranuclear electron beam welded turbine engine power shaft

[10-1076553] p0225 B80-18046

Aeropropulsion 1975 — conference

[BASA-CR-2099] p0028 B80-10205

Materials and structures technology

[10-1076553] p0225 B80-18046

Turbomachinery technology

[10-1076553] p0225 B80-18046

Mechanical components

[10-1076553] p0225 B80-18046

Mechanisms of turbine engine lubricant deposition

[10-1076553] p0225 B80-18046

The use of the Hauser factor for estimating the cost of a turbine engine in the early stages of development

[AD-1073018] p0041 B80-11095

Propulsion and energetics panel working group 2 on aircraft fire path seal components —— cost implications

[AGARD-AR-152-VOL-1] p0069 B80-12079

The physical and chemical characterization of ten military-type engine lubricants

[AD-1074073] p0148 B80-15265

Titanium combustion in turbine engines

[AD-1075657] p0170 B80-16059

Advanced infrared signature prediction program

[10-1076436] p0240 B80-19124

Development of improved high pressure turbine over gas path seal components —— asealability and thermal cycling test results

[BASA-CR-159801] p0307 B80-21332

Application of superalloy powder metallurgy for aircraft engines

[BASA-TR-81466] p0310 B80-21488

New opportunities for future, small, General-AViation Turbine Engines (GATE)

[AD-1076553] p0351 B80-22335

Restoring essential flow and ignition properties to existing kerosene (AKM) for turbine aircraft operations

[10-1080618] p0825 B80-24863

CF6 jet engine performance improvement program: High pressure turbine aerodynamic performance improvement

[BASA-CR-159832] p0480 B80-26302

Composite seal for turbomachinery

[BASA-CASP-1B-12131-2] p0485 B80-26658

Cold flow quality for Turbine Engine Loads Simulator (TELS) facility

[AD-1076553] p0225 B80-18046

Aviation turbine fuels, 1979

[1S1BD-1B-132-VOL-1] p0069 B80-12079

Temperature and pressure measurement techniques for an advanced turbine test facility

[10-1076553] p0225 B80-18046

Turbine pumps

Measurement of liquid pump torque in the starting regime

[10-1076553] p0003 B80-10611

Turbine wheels

Transient, nearly periodic rotor oscillations

[10-1073018] B80-10129

Computer calculation of stationary temperature fields in cooled turbine discs

[10-1073018] B80-10129

Vibration characteristics of asymmetric cross-section bladed disk under rotation

[ASBE PAPBB 79-DEE-95-1] p0057 B80-15742

A cooled laminated radial turbine technology demonstration

[10-1076553] p0156 B80-22749

High temperature radial turbine demonstration

[10-1076553] p0156 B80-22749

Low cycle fatigue life model for gas turbine engine discs

[10-1076553] p0156 B80-22749

Free vibrations of a turbomachine rotor on a system of structural rotational symmetry

[10-1076553] p0164 B80-29410

The determination of deviation angles at exit from the nozzles of an inward flow radial turbine

[ASBE PAPBB 79-DEE-95-1] p0057 B80-15742

Calculation of radial-axial turbine wheel thermal and stress states

[10-1076553] p0164 B80-29410

Forced vibrations of turbine discs under nonuniform gas flow conditions

[10-1076553] p0164 B80-29410

Investigations of a hot-pressed silicon nitride turbine rotor

[10-1076553] p0164 B80-29410
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>TURBINE COMPONENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison of calculated and measured blade loads on a full-scale tilting propeller in a wind tunnel</td>
<td>p0062 H80-31386</td>
</tr>
<tr>
<td>Flow measurements in a turbine scroll</td>
<td>p0211 A80-27738</td>
</tr>
<tr>
<td>The aerodynamics of axial flow wind power turbines</td>
<td>[CSTR-R-85-1619]</td>
</tr>
<tr>
<td>Vertical axis wind turbine development: Executive summary</td>
<td>p0371 H80-23781</td>
</tr>
<tr>
<td>Axial flow power turbines</td>
<td>p0371 H80-23045</td>
</tr>
<tr>
<td>Some calculated effects of non-uniform inflow on the radiated noise of a large wind turbine</td>
<td>p0429 H80-25104</td>
</tr>
<tr>
<td>Cold-air investigations of a 1 1/2 stage turbine with stage-loading factor of 4.66 and high specific work output</td>
<td>p0435 H80-25338</td>
</tr>
<tr>
<td>Evaluation of instability forces of labyrinth seals in turbines or compressors</td>
<td>p0557 H80-29715</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TURBOCHARGERS</th>
<th>U SUPERCHARGERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application of the discrete-phase method /DPM/ to the study and control of aircraft turbine engine blade vibrations</td>
<td>p0002 A80-10234</td>
</tr>
<tr>
<td>Prediction of surge-point in multi-stage axial compressors</td>
<td>p0005 A80-10897</td>
</tr>
<tr>
<td>On behavior of axial compressor blades with variable geometry when using blade cascade measurement data —— German thesis</td>
<td>p0048 H80-13455</td>
</tr>
<tr>
<td>Design solutions for highly loaded stages of radial compressors</td>
<td>p0053 H80-15084</td>
</tr>
<tr>
<td>Handling problems through compressor deterioration —— in-flight stalling</td>
<td>p0063 H80-17340</td>
</tr>
<tr>
<td>On the influence of steady state temperature and pressure distortion on the flow characteristics in an installed multistage jet engine compressor</td>
<td>p0090 H80-17729</td>
</tr>
<tr>
<td>Damping capacity of plastic compressor blades</td>
<td>p0012 H80-19866</td>
</tr>
<tr>
<td>Determination of start-up pressure losses for gas-turbine engine compressors</td>
<td>p0178 H80-21052</td>
</tr>
<tr>
<td>Calculation of the coefficient of secondary losses in an axial compressor stage</td>
<td>p0151 H80-21332</td>
</tr>
<tr>
<td>Experimental results on axial flow compressor stages with high subsonic Mach numbers</td>
<td>p0260 H80-29097</td>
</tr>
<tr>
<td>Some aspects of off-design testing of turbocompressors</td>
<td>p0260 H80-29102</td>
</tr>
<tr>
<td>The present state in the axial-flow transonic compressor design</td>
<td>p0260 H80-29103</td>
</tr>
<tr>
<td>Secondary losses in axial compressor</td>
<td>p0260 H80-29108</td>
</tr>
<tr>
<td>Numerical strain and stress analysis of radial compressor impellers with riveted cover disks</td>
<td>p0261 H80-29114</td>
</tr>
<tr>
<td>The effects of the end-wall boundary layers on the performance of an axial compressor</td>
<td>p0261 H80-29116</td>
</tr>
<tr>
<td>Rotating stall and surge</td>
<td>p0271 H80-30282</td>
</tr>
<tr>
<td>Model tests for the development of axial compressors</td>
<td>p0273 H80-30595</td>
</tr>
<tr>
<td>A laser-two-focus /L2/ velocimeter for automatic flow vector measurements in the rotating components of turbomachines</td>
<td>p0342 H80-36138</td>
</tr>
<tr>
<td>Unsteady pressure measurements and data analysis techniques in axial-flow compressors</td>
<td>p0342 H80-36143</td>
</tr>
<tr>
<td>Comparison between optical measurements and a numerical solution of the flow field within a transonic axial-flow compressor rotor</td>
<td>p0396 H80-38897</td>
</tr>
<tr>
<td>Review — Axial compressor stall phenomena</td>
<td>p0456 H80-42055</td>
</tr>
<tr>
<td>Compression response to spatially repetitive and non-repetitive transients</td>
<td>p0456 H80-42058</td>
</tr>
<tr>
<td>Compressor rotating stall in uniform and non-uniform flow</td>
<td>p0456 H80-42055</td>
</tr>
<tr>
<td>Investigations of an axial flow compressor with tandem cascades</td>
<td>p0565 H80-47435</td>
</tr>
<tr>
<td>Damping capacity of compressor blades of composition materials</td>
<td>p0566 H80-47512</td>
</tr>
<tr>
<td>Study of gas turbine engine autorotation regimes</td>
<td>p0616 H80-51901</td>
</tr>
<tr>
<td>Aerelastic testing in a straight cascade wind-tunnel</td>
<td>p0622 H80-53283</td>
</tr>
<tr>
<td>Experimental study of low aspect ratio compressor blading</td>
<td>p0035 H80-11037</td>
</tr>
<tr>
<td>Design and performance evaluation of supercritical airfoil for axial flow compressors</td>
<td>p0041 H80-11093</td>
</tr>
<tr>
<td>Unsteady flow in turbomachines, vol. 2: Stage group performance</td>
<td>p0073 H80-12331</td>
</tr>
<tr>
<td>Temperature distortion —— in a compressor inflow</td>
<td>p0073 H80-12332</td>
</tr>
<tr>
<td>Unsteady pressure distortion —— in compressor inflow</td>
<td>p0073 H80-12333</td>
</tr>
<tr>
<td>Blade wake interference: Temperature effect —— on cascade flow</td>
<td>p0073 H80-12335</td>
</tr>
<tr>
<td>High speed blade-wake interactions —— in axial flow turbomachines</td>
<td>p0073 H80-12336</td>
</tr>
<tr>
<td>Rotating stall in axial flow compressors</td>
<td>p0073 H80-12337</td>
</tr>
<tr>
<td>The performance estimation of an axial-flow compressor stage using theoretically derived blade element characteristics with experimental comparison</td>
<td>p0083 H80-13466</td>
</tr>
<tr>
<td>Modification of axial compressor streamline program for analysis of engine test data</td>
<td>p0113 H80-14051</td>
</tr>
<tr>
<td>Application of the multistage axial-flow compressor time-dependent mathematical modeling technique to the TF1-4-1-1 modified block 76 compressor</td>
<td>p0121 H80-14138</td>
</tr>
<tr>
<td>Boundary layer and wake modifications to compressor design systems: The effect of blade-to-blade flow variations on the mean flow field of a transonic rotor</td>
<td>p0180 H80-17075</td>
</tr>
<tr>
<td>Basic studies of rotating stall in axial flow compressors</td>
<td>p0243 H80-19115</td>
</tr>
<tr>
<td>Aerodynamic and acoustic investigations of axial flow fan and compressor blade rows, including three-dimensional effects</td>
<td>p0243 H80-19116</td>
</tr>
<tr>
<td>Aerodynamics of advanced axial-flow turbomachinery</td>
<td>p0293 H80-20277</td>
</tr>
<tr>
<td>Performance of single-stage axial-flow transonic compressor with rotor and stator aspect ratios of 1.19 and 1.26 respectively, and with design pressure ratio of 2.05</td>
<td>p0306 H80-21325</td>
</tr>
<tr>
<td>Three dimensional flow investigation with a method of characteristics in the inlet region and the blade-to-blade channels of supersonic axial</td>
<td>p0306 H80-21326</td>
</tr>
</tbody>
</table>

**A-413**
Experimental study of the interaction between a rapid subsonic aircraft wing and an engine nacelle at high dilution rate

[ONERA, TP No. 1980-35]

A mission training simulator for the mixed RB RR 2 and some aspects of the derivation and verification of its system models

Advanced turboprop potential for high speed

CL-600 challenger

Applied technology in turbofan engines

Effects of nonconstant enthalpy addition on fan-nozzle combinations

Engine airflow commonality

Technology of the Rolls-Royce RB211 engine

Installation effects on cycle selection for small turbofan engines

[IAIA PAPER 80-0106]

An experimental model investigation of turbofan engine internal exhaust gas mixer configurations

[IAIA PAPER 80-0229]

Scale model performance test investigation of exhaust system mixers for an Energy Efficient Engine /EE/ propulsion system

[IAIA PAPER 80-0229]

Mixing nozzle noise characteristics -- turbofan noise reduction

[IAIA PAPER 80-0166]

Failure accommodation in gas turbine engines with application to fan turbine inlet temperature reconstruction

Optimal output feedback for systems having direct feedthrough of control -- applied to turbofan engine regulator design

Air supply system approach for the Boeing Model 767 airplane

[SAE PAPER 791068]

Investigation of engine performance degradation of TF33-P-7 engines

The future of civil turbofan engines

[IAIA PAPER 80-0893]

Big-fan engines -- a new US generation

New developments in US military fighter engines

The DC-8 re-engining program

Experimental study of fan-noise silencers of aircraft turbojet engines

Jet flap impingement noise from a full-scale STOL turbo jet-wing system

Status of NASA full-scale engine aeroelasticity research

QCES fan exhaust bulk absorber treatment evaluation

[IAIA PAPER 80-0907]

Study and experimental tests of fibrous acoustic treatment for reduction of fan noise from TF3-1 turboshaft engine

[IAIA PAPER 80-0988]

Fan noise caused by the ingestion of anisotropic turbulence -- a model based on axi-symmetric turbulence theory

[IAIA PAPER 80-1021]

Analytical study of the effects of wind tunnel turbulence on turboshaft rotor noise

[IAIA PAPER 80-1022]

Model tests demonstrating under-wing installation effects on engine exhaust noise

[IAIA PAPER 80-1048]

Temperature and pressure measurement techniques for an advanced turbine test facility

Preliminary studies of a turboshaft engine and fuel system for use with liquid hydrogen

Hydrogen fueled high bypass turbofan aircraft

Fan noise reduction by single- and double-wall barriers -- for turboshaft engines

[IAIA PAPER 80-0344]

[IAIA PAPER 80-1399] p0507 A80-44152

Fan noise source location from field measurements

[IAIA PAPER 80-1054] p0393 A80-36641

Enhancing dynamic model fidelity for improved prediction of turboshaft engine transient performance

[IAIA PAPER 80-1083] p0352 A80-34216

Advanced component technologies for energy-efficient turbofan engines

[IAIA PAPER 80-1086] p0408 A80-38638

Experimental evaluation of exhaust mixers for an Energy Efficient Engine

[IAIA PAPER 80-1088] p0352 A80-34217

Full authority microprocessor digital control -- for advanced technology engines

[IAIA PAPER 80-1149] p0393 A80-36641

Compact diffusers for centrifugal compressors

[IAIA PAPER 80-1077] p0396 A80-38896

Microprocessor requirements for implementing modern control logic

[IAIA PAPER 80-1151] p0393 A80-38641

Fuel conservation through active control of rotor clearances

[IAIA PAPER 80-1087] p0407 A80-39572

Influence of pressure driven secondary flows on the behavior of turboshaft forced mixers

[IAIA PAPER 80-1198] p0393 A80-38896

Design study for a fuel efficient turboshaft engine

[ASME PAPER 80-GT-141] p0462 A80-42254

The Energy Efficient Engine /EE/ -- Advancing the state of the art

[ASME PAPER 80-GT-142] p0462 A80-42255

Results from tests on a high work transonic turbine for an energy efficient engine

[ASME PAPER 80-GT-146] p0463 A80-42258

Future trends in subsonic transport engine efficient turbofan engines

[ASME PAPER 80-GT-177] p0464 A80-42283

CPU fan performance improvement

[ASME PAPER 80-GT-178] p0465 A80-42224

Use of contingency ratings on a subsonic V/STOL propulsion system

[IAIA PAPER 80-1855] p0471 A80-43307

Excitation and analytical evaluation of 3-dimensional exhaust plumes

[IAIA PAPER 80-1399] p0393 A80-36641

Contingency rating options for ASR-AEV V/STOL aircraft

[ASME PAPER 80-GT-177] p0464 A80-42224

Some aspects of the thermodynamics of duct jet flows -- in turbofan engines

[IAIA PAPER 80-1856] p0525 A80-46846
SUBJECT INDEX

Uncertainties in predicting turbine blade metal temperatures: [NASR PAPER 80-HT-25] p0569 AN-40-48016
Can anyone follow the JTBD? p0620 AN-50-52700
Design, durability and low cost processing technology for composite fan exit guide vanes [NASA-CH-159677] p0071 AN-100-12091
A size dependent difference theory for sound propagation in ducts with flow --- characteristic of inlet and exhaust ducts of turbofan engines [NASA-TM-79302] p0075 AN-100-12823
Evaluation of airjet distortion generator used to produce steady-state, total-pressure distortion at the inlet of a General Electric F101-GE-100 turbofan engine [AD-A072743] p0081 AN-100-13049
Build 2 of an accelerated mission test of a TF-41 with block 70 [AEB-SEARCH 22727] p0156 AN-100-13800
Static test stand performance of the F-102 turbofan engine with several exhaust configurations for the Quiet Short-Haul Research Aircraft (QSHA) [NASA-TP-1556] p0119 AN-100-14121
The CF6 jet engine performance improvement: New front mount [NASA-CH-159639] p0120 AN-100-14127
Study of turboprop systems reliability and maintenance costs [NASA-CH-135192] p0120 AN-100-14129
Quiet Clean Short-Haul Experimental Engine (QCSEE) over-the-wing (OTW) design report [NASA-CH-134848] p0131 AN-100-15086
Quiet Clean Short-Haul Experimental Engine (QCSEE) preliminary under-the-wing flight propulsion systems analysis report [NASA-CH-134860] p0131 AN-100-15088
Computation of three-dimensional flow in turbofan mixers and comparison with experimental data [NASA-TM-81460] p0144 AN-100-15364
Core noise investigation of the CF6-50 turbofan engine [NASA-CH-159598] p0170 AN-100-16061
Core noise investigation of the CF6-50 turbofan engine [NASA-CH-159783] p0170 AN-100-16062
Method and apparatus for rapid thrust increases in a turbofan engine [NASA-CASE-LW-12971-1] p0224 AN-100-18039
Proceedings of the 7th Int. Tri-Service Meeting for Aircraft Engine Monitoring and Diagnostics --- conferences [EAD-A076426] p0225 AN-100-18045
Application of composite materials to turbofan engine fan exit guide vanes [NASA-TM-81423] p0227 AN-100-18106
Novel ceramic turbine rotor concepts [AD-A078869] p0242 AN-100-19118
Experimental evaluation of a spinning-mode acoustic-treatment design concept for aircraft inlets --- suppression of TF-102 engine fan noise [NASA-CH-16133] p0306 AN-100-21323
Analysis of uncertainties in turbine metal temperature predictions [NASA-TP-15581] p0306 AN-21012
Aerospace QCAT program --- quiet cleaner general aviation turbine engines [NASA-CH-159758] p0306 AN-21031
Aerospace QCAT engine, airplane, and nacelle design features [NASA-CH-159758] p0306 AN-21031
Aerospace QCAT engine performance and emissions tests [NASA-CH-159758] p0350 AN-22328
Aerospace QCAT engine: Acoustic test results [NASA-CH-159758] p0351 AN-22329
ACGAT aircraft/engine design for reduced noise and emissions [NASA-CH-159758] p0351 AN-22331
Avco Lycoming QCAT program design cycle, demonstrated performance and emissions [NASA-CH-159758] p0351 AN-22332
Avco Lycoming quiet clean general aviation turbofan engine [NASA-CH-159758] p0351 AN-22333
Turbopropulsion combustion technology assessment [AD-A080748] p0366 AN-23023
F100 exhaust nozzle area control [AD-A080748] p0369 AN-23513
Status of NASA full-scale engine aerelasticity research [NASA-TP-81500] p0370 AN-23678
Advanced component technologies for energy-efficient turbofan engines [NASA-CH-159707] p0420 AN-24316
High bypass turbofan component development. Phase 1: Fan detail design [AD-A082821] p0435 AN-25336
Static and transient performance of TF-102 engine with up to 1% percent core bleed for the quiet short-haul research aircraft [NASA-TP-1692] p0435 AN-25339
High bypass turbofan component development. Phase 2: Detailed design [AD-A080757] p0435 AN-25341
Theoretical performance for non-static ejector thrust augmenters [AD-A080326] p0480 AN-26303
PIPS/Navy rapid evaluation of propulsion system effects for the Navy gas turbine engine code [RECORD] p0480 AN-26308
A comprehensive approach in-flight thrust determination [AD-A0801511] p0480 AN-26305
Design, evaluation and test of an electronic, multivariable control for the F100 turbofan engine [NASA-CH-159758] p0480 AN-26316
Off-design correlation for losses due to part-span dampers on transonic rotors [NASA-TP-1693] p0530 AN-28352
Performance estimation for highly loaded six and ten blade propellers combined with an advanced technology turboshaft engine [NASA-CH-159472] p0534 AN-28353
Is the joint Air Force/Navy alternate engine program workable? GIO thinks not, as presently structured [AD-A080870] p0534 AN-28354
Review of turbofan-engine combustion and jet-noise research and related topics [AD-A085176] p0535 AN-28361
Engine inlet anti-icing system evaluation procedure [NASA-CH-159478] p0535 AN-28363
Cumulative damage fatigue mechanics under engine spectra [NASA-CH-159479] p0536 AN-28365
NASA broadened-specification fuels combustion technology program [NASA-CH-159410] p0547 AN-29299
Investigation of performance deterioration of the C6/JT9D, high-bypass ratio turbofan engines [NASA-CH-159582] p0551 AN-29332
High bypass ratio turbofan engines development of a noninterference technique for measurement of turbine engine compressor blade stress [NASA-CH-165170] p0552 AN-29390
Influence of mistuning on blade torsional flutter [NASA-CH-165137] p0559 AN-31351
The design of axisymmetric coolers for cooled nacelles for high by-pass ratio turbofan engines [NASA-CH-165846] p0603 AN-31394
Reverse thrust performance of the QCSEE variable pitch turbofan engine [NASA-TP-81558] p0606 AN-31399
Improved components for engine fuel savings [NASA-CH-159577] p0608 AN-31402
Advanced turbo-prop airplane interior noise feasibility tests of use of the tri-turbo-
Acoustic measurements of three Prop-Fan models evaluation of Aero Commander sidevalve vibrations.
Advanced turboprop potential for high speed short-distance multipurpose aircraft An-28
Acoustic test and analyses of three advanced high-speed turboprops for executive aircraft, acoustic pressures on a prop-fan aircraft fuselage noise transmission and attenuation by stiffened panels
The parameters and measurements of the destabilizing actions of rotating machines, and the assumptions of the 1950's.
Flow induced spring coefficients of labyrinth seals for application in rotor dynamics
Development of flexible rotor balancing criteria
Unsteady aerodynamics in turbomachines
TURBOPROP AIRCRAFT
NT AN-24 AIRCRAFT
CT C-130 AIRCRAFT
TT CL-84 AIRCRAFT
NT F-27 AIRCRAFT
Acoustic pressures on a prop-fan aircraft fuselage surface
Noise transmission and attenuation by stiffened panels
Short distance multipurpose aircraft An-28
Feasibility tests of use of the tri-turbo-3 aircraft for arctic ANT drops
Advanced turbo-prop airplane interior noise reduction-source definition
High speed turboprops for executive aircraft, potential and recent test results
Advanced turbo-prop potential for high speed
Acoustic test and analyses of three advanced turboprop models
Performance estimation for highly loaded six and ten blade propellers combined with an advanced technology turboshaft engine
Evaluation of Aero Commander sidewall vibration and interior acoustic data: Static operations
TURBOPROP ENGINES
Acoustic measurements of three Prop-Fan models
Study of turboprop systems reliability and maintenance costs
Preliminary study of advanced turboprop and turboshaft engines for light aircraft -- cost effectiveness
Performance estimation for highly loaded six and ten blade propellers combined with an advanced technology turboshaft engine
The NASA high-speed turboprop program application of advanced technologies to small, short-haul transport aircraft
TURBOPUMPS
TURBOMACHINES
HIGH TURBINE WHEELS
TURBINES
Development of an aircraft-derivative gas turbine with high performance and large output
Fuel conservation benefits and critical technologies of recuperative and advanced conventional cycle turboshaft engines
The Rolls-Royce Gem
Range of applicability and energetic characteristics of small-scale high-pressure-gradient biaxial turbines
Inlet and exhaust beam welded turbine engine power shaft
Preliminary study of advanced turboprop and turboshaft engines for light aircraft -- cost effectiveness
TURBULENCE
ATMOSPHERIC TURBULENCE
CLEAR AIR TURBULENCE
ST AIRSPEED TURBULENCE
ST STALL TURBULENCE
ST ISOTROPIC TURBULENCE
Velocities profiles in a long inlet duct employing a photos correlating laser velocimeter without seeding
Analysis of NASA JP-4 fire tests data and development of a simple fire model
TURBULENCE EFFECTS
Evaluation of a new concept for reducing free-stream turbulence in wind tunnels
A comparison of experimental and theoretical turbulence reduction from screens, honeycomb and honeycomb-screen combinations
Study on the dynamics of small flight vehicles under gust loading
Review of nonstationary gust-responses of flight vehicles
Pan noise caused by the ingestion of anisotropic turbulence -- a model based on axisymmetric turbulence theory
Analytical study of the effects of wind tunnel turbulence on turboshaft rotor noise
On the stability of the longitudinal disturbed motion of an airplane with lift force control system
The effects of inhomogeneities in atmospheric turbulence on the dynamic response of an aircraft
Time-domain computation of aircraft gust covariance matrices
Effects of free-stream turbulence on diffuser performance
TURBULENT BOUNDARY LAYER
Separation due to shock wave-turbulent boundary layer interaction
Analysis of two-dimensional interactions between shock waves and boundary layers
Wind tunnel design and performance for rough wall turbulent boundary layer
An experimental and numerical investigation of a three-dimensional shock-wave separated turbulent boundary layer
Some analytical consideration in jet noise prediction

Visualization of the laminar-turbulent transition in the flow over an airfoil using the smoke-wire technique

Evaluation of a new concept for reducing free-stream turbulence in wind tunnels

Computational aerodynamics on large computers

Evaluation of an analysis for axisymmetric internal flows in turboachinery ducts

Prospects for computer modeling in ramjet combustors

Prediction and measurement of turbulent aerodynamic trailing edge flows

A Navier-Stokes solution for laminar and turbulent flow through a cascade of airfoils

Numerical study of separated turbulent flow over airfoils

The effect of finite turbulence spatial scale on the amplification of turbulence by a contracting stream

Measurements and calculations of the isotropic flow in axisymmetric models of combustor geometries

Dynamics of diesel fuel combustion in turbulent flow

Aerodynamic measuring techniques in or outside turbulent flows

On the effect of wing wake on tail characteristics

Detection of the transitional layer between laminar and turbulent flow streams on a wing surface using an accelerometer to measure pressure levels during wind tunnel tests

Le Recherche Aerospatiale Bi-monthly Bulletin number 1979-1

Noise generated aerodynamically

Application of a laminar lighting device to the smoke visualization of flows in a wind tunnel

Noise generated by an eddy

Nature of inlet turbulence and strut flow disturbances and their effect on turboachinery noise

Modelling requirements for the calculation of the turbulent flow about airfoils, wings and bodies of revolution

Effects of axisymmetric contractions on turbulence of various scales

On the swelling of rolled up vortex surfaces and the breakdown of the vortex core for slender wings

Photo correlation laser velocimeter measurements in highly turbulent flow fields

Studies of turbulent confined jet mixing

Turbulent mixing

Pollutant emissions from partially mixed turbulent flows

Studies of turbulent confined jet mixing

Analysis of mixing and combustion in a scramjet combustor with a coaxial fuel jet

AIAA PAPER 80-1256
Influence of pressure driven secondary flows on the behavior of turbofan forced mixers [AIAA PAPER 80-0865] p0055 A80-41515
Asymmetric trailing-edge flows at high Reynolds number [AIAA PAPER 80-1296] p0506 A80-44151
Considerations of some critical ejector problems --- for the V/STOL aircraft p0023 A80-10127
Computations of three-dimensional flows in turbofan mixers and comparison with experimental data [NASA-TM-81410] p0140 A80-15364

TURBULENT WAKES

Turbulent wake structure and unsteady pressures at trailing edges of airfoils --- an aeroacoustic sound generator p0161 A80-23900
High-resolution LDA measurements of Reynolds number in boundary layers and wakes [AIAA 00-0836] p0202 A80-26967
Experimental investigation of the two-dimensional asymmetrical turbulent wake behind a parabolic cylinder p0327 A80-33282
Vorticity modelling of blade wakes behind isolated annular blade rows --- induced disturbances in swirling flows [AIAA PAPER 80-GT-160] p0462 A80-42253
Perturbing influence of the probe on the characteristics of a subsonic wake behind a two-dimensional model p0475 A80-43787
Asymmetric trailing-edge flows at high Reynolds number [AIAA PAPER 80-1296] p0506 A80-44151
Effect of swirl, wake parameter and wake Reynolds number on recirculation in combustion chambers of jet engines p0617 A80-50201
A note on an instability mechanism for the core of a rolled-up vortex sheet p0815 B80-24275
Wind tunnel measurements of the mean flow in the turbulent boundary layer and wake in the region of the trailing edge of a swept wing at subsonic speeds [NASA-TE-79062] p0815 B80-24275
A numerical and experimental study of the turbulent wakes of turbomachinery rotor blades, isolated airfoils, and a cascade of airfoils p0466 B80-27277

TURBULENT FLOW

Development of a program for controlling the angle of bank of an orbital aircraft during entry into the atmosphere p0150 A80-21279
Fundamentals of design. V - Fin design for combat aircraft p0210 A80-27725
Effect of winglets on performance and handling qualities of general aviation aircraft [AIAA PAPER 80-1870] p0472 A80-43314
A model for helicopter guidance on spiral trajectories [AIAA 80-1721] p0510 A80-45523
Minimum time turns with thrust reversal --- high performance aircraft trajectory control [AIAA 80-1595] p0517 A80-45888
Flying-qualities criteria for wings-level-turn maneuvering during an air-to-ground weapon delivery task [AIAA 80-1620] p0520 A80-45916
Minimum time turns with thrust reversal --- using control theory [AD-A078951] p0230 A80-19070

TVG (COBTOL)

U TRUSS VECTOR COFFREL

TURBOFANS

On axial turbine stage rotor blade twist with tangential tilt of the stator vanes p0008 A80-10560
Optimal twisting of blades in axial turbomachines p0213 A80-27797
Means for controlling aerodynamically induced twist --- equipment to control twisting of slender wings due to aerodynamic loads [NASA-CASB-LR-12175-1] p0169 B80-16055

SUBJECT INDEX

TWO DIMENSIONAL BODIES
An experiment of lift interference on 2-dimensional wings in a wind tunnel with perforated walls p0260 A80-29689
AGARD two-dimensional aerelastic computations [AGARD-AR-156] p0228 B80-10202
Transonic data memorandum: Numerical methods for solving the potential flow equation for two-dimensional aerofoils in subsonic and transonic flows, brief details, test cases and examples [NASA-TM-79009] p0302 B80-21278
Study for conceptual design of V/STOL exhaust nozzle [NASA-CR-152388] p0646 A80-33397

TWO DIMENSIONAL FLOW
Engine aerodynamic installation by numerical simulation [AIAA PAPER 80-0002] p0156 A80-22727
Allowance for unsteady boundary layer effects in two-dimensional transonic calculations [AIAA 80-0383] p0233 A80-53293
Influence of a two-dimensional strip-boundary layer with a three-dimensional transonic swept-wing code p0220 A80-17908
Flow of a compressible fluid over an isolated airfoil and through a cascade p0151 A80-21302
Modelling low Mach number noise p0161 A80-23902
Straight-walled, two-dimensional diffusers --- Transitory stall and peak pressure recovery p0217 A80-27746
Rotating stall and surge p0271 A80-30567
Stability aspects of diverging subsonic flow p0272 A80-30567
Design of slotted transonic wind tunnels for supersonic flow development p0275 A80-30976
Effect of initial value on the behaviour of flow calculations for blade-to-blade flow through a turbine p0286 A80-32528
Experimental investigation of the two-dimensional asymmetrical turbulent wake behind a blade p0322 A80-33282
Computations of vortex flows by panel methods p0382 A80-37320
Plane unsteady flow of inviscid and incompressible fluid around a system of profiles p0391 A80-38373
Pressure fields generated by instability waves and coherent structures in an impinging jet [AIAA PAPER 80-0880] A80-38632
Analysis of nonlifting and lifting airfoils in transonic flow by parametric differentiation [AIAA PAPER 80-1594] p0552 A80-41598
Perturbing influence of the probe on the characteristics of a subsonic wake behind a two-dimensional model p0475 A80-43787
Shockless airfoils for wings, compressors, and turbines p0581 A80-50311
Lifting and nonlifting kernel functions for cascade and isolated airfoils p0615 A80-51920
General potential theory of arbitrary wing sections [AIAA-CP-80-057] p0127 B80-15046
Unsteady effects of a control surface in two-dimensional, subsonic and transonic flow p0742 B80-15168
Unsteady transonic flows in a two-dimensional diffuser --- air breathing engines

[A-D-A075261] p0175 N80-17033

A perturbation theory of two-dimensional transonic wind tunnel wall interference

[A-D-A071167] p0182 N80-17092

An experimental study of two-dimensional supersonic jet impingement on a flat plate

[A-D-A076536] p0220 N80-17996

Blade-to-blade flow of ideal fluid with wall injection

La Recherche Astronautale, Bi-monthly Bulletin no. 979-5

[ESA-TT-613] p0437 N80-25485

Calculation techniques for inviscid two-dimensional supersonic airflow

[AD-A085327] p0542 N80-29257

A brief investigation of the two-dimensionality of the flow over an airfoil in the 8 foot by 6 foot transonic wind tunnel

[RAE-TR-AERO-1828] p0600 N80-31368

Unsteady transonic flows in a two-dimensional Navier-Stokes equations

[AD-A088231] p0636 N80-32400

Reversing pseudo-unsteady aerodynamic calculation methods

p0652 N80-33616

A rapid implicit-explicit solution to the two-dimensional time dependent incompressible Navier-Stokes equations

[NASA-CS-330] p0653 N80-33718

TWO PHASE FLOW

Some aspect of aerodynamic erosion in fans

p0260 A80-29106

TWO STAGE TURBINES

Range of applicability and energetic characteristics of small-scale high-pressure-gradient birotational turbines

p0526 A80-47177

T3A AIRCRAFT

U T-2 AIRCRAFT

T3J AIRCRAFT

U T-39 AIRCRAFT

U TUBES

U MANNETERS

OH-1 HELICOPTER

A compilation and analysis of helicopter handling qualities data. Volume 1: Data compilation

[V/STOL and airborne systems flight-test data on a UH-1 helicopter

[NASA-CS-3144] p0041 N80-11097

VTOL and airborne systems flight-test data on a UH-1 helicopter

[NASA-TF-78951] p0225 N80-18047

Navigation systems for approach and landing of V/STOL aircraft

[NASA-CS-152335] p0235 N80-19055

Preliminary Airworthiness Evaluation UH-1H helicopter equipped with Multiple Target Electronic Warfare System (MULEWS)

p0236 N80-19067

The fabrication and testing of prototype UH-1 aircraft windshields manufactured with a sheet of glass

[AD-A077711] p0238 N80-19080

Microphysical properties of artificial and natural clouds and their effects on UH-1H helicopter icing

[AD-A084633] p0530 N80-28328

US-60A HELICOPTER

The 5.5. Army Digital Avionics Technology program

p0284 A80-32452

ULTRA SHORT WAVES RADIO EQUIPMENT

U VERY HIGH FREQUENCY RADIO EQUIPMENT

ULTRASOUND FREQUENCIES

UHF coplanar-slot antennas for aircraft-to-satellite data communications

p0015 A80-13064

The effect of equatorial ionospheric disturbance on aircraft-to-satellite communications

p0158 A80-22103

Present-day problems of air traffic control in ground-to-air communications

p0192 A80-26221

L-band measurements in the air traffic channel to characterize secondary radar systems

p0117 N80-14052

Combined vibration/temperature/sideload environmental testing of UHF blade antennas

p0184 N80-17301

Precision L-band DM tests

p0645 N80-33388

ULTRASONIC FLAW DETECTION

Nondestructive evaluation of graphite composite aircraft structures

p0197 A80-26891

Walking-gate spatial signal averaging --- signal processing for fatigue crack ultrasonic inspection systems

p0381 A80-37206

Acceptance limits of ultrasonic transducers for nondestructive inspection

p0381 A80-37216

Optimization of computer automated ultrasonic inspection systems

p0074 N80-12423

Ultrasound and acoustic emission detection of fatigue damage --- aluminum alloy 7075-7651

[A-D-A079277] p0310 N80-21510

Nondestructive inspection of advanced composite aircraft structure --- ultrasonic flaw detection

[AD-A088231] p0424 N80-24378

ULTRASONIC TESTS

NPS policy and techniques for advanced composites --- nondestructive inspection

p0320 A80-38765

Autoscant ultrasonic fatigue-crack detector --- for military aircraft fastener sites

p0381 A80-37221

ULTRASONIC WAVES TRANSMISSION

Acceptance limits of ultrasonic transducers for nondestructive inspection

p0381 A80-37216

Autoscant ultrasonic fatigue-crack detector --- for military aircraft fastener sites

p0381 A80-37221

ULTRASONIC WELDING

Developments in ultrasonic welding for aircraft

p0328 A80-36797

ULTRASONICS

Study of an edge vortex by means of ultrasound in a close field behind a rectangular wing in a wind tunnel


UNCAMERED WINGS

WT RING WINGS

UNDERCARRIAGES

Optimization of aircraft undercarriages

[AMER PAPER 79-DST-79] p0057 A80-15737

Undercarriage drag prediction methods

[2000-79015] p0232 N80-19028

Aircraft dynamic response to damaged runways

[AARD-B-5685] p0433 N80-25325

Parameters affecting aircraft performance on runways in bad condition

p0430 N80-25328

Calibration of mirage main undercarriage to determine wheel loads from measured strains

[AD-A086721] p0589 N80-30300

UNDERWATER VEHICLES

VT SUBMARINES

UNIAXIAL STRAIN

U AXIAL STRAIN

UNIFORM FLOW

Some calculated effects of non-uniform inflow on the radiated noise of a large wind turbine

[NASA-TB-81613] p0425 N80-25104

UNITED KINGDOM

Airport equipment and know-how from England - An airport forces survey

p0506 A80-44117

Computer graphics and related design processes in the UK

p0299 N80-21252

UNITED STATES OF AMERICA

VT VIRGINIA

Airport ground traffic services in the West German Republic and the US open-air policy - Critical remarks concerning article 9 of the supplementary agreement of Nov. 1, 1976 to the German-American Air Traffic Agreement of 1955

p0062 A80-17289

The FAA satellite airport program

[SAM PAPERS 800756] p0576 A80-49705

UNABRIDGED SPACELCRAFT

UT GEOS 3 SATELLITE
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UNSTEADY FLOW</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>JUPITER PROBES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NAVIGATION SATCOM SATELLITES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRANSIT SATELLITES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UNSTEADY FLOW</strong></td>
<td>Installation for investigating the effect of non-steady-state supersonic gas flow on the blades of a plane cascade</td>
<td>p0048 A80-11255</td>
</tr>
<tr>
<td></td>
<td>A Laser Doppler Velocimeter system to investigate unsteady flow separation</td>
<td>p0016 A80-12634</td>
</tr>
<tr>
<td></td>
<td>Computations of the pitching oscillation of a RACA 60A-010 airfoil in the small disturbance limit</td>
<td>[AIAA PAPER 80-0128]</td>
</tr>
<tr>
<td></td>
<td>p0157 A80-23012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application of unsteady airfoil theory to rotary wings</td>
<td>p0217 A80-28856</td>
</tr>
<tr>
<td></td>
<td>A directionally sensitive hot-wire probe for detection of flow reversal in highly unsteady flows</td>
<td>p0264 A80-29492</td>
</tr>
<tr>
<td></td>
<td>Unsteady aerodynamic measurements techniques for turbomachinery research</td>
<td>p0342 A80-36142</td>
</tr>
<tr>
<td></td>
<td>Unsteady wake behind a profile at variable incidence</td>
<td>[AIAA PAPER 80-10]</td>
</tr>
<tr>
<td></td>
<td>p0377 A80-36841</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A mixed compact Hermitian method for the numerical study of unsteady viscous flow around an oscillating airfoil</td>
<td>p0391 A80-38258</td>
</tr>
<tr>
<td></td>
<td>Plane unsteady flow of inviscid and incompressible fluid around a system of profiles</td>
<td>p0391 A80-38723</td>
</tr>
<tr>
<td></td>
<td>A nonlinear unsteady one-dimensional theory for wings in extreme ground effect</td>
<td>p0406 A80-39527</td>
</tr>
<tr>
<td></td>
<td>Unsteady wake of a plunging airfoil</td>
<td>[AIAA PAPER 80-1046]</td>
</tr>
<tr>
<td></td>
<td>p0453 A80-41626</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Analysis of rotating stall in vaneless diffusers of centrifugal compressors</td>
<td>[ASME PAPER 80-GT-168]</td>
</tr>
<tr>
<td></td>
<td>p0465 A80-42286</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A vortex-lattice method for the calculation of the unsteady separated flow over delta wings</td>
<td>[AIAA PAPER 80-1800]</td>
</tr>
<tr>
<td></td>
<td>p0469 A80-43826</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Numerical solution of three-dimensional unsteady transonic flow over swept wings</td>
<td>[AIAA PAPER 80-1369]</td>
</tr>
<tr>
<td></td>
<td>p0506 A80-44143</td>
<td></td>
</tr>
<tr>
<td></td>
<td>On the unsteady wake induced lift on a slotted airfoil</td>
<td>p0514 A80-45840</td>
</tr>
<tr>
<td></td>
<td>Allowance for unsteady boundary layer effects in two-dimensional transonic calculations</td>
<td>[NTHA, TP No. 1980-109]</td>
</tr>
<tr>
<td></td>
<td>p0623 A80-53290</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unsteady compressible three-dimensional boundary-layer flow near an asymmetric stagnation point with mass transfer</td>
<td>p0625 A80-53582</td>
</tr>
<tr>
<td></td>
<td>Entrainment characteristics of unsteady subsonic jets --- for V/STOL aircraft</td>
<td>p0023 N80-10124</td>
</tr>
<tr>
<td></td>
<td>A simple apparatus for the experimental study of non-steady flow thrust-augmenter ejector configurations</td>
<td>p0023 N80-10124</td>
</tr>
<tr>
<td></td>
<td>Temperature distortion --- in a compressor inflow</td>
<td>p0073 N80-12332</td>
</tr>
<tr>
<td></td>
<td>Unsteady pressure distortion --- in compressor inflow</td>
<td>p0071 N80-12333</td>
</tr>
<tr>
<td></td>
<td>High speed blade-wake interactions --- in axial flow turbomachines</td>
<td>p0073 N80-12336</td>
</tr>
<tr>
<td></td>
<td>Rotating stall in axial flow compressors</td>
<td>p0073 N80-12337</td>
</tr>
<tr>
<td></td>
<td>Investigations on unsteady pressure distribution measurements in rotating systems</td>
<td>[RSA-TT-503-REV]</td>
</tr>
<tr>
<td></td>
<td>p0082 N80-13059</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unsteady flow and dynamic response analyses for helicopter rotor blades</td>
<td>[NASA-CR-159190]</td>
</tr>
<tr>
<td></td>
<td>p0123 N80-13355</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unsteady effects of a control surface in two dimensional, subsonic and transonic flow</td>
<td>p0142 N80-15168</td>
</tr>
<tr>
<td><strong>UNSTEADY STATE</strong></td>
<td>Unsteady aerodynamics of conventional and supercritical airfoils</td>
<td>p0031 A80-35038</td>
</tr>
<tr>
<td></td>
<td>Unsteady pressure measurements and data analysis techniques in axial-flow compressors</td>
<td>p0042 A80-36143</td>
</tr>
<tr>
<td></td>
<td>Unsteady effects with control surfaces --- measured in a transonic wind tunnel</td>
<td>[AIAA-PRO-79-01]</td>
</tr>
<tr>
<td></td>
<td>p0225 N80-18049</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experimental techniques in unsteady aerodynamics</td>
<td>p0644 N80-33373</td>
</tr>
<tr>
<td><strong>UNSWEPT WINGS</strong></td>
<td>NT INFINITE SPAN WINGS</td>
<td>NT RECTANGULAR WINGS</td>
</tr>
<tr>
<td>NT RING WINGS</td>
<td>Lifting surface divergence and control effectiveness</td>
<td>p0065 N80-12004</td>
</tr>
<tr>
<td>A flatter-speed formula for wings of high aspect ratio</td>
<td>p0139 N80-15147</td>
<td></td>
</tr>
<tr>
<td><strong>UPDATES</strong></td>
<td>U VERTICAL AIR CURRENTS</td>
<td>U SHERBET BLOWING</td>
</tr>
</tbody>
</table>
| U SHERBET BLOWING | Low speed aerodynamic characteristics of wings of
VECTOR CALCULUS
U VECTOR SPACES
VECTOR CONTROL
U DIRECTIONAL CONTROL
VECTOR SPACES
MT EIGENVALUES
MT EIGENVECTORS
MT MATRICES (MATHEMATICS)
MT STATE VECTORS
MT STIFFNESS MATRIX
MT VECTORS (MATHEMATICS)
MT VORTICITY
A new weighting coefficient for adaptive state estimation

0083 N80-13347

VECTORS (MATHEMATICS)
MT EIGENVECTORS
MT STATE VECTORS
MT VORTICITY

Control system design using vector-valued performance criteria and application to the supercritical compressor and turbine

p0355 N80-22363

Simulation development and evaluation of an improved longitudinal velocity vector control wheel steering mode and electronic display format

p0590 N80-30305

VELOCITY DISTRIBUTION
Three-dimensional velocity distribution between stator blades and unsteady force on a blade due to passing wakes

p0001 A80-10011

Large-asplitude fluctuations of velocity and incidence of an oscillating airfoil

p0009 N80-11832

Operational implications of some NASA/RNA rotary wing induced velocity studies

p0209 A80-27599


p0210 A80-27732

Flow measurements in a turbine scroll

p0211 A80-27736

Unsteady wake of a plunging airfoil

p0053 A80-41626

The effect of the axial velocity density ratio on the aerodynamic coefficients of compressor cascades

p061 A80-42247

The combined effect of axial velocity density ratio and aspect ratio on compressor cascade performance

p0662 A80-42251

A method for predicting the noise levels of cascades with twisted inlet profiles

p0085 N80-11866

Design of supercritical compressor and turbine cascades using a numerical method considering axial velocity density ratio - numerical analysis of mathematical models of velocity
A mixed compact Hermitian method for the numerical study of unsteady viscous flow around an oscillating airfoil

Calculation of transonic viscous flows past wing profiles

Complete viscous flowfield solutions about a blunt parabolic body in a supersonic stream

[AD-A119-4351] p0045 A00-00909

Heat transfer at a breaking point of the leading edge of a plate in hypersonic flight

Investigation of flows in Laval nozzles at small Reynolds numbers

Application of viscous analyses to the design of jet exhaust powered lift installations

Theoretical method for the analysis of airfoils in viscous flows

A simplified model for the viscous crossflow in a slotted test section

Viscous flowfields induced by two- and three-dimensional lift jets in ground effect

Viscous flow in the region of a rounded trailing edge

[AD-A0709858] p0223 N80-19045

Velocity-split Navier-Stokes solution procedure for incompressible high Reynolds number external flows

[NASA-TD-1655] p0311 N80-21702

Computational models for the viscous/inviscid analysis of 2 aircraft exhaust plumes --- predicting afterbody drag


An analysis method for multi-component airfoils in separated flow


An integral-representation approach for time-dependent viscous flows

A comprehensive investigation into the supersonic viscous flow about a slender cone at high angle of attack: Experimental and theoretical results

[ NASA-TF-1655 ] p0640 N80-33340

VISCOS FLUIDS

The basic models of mechanics of liquids and gases in the theory of the wing

[ NASA-AI-6911 ] p0404 N80-40442

Dynamics of flexible rotors partially filled with a viscous incompressible fluid

[ NASA-AI-6911 ] p0297 N80-20513

VISIBILITY

L LOW VISIBILITY

The influence of colors on the visibility of aircraft and ground obstacles

Optical design of airport control tower cabs

Lidar visibility measurements

Inferior visibility for U.S. airports

[ AD-A008407 ] p0298 N80-20987

A remote sensing method for determination of slant range visibility

[ DFVR-YB-79-16 ] p0371 N80-23759

Development and evaluation of a tower slant visual range system

[ AD-A082384 ] p0628 N80-24953

Military member calculations for the Nato theater: Weather and Warplanes 8

[ AD-A080499 ] p0659 N80-34033

VISION

L NIGHT VISION

VISUAL AIDS

An investigation of laser lighting systems to assist aircraft landing

[ AD-A077722 ] p0840 N80-27315

VISUAL DISPLAYS

U DISPLAY DEVICES

Visual accommodation responses in a virtual image environment

[ AD-A070415 ] p0131 N80-15802

Predicting field of view requirements for VSTOL aircraft approach and landing

VISUAL FLIGHT

Pilot performance during simulated approaches and landings made with various computer-generated visual glidepath indicators

Visually Coupled System: Computer Generated Imagery (FCS-CGI) engineering interface

[ AD-A006220 ] p026 N80-10151

[ AD-A080931 ] p0366 N80-23306

VISUAL FLIGHT RULES

ATIS/ATC simulation tests with site adaptation logic in the Philadelphia terminal area

[ AD-A083715 ] p0689 N80-27308

VISUAL PERCEPTION

L SPACE PERCEPTION

Perception and performance in flight simulators:

The contribution of vestibular, visual, and auditory information


Visual accommodation responses in a virtual image environment

[ AD-A074415 ] p0131 N80-15082

Development of a visual inspection technique (optical assessment of aircraft transparencies)

[ AD-A079369 ] p0239 N80-19086

Platform motion contributions to simulator training effectiveness. Study 3: Interaction of motion with fields-of-view

[ AD-A070426 ] p0367 N80-22334

Pilot/vehicle model analysis of visual and motion cue requirements in flight simulation --- helicopter hovering


VISUAL TASKS

Optical design of airport control tower cabs

VISUAL TRACKING

U OPTICAL TRACKING

VISUALIZATION OF FLOW

U FLOW VISUALIZATION

VOICE COMMUNICATION

L VOICE DATA PROCESSING

Management of a stored program controlled ATC communication system


UNIGEN - Universal language of aviation

[ NASA-CR-3312 ] p0387 N80-37694

Hypoxia-induced fatal aircraft accident revealed by voice analysis

[ NASA-CR-3312 ] p0387 N80-37694

Vocabulary specification for automatic speech recognition in aircraft cockpits

[ AD-A073703 ] p0123 N80-14303

Visual confirmation of voice takeoff clearance (VICON) alternative study

[ AD-A066000 ] p0545 N80-29282

VOICE DATA PROCESSING

Voice data entry in air traffic control

[ AD-A073707 ] p043 N80-11273

VOLATILITY

U VAPORIZING

VOLTAGE BREAKDOWN

U ELECTRICAL FAULTS

VOLTAGE GENERATORS

Improved test methods for determining lightning-induced voltages in aircraft

[ NASA-CR-3329 ] p0633 N80-32379

VOLTAGE MEASUREMENT

U ELECTRICAL MEASUREMENT

VOLTAGE REGULATORS

An overvoltage safety system for direct current aircraft generators

Effects of electric fluctuations in electric power systems of flight vehicles

[ AD-A076100 ] p0336 N80-35185

Radar approach control (BARCON) primary input power supply study

[ AD-A076100 ] p0416 N80-24289

VODDO AIRCRAFT

U F-101 AIRCRAFT

VOR SYSTEMS

L UHF ORBITAL NAVIGATION

VORTEX BREAKDOWN

Exploratory investigation of the effects of vortex bursting on the high angle-of-attack lateral-directional stability characteristics of
null
SUMMARY OF THEORETICAL AND EXPERIMENTAL INVESTIGATIONS OF VORTEX LIFT AT HIGH ANGLES OF ATTACK

[A&D-07468] p0316 N80-160137

Rotary balance data for a typical single-engine general aviation design for an angle-of-attack range of 8 deg to 90 deg. 1. Low-wing model fluid drainage and vortices for general aviation aircraft to determine aerodynamic characteristics for various designs.

[NASA-CA-3100] p0322 N80-19030

Three-dimensional interactions and vertical flows with emphasis on high speeds.

[NASA-TR-81169] p0362 N80-21206

A note on an instability mechanism for the core of a rolled-up vortex sheet.

Active control of asymmetric vortex effects.

[A&D-081648] p0395 N80-23254

Opportunities analysis of potential advanced vortex systems separation standards.

[A&D-081479] p0361 N80-23281

Procedural feasibility of reduced spacing under NASA operation with applications to Atlanta and O'Hare.

[A&D-081480] p0362 N80-23287

Development of test methods for scale model simulation of aerial applications in the NASA Langley Vortex Research Facility.

[NASA-TR-81080] p0413 N80-24260

Aircraft wake vortices. Citations from the NASA database. 1.

[880-080566] p0341 N80-25303

Preliminary results of simulated vortex encounters by a twin-engine, commercial aircraft during final landing approach.

[NASA-TR-81762] p0478 N80-26285


[NASA-CA-3279] p0386 N80-27280


[NASA-CA-3278] p0487 N80-27282

Chicago monostatic acoustic vortex sensing system. Volume 1: Data collection and reduction.

[A&D-076929] p0488 N80-27306

Water-tunnel and analytical investigation of the effect of strake design variables on strake vortex breakdown characteristics.

[NASA-TP-1767] p0529 N80-28304

Ground wind vortex sensing system calibration tests.

[A&D-085647] p0542 N80-29259

Study of an edge vortex by means of ultrasound in a close field behind a rectangular wing in a wind tunnel.


Vortex advisory system. Volume 1: Effectiveness for selected airports.

[A&D-087882] p0588 N80-30286

Unsteady swirling flows in gas turbines.

[A&D-087885] p0593 N80-30697

Ranges and critical values of advance ratio for blade/vortex interaction patterns of a helicopter rotor.

[NPL-M-79030-0] p0559 N80-31360

On the swelling of rolled up vortex surfaces and the breakdown of the vortex core for slender wings.

[NASA-TR-75852] p0641 N80-33346

VORTICITY

Jet-engine combustion noise - Pressure, entropy and vorticity perturbations produced by unsteady combustion or heat addition.

[AD/A-08015] p0103 N80-20151

Vorticity associated with multiple jets in a crossflow - vertical takeoff aircraft.

[NASA-CA-16235] p0249 N80-19556

Noise generated by an eddy.

[AD/A-081648] p0316 N80-22253

Experimental and analytical studies of a three-airspeed sensor.

[NASA-CA-163261] p0479 N80-26297

VOLATGE HTHELICOPTEB TOL

A CH-46 HELICOPTER TOL

U VERTICAL TAKEOFF U VERTICAL LANDING U VERTICAL TAKOFF

W WINGS U VARIABLE SWEEP WINGS

WAKEST

WT AIRCRAFT WAKES WT HELICOPTER WAKES WT LAMINAR WAKES WT BOUNDARY LAYERS

WAKE CHARACTERISTICS OF BUILDINGS IN DISTURBED BOUNDARY LAYERS.

[NASA-CA-3280] p0427 N80-26940

WALL FLOW

A computer code to model swept wings in an adaptive wall transonic wind tunnel.

[IAIA PAPERS 80-0156] p0100 N80-19207

Sound generation in a flow near a compliant wall.

[NASA-CA-3280] p0427 N80-26940

Wind tunnel design and performance for rough wall turbulent boundary layer.

[IAIA PAPERS 80-0156] p0100 N80-19207

Straight-walled, two-dimensional diffusers. Transitory stall and peak pressure recovery.

[NASA-CA-3280] p0427 N80-26940

The effects of the end-wall boundary layers on the performance of an axial compressor.

[IAIA PAPERS 80-0156] p0100 N80-19207

Radiation in a wind jet flow environment - a mathematical model for noise reduction of STOL airplanes.

[IAIA PAPERS 80-0156] p0100 N80-19207

Types of leeside flow over delta wings.

[AD/A-08015] p0327 N80-34652

An experimental investigation of endwall profiling in a turbine vanes cascade.

[IAIA PAPERS 80-0156] p0332 N80-34652

Calculation of compressible inlet flows.

[AD/A-08015] p0345 N80-09103

Calculations of transonic flow past a simple and a shoulder.

[AD/A-08015] p0345 N80-09103

Notion of rectangular wing on passing wakes.

[AD/A-08015] p0345 N80-09103

Pressure and velocity measurements in a three-dimensional wind tunnel using laser velocimetry.

[AD/A-08015] p0345 N80-09103
The modular life cycle cost model - An overview

Experiments on the diffraction of weak blast waves
- The von Neumann paradox

Aircraft radar echoes characterization

Applications of diffusion theory to aeroacoustics

-- aircraft noise

Aircraft radar echoes characterization

Experimental and numerical results on a shear layer excited by a sound pulse

[NASA-TM-801083]

Aircraft radar echoes characterization

Remotest radar interactions on a swept wing

[NASA-TP-1611]

Determination of the loading capacity of wave transmissions with a slide generator

Nose blast overpressure levels on the A-15

Heliport tow sight unit

Airborne systems evaluation

Mathematical modelling in military aircraft weapon system design

Synthesis of a theoretical approach for employing adaptive configuration management in aeronautilc weapon system programs

The operational roles of the F-16

A plan for developing and validating a gun system design trade-off methodology

The Tornado all-weather high-speed low-level system

The use of computer aided design methods in airborne systems evaluation

A hybrid simulator for the ESB-34C gunnition BPT

Importance of simulations of weapon and load drops

Wind tunnel investigations of the release behavior of aircraft stores at low and high velocities

The von Neumann paradox

Noise generated aerodynamically

Sonic boom wave-front shapes and curvatures associated with supersonic flight

[NASA-TP-1611]

Ground reflection effects on aircraft flyover noise

Helicopter canopy internal reflection investigation

Antireflection techniques for detecting false tracks in air traffic surveillance with secondary radar

A statistical model for multipath reflection effects of antennas mounted on aircraft

Ground reflection effects on aircraft flyover noise

Helicopter canopy internal reflection investigation

[AD-A073884]

[AD-A084027]

Approximate method of determining the wave drag of a profile in the presence of a local supersonic region

[AD-A085565]

[AD-A084027]

[AD-A085565]

[AD-A084027]

[AD-A085565]

[AD-A084027]

[AD-A085565]

[AD-A084027]

[AD-A085565]

[AD-A084027]

[AD-A085565]

[AD-A084027]

[AD-A085565]
WEAR

Projects:

- Feasibility study for integrated flight trajectory control fighter
  [AD-808746]
- Improved capabilities to detect instipient bearing failure
  [AD-A073123]
- Some considerations of the performance of two honeycomb gas path seal material systems
  [NASP-TM-61938] 0172 N0-16143
- Lubricating oil analysis for wear monitoring.
  [P8BO-807688] 0592 N0-30531
- Pavement evaluation and overlay design using vibratory nondestructive testing and layered elastic theory. Volume 1: Development procedure
  [AD-A087186] 0593 N0-30808

WEAR INHIBITORS

Applications of sprayed coatings
  p038 N0-25507

WEAR TESTS

- The role of aluminum segregation in the wear of aluminum bronze-steel interfaces under conditions of boundary lubrication --- in aircraft fuel systems
  [SAGE PREPRINT 79-AN-58-1] 0011 N0-12110
- Third body formation and the wear of PTFE fibre-based dry bearings
  [ASAE PAPER 79-L09-7] 0051 N0-14742
- Wear of seal materials used in aircraft propulsion systems
  0213 N0-28010
- Evaluation of coatings for wear and corrosion — Protection in air/fluid accumulators — for Navy aircraft carriers
  0329 N0-38619
- Design criteria for dry lubricated flight control bearings — wear tests to make design analysis and check equipment specifications
  [AD-A071322] 0031 N0-10220
- Investigation of advanced prognostic analysis techniques — failure analysis and wear tests of mechanical drive gears
  [AD-A073553] 0079 N0-13032

WEATHER

- Accident investigation
  p0124 N0-14636
- Effect of weather conditions on airport operations
  p0124 N0-14630
- Evaluation of the Aviation Weather And NOAA System (ANWS)
  [AD-A086167] 0556 N0-29568
- In-flight evaluation of a severe weather avoidance system for aircraft
  [AD-A087426] 0601 N0-31736
- Military weather calculations for the NATO theater: Weather and Warplanes 8
  [AD-A080859] 0654 N0-34033

WEATHER CHARTS

- U METEOROLOGICAL CHARTS
- WEATHER CONDITIONS
- U WEATHER MODIFICATION
- WEATHER FORECASTING

- Weather detection using airport surveillance radar
  p009 N0-19129
  p009 N0-19129
- Representativeness of wind observations at airports
  p058 N0-50685
- Current research on aviation weather (bibliography), 1979
  [NASA-CR-3214] 0125 N0-14651
- Nowcast and short-range (0-2 hour) forecasts of thunderstorms and severe convective weather for use in air traffic control
  [AD-A080426] 0290 N0-20247
- Inferred climatology for U.S. airports
  [AD-A080487] 0298 N0-20987
- A demonstration test of the Modular Automated Weather System (MAWS)
  [AD-A087070] 0612 N0-32030

WEATHER FRONTS

- UFRONTS (METEOROLOGY)
- WEATHER MAPS
- U METEOROLOGICAL CHARTS
- WEATHER MODIFICATION
- WT FOG DISPERSAL
- WT LIGHTNING SUPPRESSION

SUBJECT INDEX

- Icing nozzle element optimization test, January 1979
  [AD-A081175] 0017 N0-20297
- WEATHER RADAR
- U AEROSPERICAL RADAR
- WEATHER RECONNAISSANCE AIRCRAFT
  The Y-28 thunder/hailstorm penetration aircraft
  p0125 N0-14640
- Direct effects of lightning on an aircraft during intentional penetrations of thunderstorms — Y-28 aircraft
  p0313 N0-21947
- WEATHER STATIONS
  Preliminary assessment of an automated system for detecting present weather
  [AD-A076031] 0253 N0-19706
- A demonstration test of the Modular Automated Weather System (MAWS)
  [AD-A087070] 0612 N0-32030
- WEBS (WEATHER)
- U WEATHER SERVICES

WEATHER WINDS

- Experimental investigation of the flow past a wing of finite width
  p0262 N0-29222
- Careful numerical study of flowfields about asymmetric external conical corners
  [SAHE PAPER 80-1329] 0051 N0-41562

WEATHER WINDS

- Pressure distribution measurements on wedges at subsonic and transonic velocities — in a transonic wind tunnel
  [EAA-111-55] 0360 N0-23267
- WEIGHT (MASS)
- METRICAL WEIGHT
  Aeronautic system architecture investigation (AVSAR II)
  [AD-A0771403] 0040 N0-11080
- WEIGHT ANALYSIS
  Analog aircraft weight and balance computer
  [SAHE PAPER 1203] 0104 N0-20631
- Preliminary weight estimation of engine section structure
  [SAHE PAPER 1311] 0105 N0-20645
- Weight Integrated Sizing Evaluation (WISE) — A tool for preliminary design
  [SAHE PAPER 1312] 0105 N0-20646
- A simple system synthesis method used to estimate aircraft gross weight
  [SAHE PAPER 1313] 0105 N0-20647
- Problems associated with cargo airplanes having aft mounted engines
  [SAHE PAPER 1314] 0106 N0-20648
- Weight impact of VTOL
  [SAHE PAPER 1326] 0106 N0-20656
- Permanent magnet and superconducting generators in airborne, high power systems — computer program to predict weight of the generators and component systems
  [AD-A080824] 0228 N0-18311
- WEIGHT FACTORS
- U WEIGHT (MASS)
- WEIGHT INDICATORS
- WT SYMBEL CARGO BALANCES
  The INF Lille rotation balance and associated experimental techniques — for wind tunnel control laws simulation during high angle of attack flight
  [SAHE PAPER 80-13] 0377 N0-36844
- Industrial trial run of the AVA derivative balance on an AlphaJet model in a 3 wind tunnel
  [BRTPT-FB-78-07] 0082 N0-13060
- WEIGHT REDUCTION
  Computerized systems analysis and optimization of aircraft engine performance, weight, and life cycle costs
  p0001 N0-10035
  Application of ECS guidelines to weight effective aircraft design — Radar Cross Section
  [SAHE PAPER 1270] 0013 N0-20626
  Advanced materials and the Canadian Challenger
  [SAHE PAPER 1267] 0013 N0-20653
  Advanced technology effects on V/STOL propulsion system weight
  [SAHE PAPER 1300] 0105 N0-20640
- Weight minimization for a wing in the presence of constraints on the divergence speed
  p051 N0-21329
- Design and engineering of carbon brake
  p055 N0-22271
A single-step method of optimizing statically indeterminate minimum-volume systems
Minimum-weight wing in the presence of lift constraints
Calculation of minimum-weight and maximum-rigidity structures in the presence of design constraints
Minimum-mass designs of stiffened graphite/polyimide compression panels
Built-up low-cost advanced titanium structures
[BLAST]
[AA 80-0745]
The weight-minimization problem for a forward-swept wing with constraints on the rate of wing divergence
Determination of aircraft take-off weight in the preliminary design stage
Active controls for combat aircraft
Multi-level optimum design of wing box structures with fiber composite panel components
WEIGHTING FUNCTIONS
A new weighting coefficient for adaptive state estimation
WEAK STRENGTHS
Developments in ultrasonic welding for aircraft
WEAK TESTS
Diffusion bonding as a production process
WEAK JOINTS
BY SPOT WELDS
Fully mechanized circumferential welding for engines
WEAK STRUCTURES
BY STEEL STRUCTURES
Titanium welding in aircraft maintenance
WEARING
BY DIFFUSION WELDING
BY ELECTRON BEAM WELDING
BY GAS TUNGSTEN ARC WELDING
BY GAS WELDING
BY ULTRASONIC WELDING
Welding in the aerospace industry - Design, materials, welding methods, maintenance
International Conference, 1st, Berlin, West Germany, December 7, 8, 1978, Reports
Future applications of welding technologies in the aerospace industry
Some applications of three welding processes in the aerospace industry
Situation of welding in engine maintenance
WEARING MACHINES
Fully mechanized circumferential welding for engines
WEST GERMANY
BY GERMANY
WESTLAND AIRCRAFT
BY P-531 HELICOPTER
WESTLAND P-531 HELICOPTER
BY P-531 HELICOPTER
WETNESS
BY MOISTURE CONTENT
WETTABILITY
Process modifications for improved carbon fiber composites: Abatement of the electrical hazards problem
[ASA-CH-16362]
p0651 B80-33590
WHEELS
BY FLOATWHEELS
BY HYDRAULIC WHEELS
BY TURBINE WHEELS
BY VEHICLE WHEELS
Calibration of Mirage main undercarriage to determine wheel loads from measured strains
[AD-A086721]
p0589 B80-30300
WHEN
BY ROTATION
BY STABILITY
WHIRLING
BY ROTATION
WHIRLING TESTS
BY SPIN TESTS
WINDBAND
BY Broadband
WINDSTEER THEORY
BY FIELD THEORY (PHYSICS)
WINDLIFE
BY WIND
WINCHES
Reduction in swing of a sonar body winched from the sea by a helicopter
[AAIE-NAVY-2973-395]
p0600 B80-31666
WIND (METEOROLOGY)
BY GUSTS
Development of aerodynamic disturbance test procedures, volume 1: Executive summary
[PB80-10815]
p0258 B80-19991
Development of aerodynamic disturbance test procedures, Volume 2: Technical report
[PB80-118383]
p0298 B80-21219
Wake characteristics of buildings in disturbed boundary layers
[ASA-CR-3284]
p0427 B80-24940
Wind factor simulation model: Model description
[AD-A085733]
p0544 B80-29274
WIND CIRCULATION
BY ATMOSPHERIC CIRCULATION
WIND EFFECTS
Force equilibrium and performance balance of aircraft longitudinal motion graphically presented in the Kochhammer diagram
[PB80-40002]
p0444 B80-00892
Sone vertical and horizontal ejection problems - Aircraft weapon deployment computerized simulation
[DGLR PAPER 79-101]
p0455 B80-41901
Exploratory development of aircrew windblast protection concepts
[AD-A072013]
p0307 B80-11055
Trellis wind tunnel study
[AD-A072791]
p0668 B80-12069
Reduction of unsteady wind torques on an open port airborne optical turret
[AD-A095602]
p0440 B80-25609
Passage ventilation due to wind flow about a postcrash aircraft
[ASA-CR-163273]
p0478 B80-26284
Analytical design and evaluation of an active control system for helicopter vibration reduction and gust response alleviation
[ASA-CR-152377]
p0536 B80-28369
Nonstationary random response of structural systems to aerodynamic wind forces
[PB80-118383]
p0653 B80-33775
WIND EROSION
Possible methods for removing small airborne particles from the flow in the 5 meter pressurized low-speed wind tunnel
[EBR-T-6AERO-1826]
p0606 B80-31416
WIND MEASUREMENT
BY WIND VELOCITY MEASUREMENT
Helicopter remote wind sensor system description
[AD-A076153]
p0222 B80-18024
Helicopter remote wind sensor flight test
[AD-A082770]
p0470 B80-24313
WIND PERIOD
Exploratory development of aircrew windblast protection concepts
[AD-A072013]
p0307 B80-11055
WIND SHEAR
Flight through thunderstorm outflows
[AD-A0010-11648]
p0010 B80-11648
Design of a wind shears detection radar for airports
[p0152 B80-21429
Wind shear detection with Doppler radar
[p0389 B80-37707
Pilot-aircraft system response to wind shear
[ASA-00-1569]
p0516 B80-45686
Takeoffs and wave-offs under the influence of wind shear
[ADG PEER-90-047]
p0523 B80-46297
Wind shear hazard definition for a wide body jet
[AD-A086721]
p0589 B80-30300


Piloted flight simulation study of low-level wind shear, phase 4. All-weather landing systems (AWLS), project 2 [AD-A077164] p0180 B80-17080

Airborne aids for coping with low-level wind shear. All-weather landing systems, engineering services support project, task 2 [AD-A077164] p0180 B80-17080

Evaluation of wind tunnel measurement of lateral aerodynamic derivatives using a new oscillatory rig, with results and comparisons for the Gnat aircraft [ARC-N-78-3087] p0600 B80-31366

Exploratory studies on the design of acoustic splitters for wind tunnels [NAA-TR-290-1829] p0607 B80-31417

Investigation of landing flare in presence of wind shear [DFLY-PE-79-20] p0363 B80-32399

Wind-shear encounters during visual approaches at night. A piloted simulator study [NAA-TR-79-1261] p0417 B80-24921

Test and evaluation of the Airport Surveillance Radar (ASR)-8 wind shear detection system, phase 2 [AD-A086065] p0549 B80-29280

Low supersonic wind shear with energy height rate feedback [NASA-TR-81920] p0649 B80-33416

Investigation of landing flair in presence of wind shear [DFLY-PE-79-20] p0363 B80-32399

WIND TUNNEL APPARATUS

Real-time data acquisition system for the NASA Langley transonic dynamics tunnel [PASA-TH-81825] p0413 A80-12627

Use of an 'off-the-shelf' data acquisition system for wind tunnel data processing [PASA-TH-81825] p0413 A80-12627

A survey of laser Doppler velocimeter applications at the Arnold Engineering Development Center [NASA-CS-80-10110] p0065 B80-12011

A system for measuring and recording wind-tunnel balance data [NASA-CS-80-10110] p0065 B80-12011

On the historical development of apparatus and techniques for smoke visualization of subsonic and supersonic flows [AIAA 80-0420] p0198 A80-26939


A comparison of experimental and theoretical turbulence reduction from screens, honeycomb and honeycomb-screen combinations [AIAA 80-0433] p0199 A80-26942

Design and verification of an automatic Mach number control system [NASA-CS-81-10210] p0264 A80-30000

The IFP Lille rotation balance and associated experimental techniques - for wind tunnel control loss simulation during high angle of attack flight [AIAA PAPER MT 80-13] p0377 A80-36804

First results obtained by the AEDC, Society on the rotating assembly of IFP Lille for wind tunnel aircraft spin testing [AIAA PAPER MT 80-14] p0377 A80-36805

Quick and easy flow-field surveys [AIAA PAPER MT 80-14] p0377 A80-36805


Experimental feasibility study of the application of magnetic suspension techniques to large-scale aerodynamic test facilities - cryogenic transonic wind tunnel [NASA-CS-146761] p0042 B80-11102

Industrial trial run of the AVA derivative balance on an AlphaJet jet model in a 3 m wind tunnel [NAA-TR-78-1070] p0082 B80-13060

Two new transonic wind tunnels [AGARD-AG-290] p0286 B80-19137

Development of the cryogenic tunnel concept and application to the US National Transonic Facility [NAA-TR-78-1070] p0082 B80-13060

Development of wind tunnel models [PASA-TH-81825] p0413 A80-12627

A V/STOL ground effects test facility [PASA-TH-81825] p0413 A80-12627

Wind tunnel model deflection system [PASA-TH-81825] p0413 A80-12627

Progress report on a cryogenic pilot transonic wind tunnel driven by induction [NAA-TR-80-10110] p0163 B80-29092


Experimental investigation of the interference-free flow field around a lifting wing-body model to establish cross flow characteristics for ventilated wind tunnel walls at low supersonic Mach numbers [AIAA 80-0444] p0200 A80-26968

Measurements of control stability characteristics of a wind-tunnel model using a transfer function method [AIAA 80-0457] p0200 A80-26957

A new rig for flight mechanics studies in the OPERA Aerothermodynamic Test Center of Rome [AIAA 80-0464] p0201 A80-26961

A system for the measurement of the altitude of wind tunnel models [AIAA 80-0464] p0201 A80-26961

Development of a metric half-span model for interference free testing [AIAA PAPER 80-0460] p0268 A80-29950

Experimental study of the interaction between a rapid subsonic aircraft wing and an engine nacelle at high dilution rate, with [ONERA, TP No. 1980.35] p0403 A80-40803

Wind tunnel flutter investigations [NASA-CS-81-10210] p0085 B80-12011

Construction problems for high Reynolds number wind tunnel models [NASA-CS-81-10210] p0085 B80-12011

Some measurements of buffetting on an aerelastic model of a slender wing aircraft [NASA-TR-78-1064] p0081 B80-13055

Optimized aerodynamic design process for subsonic transport wing fitted with winglets - wind tunnel model [NASA-CS-81-10210] p0081 B80-13055
Two-dimensional wind-tunnel tests of a NASA supercritical airfoil with various high-lift systems. Volume 2: Test data. 

- [NASA-Ch-2215] p0067 880-12055
- [NASA-Ch-137697] p0068 880-12059

Rotary balance data for a typical single-engine general aviation design for an angle-of-attack range of 4 degrees to 35 degrees, J. Effect of wing leading-edge modifications, model A. 

- [NASA-Ch-3102] p0068 880-12060

Aerodynamic characteristics of a hypersonic research airplane concept having a 70 deg swept double-delta wing at Mach numbers from 0.80 to 1.20, with summary of data from 0.20 to 6.0 -- Langley 8-ft transonic wind tunnel. 

- [NASA-TP-1552] p0068 880-12064

Trestle wind tunnel study. 

- [AA-072791] p0068 880-12069

Determination in ground facilities of aerodynamic stability parameters of aircraft. 

- [NAGD-AD-242] p0072 880-12102

Focus and moment data from a wind-tunnel test of a tilt-nacelle V/STOL propulsion system with an attitude control vanes conducted in spans 40 by 80 foot wind tunnel. 

- [NASA-TR-81157] p0077 880-13003

A-10 carriage loads test. 

- [AD-A073422] p0079 880-13034

Some measurements of buffetting on an aeroelastic model of a slender wing aircraft. 

- [BAA-TM-STRUCT-982] p0081 880-13055

The development of active control and its application to flutter suppressors -- wind tunnel test results. 

- [AAAF-RT-79-02] p0082 880-13056

Experimental study of acoustic loads on an upper-surface-blown STOL airplane configuration -- Langley full-scale wind tunnel tests. 


Two dimensional aerodynamic interference effects on oscillating airfoils with flaps in ventilated subsonic wind tunnels -- computational fluid dynamics. 

- [NASA-Ch-3210] p0113 880-14047

Turbjet-exhaust-nozzle secondary-airflow pulsing as an exit control of an inlet-stability bypass system for a Mach 2.5 axisymmetric mixed-compression inlet -- Lewis 10- by 10-ft. supersonic wind tunnel test. 

- [NASA-TP-1532] p0120 880-14124

NASA/Army XV-15 tilt rotor research aircraft wind-tunnel test program plan -- Ames 40-ft by 80-ft wind tunnel tests. 

- [NASA-TM-78542] p0129 880-15067

Correlation of F-15 flight and wind tunnel test control effectiveness. 

- [AAAF-NS-1979-4] p0180 880-15152

Some wind tunnel measurements of the effectiveness at low speeds of combined lift and roll controls. 

- [NASA-T-1975] p0190 880-15153

Flap design with ACT in the presence of strakes. 

- [NASA-TP-1515] p0191 880-15161

An experimental study of the structure and acoustic field of a jet in a cross stream -- Ames 7-ft by 10-ft wind tunnel tests. 

- [NASA-Ch-162446] p0195 880-15871

Wind-tunnel flight test correlation study of aerodynamic characteristics of a large flexible supersonic cruise airplane (TR-701) 2: Extrapolation of wind-tunnel data to full-scale conditions. 

- [NASA-TP-1515] p0167 880-16032

Recent results of V/STOL test limited to the University of Washington aeronautical laboratory. 

- [NASA-Ch-3227] p0171 880-16068

Experimental study of the aerodynamics of a helicopter rotor blade model in an unsteady flow regime during wind tunnel tests. 

- [BAA-TM-79-211] p0175 880-17036

Initial study of the response of an aircraft to lateral gusts. 

- [NASA-Ch-1103] p0181 880-17046

Wind-tunnel flight test correlation study of aerodynamic characteristics of a large flexible supersonic cruise airplane (TR-701) 1: A comparison between characteristics predicted from wind-tunnel measurements and those measured in flight. 

- [NASA-TP-1516] p0219 880-17986

Comparison of aerodynamic coefficients obtained from theoretical calculations wind tunnel tests and flight tests data reduction for the alpha jet aircraft. 

- [NASA-TF-75237] p0220 880-17991


- [AD-A077183] p0221 880-18002

Programs for the transonic wind tunnel data processing installation. Part 7: Extended focal length. 

- [AD-A073414] p0226 880-18054

Aerocoustic wind-tunnel tests of a light twin-boom general-aviation airplane with free or shrouded-pusher propellers -- in the Langley full-scale tunnel. 

- [NASA-TF-6203] p0232 880-19023

Experimental investigation of a circulation control alleron. 

- [AD-A078825] p0233 880-19046

The cryogenic wind tunnel: another option for the European Transonic Facility. 

- [NASA-TF-19140] p0246 880-19140

Wind-tunnel results for an improved 21-percent-thick low-speed airfoil section. 

- [NASA-TR-78655] p0247 880-21295

Dynamics stability derivatives of space shuttle orbiter obtained from wind-tunnel and approach and landing flight tests. 

- [NASA-TF-1634] p0307 880-21336

Application of a laser lighting device to the smoke visualization of flows in a wind tunnel. 

- [NASA-TF-22242] p0316 880-22242

La Recherche Aerospatiale Bi-monthly Bulletin number 1979-4. 

- [NASA-TR-612] p0316 880-22247

Subsonic and transonic flows on a variable sweep wing. 

- [NASA-TF-22248] p0316 880-22248

Transonic wing DFTLR-P4 as an European test model. 

- [NASA-TR-75752] p0345 880-22260

Full-scale wind tunnel-investigation of the Advanced Technology Light Twin-Engine airplane (ATLIT) Langley full scale tunnel. 

- [NASA-TF-1591] p0345 880-22266

Supercritical wing design studies for transport aircraft. Volume 1: Wing design and wind tunnel measurements. 

- [BAA-TF-W-79-06-VOL-1] p0368 880-22275

A comment on the origin of on-dwell interference in wind tunnel tests of aerfoils. 

- [NASA-TF-16816] p0368 880-22280

High-speed-propeller wind-tunnel aerocoustic results. 

- [NASA-TF-22248] p0352 880-22234

Application of two design methods for active flutter suppression and wind-tunnel test results. 

- [NASA-TF-1653] p0357 880-22327

Summary of data required for the NASA SP activity standard aeroelastic configurations -- two-dimensional configurations. 

- [NASA-TF-79015-U] p0361 880-23273

Wind tunnel tests on the Sheriff twin-engined light aircraft. 

- [NASA-TF-241] p0361 880-23277

Flight safety of Bogallo hang gliders. 

- [NASA-TF-23301] p0363 880-23301

Development of test methods for scale model simulation of aerial applications in the NASA Langley Vortex Research Facility. 

- [NASA-TF-18005] p0413 880-24260

Investigation of axisymmetric and nonaxisymmetric nozzle installed on a 0.10 scale F-18 prototype airplane model -- wind tunnel tests. 

- [NASA-TF-1634] p0414 880-24267

Wind tunnel measurements of the mean flow in the turbulent boundary layer and wake in the region of the trailing edge of a swept wing at subsonic speeds. 

- [NASA-TR-79062] p0415 880-24278

Wind-tunnel tests of the XV-15 tilt wing aircraft. 

- [NASA-TF-81177] p0417 880-24294
Comparison of theoretically predicted lateral-directional aerodynamic characteristics with full-scale wind tunnel data on the AEW airplane


A comparison between an existing propeller noise theory and wind tunnel data

[NASA-TR-81519] p0428 N80-25101

Development and validation of a combined rotor fuselage induced flow field computational method.

— Langley V/STOL tunnel

[NASA-TR-81567] p0431 N80-25296

Large-scale wind-tunnel tests of inverting flaps on a STOL utility aircraft model.

[NASA-TP-16996] p0432 N80-25318

Unsteady pressure measurements on oscillating models in European wind tunnels

[NASA-TP-82326] p0478 N80-26277

Exploratory studies of the cruise performance of upper surface blown configurations — wind tunnel tests.


Experimental studies of scale effects on oscillating airfoils at transonic speeds.


Mutual interference of multiple bodies in the flow field of the F-1C aircraft in the transonic speed range — wind tunnel tests.

[AD-A084700] p0488 N80-27296

Phase 1 wind tunnel tests of the J-97 powered, external augmentor V/STOL model.


Acquisition and application of transonic vibration and far-field test data for three-dimensional computational method evaluation, volume 1.

[AD-A085258] p0530 N80-28316

Exploratory pilot simulator study of the effects of winglets on handling qualities of a representative agricultural airplane.


Transonic airfoils: The design of a supercritical wing for transport aircraft — A310 wing model wind tunnel tests.


Wind tunnel experiments on divergence of far and near fields.

[NASA-TP-1685] p0545 N80-29287

Study of an edge vortex by means of ultrasonar in a close field behind a rectangular wing in a wind tunnel.

[APIS-S17/1979] p0567 N80-30282

Night/Adverse weather -10 evaluator program (A-109).

[NASA-TR-81199] p0594 N80-31307

An investigation of scale effects on the transonic flowfield of a commercial airplane.

[ARC-RM-3842-PT-1] p0600 N80-31364


[NASA-TR-81845] p0600 N80-31365

Wind tunnel measurement of lateral aerodynamic derivatives using a new oscillatory rig, with results and comparisons for the Goodyear aircraft.

[NASA-TR-81847] p0600 N80-31366

A brief investigation of the twodimensionality of the flow over an airfoil in the 8 foot by 6 foot transonic wind tunnel.

[NAR-M-30881828] p0600 N80-31368

Pressure data for four analytically defined arrow wings in supersonic flow — Langley Unitary Plan Wind Tunnel tests.

[NASA-TR-81357] p0628 N80-32332

Aerodynamic characteristics of three helicopter rotor airfoil sections at Reynolds numbers from model scale to full scale at Mach numbers from 0.35 to 0.90 — conducted in Langley 6 by 20 inch transonic tunnel.

[NASA-TP-1701] p0628 N80-32333

Rotary balance data for a typical single-engine general aviation design for an angle-of-attack range of 8 deg to 90 deg. 2: High-wing model C.


Large scale wind tunnel investigation for future modifications to the quiet short-haul research aircraft (QSHRA) — Issue 40 by 80-ft wind tunnel.


Use of nose cap and fuselage pressure orifices for determination of air data for space shuttle orbiter below supersonic speeds.

[NASA-TP-1643] p0635 N80-32389

Investigation of performance, noise, and detectability characteristics of remotely piloted aircraft (RPA) propellers.

[AD-A0801952] p0636 N80-32399

Selected data from a transonic flexible walled test section.

[NASA-TR-81660] p0637 N80-32400

A comprehensive investigation into the supersonic viscous flow about a slender cone at high angle of attack: Experimental and theoretical results.

[NASA-TP-71001] p0640 N80-33340

Flow visualization study of the F-10 fighter aircraft configuration.


Analysis and correlation of test data from an advanced technology rotor system — helicopter performance prediction.

[NASA-CR-152366] p0642 N80-33351

The problem of wind tunnel flow nonuniformity in free-form aircraft dynamic stability.

[CSIR-WASP-79-60] p0642 N80-33352

Rotary balance data for a typical single-engine general aviation design for an angle of attack range of 8 deg to 90 deg. 1: Low wing model C — wind tunnel tests.


A digital unit for measuring unsteady pressure coefficients — in wind tunnel.

[NASA-CR-153619] p0652 N80-33619

Wind tunnel walls

Wind tunnel design and performance for rough wall turbulent boundary layer.

[PA174-A08-21900]

Experimental investigation of the interference-free flow field around a lifting wing-body model to establish cross flow characteristics for ventilated wind tunnel walls at low supersonic Mach numbers.

[AIAA PAPEB 80-1366] p0506 A80-44142

Calculations of transonic flow about an airfoil in a wind tunnel.

[AIAA PAPER 80-1366] p0506 A80-44142

Aerodynamic examination of rectangular wing between parallel wall wind tunnel.

[AD-A0801952] p0636 N80-32399

Investigation of the boundary condition at a wind tunnel wall: experimental and theoretical studies of a lifting wing-body model at low supersonic speed.

[AD-A072099] p0025 N80-10143

Experiments on the reduction of wind tunnel wall interference by adaptive-wall technology.

[AD-A076555] p0181 N80-17088

A perturbation theory of two-dimensional transonic wing tunnel wall interference.

[AD-A071167] p0182 N80-17092

The dynamic of dynamic interference by sound-absorbing walls in the B-11 3 foot wind tunnel.

[ARC-RM-3837] p0182 N80-17093

The use of sound absorbing walls to reduce dynamic interference in wind tunnels.

[ARC-RM-3831] p0182 N80-17096

A program for transonic wind tunnel interference assessment in two-dimensional wind tunnels.

[NASA-TR-81819] p0367 N80-23332

Acquisition and application of transonic wing and far-field test data for three-dimensional computational method evaluation, volume 1.

[AD-A085258] p0368 N80-28316

A proposal for aerodynamically actuated self steering subsonic wind tunnel walls.

[ARL/AERO-NOTE-392] p0555 N80-29374

WIND TUNNELS

WIND TUNNEL WALLS

The use of sound absorbing walls in the B-11 3 foot wind tunnel.

[ARC-RM-3837] p0182 N80-17093

The use of sound absorbing walls to reduce dynamic interference in wind tunnels.

[ARC-RM-3831] p0182 N80-17096

A program for transonic wind tunnel interference assessment in two-dimensional wind tunnels.

[NASA-TR-81819] p0367 N80-23332

Acquisition and application of transonic wing and far-field test data for three-dimensional computational method evaluation, volume 1.

[AD-A085258] p0368 N80-28316

A proposal for aerodynamically actuated self steering subsonic wind tunnel walls.

[ARL/AERO-NOTE-392] p0555 N80-29374
**SUBJECT INDEX**

**WIND FLOW METHOD TESTS**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windshields</td>
<td>p0026 N00-10200</td>
</tr>
<tr>
<td>Aircraft transparency</td>
<td>p0026 N00-10200</td>
</tr>
<tr>
<td>Windshields</td>
<td>p0272 A00-28494</td>
</tr>
<tr>
<td>Aircraft transparency failure and logistical cost analysis</td>
<td>p0272 A00-28494</td>
</tr>
<tr>
<td>The fabrication and testing of prototype US-1</td>
<td>p0272 A00-28494</td>
</tr>
<tr>
<td>Aircraft windshields manufactured with a sheet interlayer</td>
<td>p0272 A00-28494</td>
</tr>
<tr>
<td>Evaluation of aircraft windshield materials in a simulated supersonic flight environment</td>
<td>p0272 A00-28494</td>
</tr>
<tr>
<td>Development of a visual inspection technique</td>
<td>p0272 A00-28494</td>
</tr>
</tbody>
</table>

**WING FLAPS**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind factor simulation model: Ober's manual</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Static pressure orifice system testing method and apparatus</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Laser-Doppler flow-field diagnostics of two large hypersonic test facilities</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Magnetic suspension and balance system: A selective annotated bibliography</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Wind velocities</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Wind velocity measurements</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Air flow measurements in a large irregularly shaped tunnel</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Wind tunnel</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Autorotation</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Windows (Windtunnel Machines)</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Dynamics of a flexible rotor-tower system [ASBM-84-194-1]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Wing: Computer program for calculation of three-dimensional potential compressible flow about wind turbine rotor blades [NASA-TP-7529]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>The aerodynamics of contra-rotating axial flow wind power turbines [CSIR-62-1633]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Windows (Aeroplane)</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Noise reduction characteristics of general aviation type dual-pane windows [AIAA 80-171]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Design study forATA vacuum system aperture [ASML-15202]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Conceptual design and performance estimates for a supersonic aerodynamic window for the ATA vacuum system aperture [TCL-15021]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Aircraft transparency failure and logistical cost analysis: Supplemental study [AD-7055400]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Transparent materials for civil aircraft [SNAS-792-111-108]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>WINDFLOW UTILIZATION</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Comparative performance measurements on a Savonius rotor with ancillary surfaces [NASA 80-16005]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>New approaches to sailing [NASA-TH-75282]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Composite rotor blades for large wind energy installations [NASA-TH-75282]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>The Kirsten rotor as a wind turbine [NASA-75-1637]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Comparative performance measurements on a Savonius rotor with ancillary surfaces</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Wind-turbine power improvement with modern airfoil sections and multiple-speed generators [AIAA 80-0633]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Sailwing Barrisons rotors</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>The aerodynamics of axial flow wind power turbines [CSIR-62-1633]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Vertical axis wind turbine development: Executive summary [ORO-51355-77-5]</td>
<td>p0056 A00-154795</td>
</tr>
<tr>
<td>Vertical axis wind turbine development [ORO-51355-77-5]</td>
<td>p0056 A00-154795</td>
</tr>
</tbody>
</table>

**A-443**
Harmonic oscillations of annular wing in steady ideal fluid flow

Damping stall on oscillating airfoils in subsonic free-streams

Experimental unsteady aerodynamics of conventional and supercritical airfoils --- conducted in the Ames 11 foot transonic wind tunnel [NASA-TM-81221]

Method for calculating wing loading during maneuvering flight along a three-dimensional curved path

Solution of linear problems of flow about finite span wing

Application of finite element analysis to the derivation of structural weight [SAW PAPER 1271]

A panel method for calculating the loads on a wing that performs harmonic oscillations in subsonic flow

Application of the variational difference method of straight lines to the calculation of wing middle surface deformation

The relationship between the critical reversal and divergence speeds for a straight wing

Pressure distribution in rectangular wing/blade sections during curvilinear motion in an incompressible medium

Direct and inverse problems of flow over a wing of finite span in the linear formulation

Calculation of pressure distribution on slender wings in supersonic flow

The method of matched asymptotic expansions in the hydrodynamics of wings --- Russian book

Instationary air forces on wings with an oscillating rudder

Scattor of fatigue-life data for elements of full-scale light-aircraft wings under steady loads

Calculation of aircraft wing reliability from sudden failures

The application of a parametric method of fatigue load measurement to wings based on flight measurements on a Lightning R T5 [ARC-N/9-M-3856]

Additional information about FALS0PP --- fighter aircraft loading standard for fatigue evaluation [ELR-TR-79056-0]

Effect of sweep and aspect ratio on the longitudinal aerodynamics of a spanloader wing in an out-of-ground-effect --- conducted in Langley V/STOL wind tunnel [NASA-TM-81099]

Calculation of the endurance of civil aircraft wing structures --- life estimate method for wing loading on general aviation aircraft [SDD-C-79024]

Parametric study of variation in cargo-airplane performance related to progression from current to spanloader designs [NASA-TP-1625]

Active control technology for gust alleviation [NASA-CR-159240]

Aircraft for spin recovery [NASA-CR-159240]

Computation of spanwise distribution of circulation and lift coefficient for flapped wings of arbitrary planform [NASA-CR-159329]

Fatigue testing of vampire wings [AIAA 80-1048]

Model tests demonstrating under-wing installation effects on engine exhaust noise [AIAA PAPER 80-0803]

Experimental study of the interaction between a rapid subsonic aircraft wing and an engine nacelle at high dilution rate [NASA TP 106190-35]

Investigation of the influence of the parameters of a wing/engine combination on the critical flutter speed

Assessment at full scale of exhaust nozzle to wing size on STOL − OTW acoustic characteristics [NASA-TM-79279]


Calculation of aircraft wing reliability from the method of matched asymptotic expansions in the ideal fluid flow

The relationship between the critical reversal and divergence speeds for a straight wing

Pressure distribution in rectangular wing/blade sections during curvilinear motion in an incompressible medium

Direct and inverse problems of flow over a wing of finite span in the linear formulation

Calculation of pressure distribution on slender wings in supersonic flow

The method of matched asymptotic expansions in the hydrodynamics of wings --- Russian book

Instationary air forces on wings with an oscillating rudder

Scattor of fatigue-life data for elements of full-scale light-aircraft wings under steady loads

Calculation of aircraft wing reliability from sudden failures

The application of a parametric method of fatigue load measurement to wings based on flight measurements on a Lightning R T5 [ARC-N/9-M-3856]

Additional information about FALS0PP --- fighter aircraft loading standard for fatigue evaluation [ELR-TR-79056-0]

Effect of sweep and aspect ratio on the longitudinal aerodynamics of a spanloader wing in an out-of-ground-effect --- conducted in Langley V/STOL wind tunnel [NASA-TM-81099]

Calculation of the endurance of civil aircraft wing structures --- life estimate method for wing loading on general aviation aircraft [SDD-C-79024]

Parametric study of variation in cargo-airplane performance related to progression from current to spanloader designs [NASA-TP-1625]

Active control technology for gust alleviation [NASA-CR-159240]

Aircraft for spin recovery [NASA-CR-159240]

Computation of spanwise distribution of circulation and lift coefficient for flapped wings of arbitrary planform [NASA-CR-159329]

Fatigue testing of vampire wings [AIAA 80-1048]

Model tests demonstrating under-wing installation effects on engine exhaust noise [AIAA PAPER 80-0803]
The application of output predictive digital control to wing flutter suppression and terrain following problems

Further investigation of a finite difference procedure for analyzing the transonic flow about harmonically oscillating airfoils and wings (NASA CR-1395)

Principles of design of a carbon fibre composite aircraft wing

Calculation of minimum-weight and maximum-rigidity structures in the presence of design constraints

Minimum-mass designs of stiffened graphite/polyimide compression panels

Preliminary design of composite wing-box structures for global damage tolerance

Repair of advanced composite structures --- in service aircraft

Wing/store flutter with nonlinear pylons stiffened wings

Fabrication of double-curvature skins by rolling --- for aircraft structures

Construction of stiffness matrices of thin-wall systems using sliding interpolation

Autocon-I ultrasonic fatigue-crack detector --- for military aircraft fastener sites

Protection against wing icing for Airbus A300 and A310

Calculation of the interaction between an exhaust jet and a high-lift wing

Flight simulation fatigue crack propagation evaluation of candidate lower wing skin materials with particular consideration of spectrum truncation

Elements of the wing section theory and of the wing theory

Loading tests of a wing structure for a hypersonic aircraft

Preliminary design of graphite composite wing panels for commercial transport aircraft

An investigation of residual stresses in simulated wing panels of 7075-T6 aluminum

Design studies of laminar Flow Control (LFC) wing concepts using superplastic forming and diffusion bonding (SPF/DB)

Multilevel optimal design of wing box structures with fiber composite panel components

WING PLAINFORMS

BT ARROW WINGS

BT DELTA WINGS

BT INFINITE SPAN WINGS

BT SWEEP FORWARD WINGS

BT SWEEPBACK WINGS

BT TRAPEZOIDAL WINGS

BT VARIABLE SWEEP WINGS

The effects of leading edge modifications on the post-stall characteristics of wings (AIAA Paper 80-1019)

Some parametric relations for designing large-aspect wings

Evolution of the hybrid wing - YF-17/YF-18 type

Aircraft configuration optimization for ground attack mission

Development of a mission adaptive wing system for a tactical aircraft

WING PROFILES

HT WING SPAN

The variable-geometry wing

Predicted jet thickness effects on the lift of an augmentor wing

Wing profile design of the world championship sailplane SB 11

A nonlinear problem of static aeroelasticity

Some parametric relations for designing large-aspect wings

Selecting the optimal geometrical twist of an aircraft wing

Drag calculations for profiles at transonic speeds

Weight minimization for a wing in the presence of constraints on the divergence speed

The Mitsubishi Diamond I - What are its chances on the current market

A study of nonadiabatic boundary-layer stabilization wing in a monochromatic free-molecular rarefied-gas flow in the case of specular-reflection interactions

Steady-state entrainment of a body by a shock wave

Application of aerodynamic characteristics of certain circular plane-convex configurations to hybrid airships

Calculation of transonic viscous flow past wing profiles

Experiments with transonic profiles

Aircraft configuration optimization for ground attack mission

Dynamics of flying vehicles elements made from composite materials

Validation of a wing leading edge stall prediction technique

Airbus airfoils cut fuel burn - High aspect ratio, thickness, low sweep contribute

Potential flow past a wing profile with a trailing edge of finite thickness

Influence of nonequilibriums on the aerodynamic characteristics of some wing profiles

Some applications of the methods of failure mechanics in analyzing the growth and service life of aircraft structures

The canard configuration and the conventional airplane --- aerodynamic characteristics of wings

Shock-free wing design

Selecting the geometric parameters and position of a nose flap on the root profile of a swept wing using tunnel test data, part 2
Laminar boundary layer calculation from experimental pressure distribution
Analytic formulas for wing profile aerodynamic characteristics in incompressible flow
Harmonic oscillations of annular wing in steady ideal fluid flow
Exploratory study of the effects of wing-leading-edge modifications on the stall/spin behavior of a light general aviation airplane
Theoretical study of aerodynamic characteristics of wings having vortex flow
General potential theory of arbitrary wing sections
A brief investigation of the two-dimensionality of the flow over an airfoil in the 8 foot by 6 foot transonic wind tunnel
Fatigue testing of vampire wings
Selecting the geometric parameters and position of a nose flap on the root profile of a swept wing using tunnel test data, part 2
Wing flapping with minimum energy — minimize the drag for a sweeping moment at the wing root
RHEBIST: A shortened version of TBIST
Stationary flow past the lower surface of a piecewise-planar delta wing with supersonic leading edges
Solution of linear problems of flow about finite span wing
Weight minimization for a wing in the presence of constraints on the divergence speed
Development of a metric half-span model for interference free testing
Stationary flow past the lower surface of a piecewise-planar delta wing with supersonic leading edges
Direct and inverse problems of flow over a wing of finite span in the linear formulation
An experimental investigation of a wing with controlled mid-span flow separation
Temperature and flow measurements on near-freezing aviation fuel in a wing-tank model
Temperature and flow measurements on near-freezing aviation fuels in a wing-tank model
Effects of nonlinearities on wing-store clutter
Test study of the vortex regime of highly sweepback wings by extrapolation of the Jones method
Effect of tip vortex structure on helicopter noise due to blade-vortex interaction
Full scale visualization of the wing tip vortices generated by a typical agricultural aircraft
The significance of wing end configuration in airfoil design for civil aviation aircraft
B holographic interferometry of carbon fiber reinforced plastic wingtips
Airflow effects on riming measurements by a wing tip-mounted ice detector on the EC130K research airplane
Exploratory study of the effects of gaps and vortex generators on elevator efficiency and drag for a bending moment at the wing root

Aircraft wingtip coupling experiments
Development of high lift devices for application to advanced Navy aircraft
Computational and simplified analytical treatment of transonic wing-fuselage-pylon-store interactions
Unsteady pressure measurements on wing-store combinations in incompressible flow
Investigation of internal control laws for wing/store flutter suppression
Investigation of internal control laws for wing/store flutter suppression
Recent development of the TP-17 active flutter suppression system
Passive control of wing/store flutter
Computational and simplified analytical treatment of transonic wing-fuselage-pylon-store interactions
Simulated transonic flows for aircraft with nacelles, pylons, and winglets
Effect of winglets on performance and handling qualities of general aviation aircraft
Effect of winglets on a first-generation jet transport wing. 6 Stability characteristics for a full-span model at subsonic speeds
Optimized aerodynamic design process for subsonic transport wing fitted with winglets — wind tunnel model

Subject Index

Noise due to tip vortex formation on lifting rotors
Effect of tip vortex structure on helicopter noise due to blade-vortex interaction
Full scale visualization of the wing tip vortices generated by a typical agricultural aircraft
The significance of wing end configuration in airfoil design for civil aviation aircraft
B holographic interferometry of carbon fiber reinforced plastic wingtips
Airflow effects on riming measurements by a wing tip-mounted ice detector on the EC130K research airplane
Exploratory study of the effects of gaps and vortex generators on elevator efficiency and drag for a bending moment at the wing root

Wing Tanks

Temperature and flow measurements on near-freezing aviation fuel in a wing-tank model
Temperature and flow measurements on near-freezing aviation fuels in a wing-tank model
Effects of nonlinearities on wing-store clutter

Wing Tip Vortexs

Test study of the vortex regime of highly sweepback wings by extrapolation of the Jones method
Refraction of sound by aircraft wing tip vortices

Wings

Armed Wings
Caribena Wings
Caribena Wings
Caret Wings
Chicofin Wings
Delta Wings
Fixed Wings
Flexible Wings
G-1 Airfoil
G-2 Airfoil
Infinite Span Wings
Lifting Motors
Low Aspect Ratio Wings
Oblique Wings
Parabolas
Rectangular Wings
Rigid Motors
Rigid Wings
Rigging Wings
Rigging Wings
Sleeper Wings
Super Critical Wings
Swift Forward Wings
Swift Wings
Swiftback Wings
Thin Wings
<table>
<thead>
<tr>
<th>WINGS CORPO</th>
<th>SUBJECT INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducted in Langley 8 foot transonic pressure tunnel</td>
<td>[NASA-TP-1330] p0021 80-10101</td>
</tr>
<tr>
<td>Estimation of attainable leading-edge thrust for wings at subsonic and supersonic speeds</td>
<td>[NASA-TP-1500] p0022 80-10105</td>
</tr>
<tr>
<td>Prediction of aerodynamic characteristics of fighter wings at high lift</td>
<td>[AD-1072630] p0025 80-10140</td>
</tr>
<tr>
<td>A study to develop optimization algorithms for aircraft wing structures</td>
<td>[AD-1072668] p0027 80-10196</td>
</tr>
<tr>
<td>On a smooth approximation method and its application to mathematical description of wing aerodynamic characteristics</td>
<td>p0034 80-11011</td>
</tr>
<tr>
<td>Influence of wing deformation on trailing-edge flap deflections</td>
<td>p0034 80-11012</td>
</tr>
<tr>
<td>Optimized aerodynamic design process for subsonic transport wing fitted with winglets --- wind tunnel model</td>
<td>p0114 80-14054</td>
</tr>
<tr>
<td>Elements of the wing section theory and of the wing theory</td>
<td>p0126 80-15040</td>
</tr>
<tr>
<td>A parametric wing design study for a modern laminar flow wing</td>
<td>[NASA-TR-801054] p0127 80-15050</td>
</tr>
<tr>
<td>Jet-induced circulation control wing contractor demonstration</td>
<td>[AD-1074888] p0130 80-15080</td>
</tr>
<tr>
<td>Aerodynamic interaction on a close-coupled canard wing configuration</td>
<td>p0163 80-15175</td>
</tr>
<tr>
<td>Average gust frequencies subsonic transport aircraft [B690-69023-A-D-C]</td>
<td>p0167 80-16029</td>
</tr>
<tr>
<td>Theoretical analysis of the transient response of a wing to non-stationary buffet loads</td>
<td>[AD-1073702] p0180 80-17083</td>
</tr>
<tr>
<td>Design and test of a boron - aluminum high temperature wing</td>
<td>[AD-1075814] p0223 80-18034</td>
</tr>
<tr>
<td>Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests</td>
<td>[NASA-CASE-LAB-12261-1] p0267 80-20224</td>
</tr>
<tr>
<td>On wings of circular design</td>
<td>p0287 80-20229</td>
</tr>
<tr>
<td>Ground plane effects on a contoured surface at low subsonic velocities</td>
<td>[AD-1079877] p0288 80-20237</td>
</tr>
<tr>
<td>Wing design process by inverse potential flow computer program</td>
<td>p0300 80-21259</td>
</tr>
<tr>
<td>Transonic wing DPFLR-F4 as European test model</td>
<td>[NASA-TR-75752] p0345 80-22260</td>
</tr>
<tr>
<td>Calculation of the interference effects between the engine wing and the base wing of civil and military transport aircraft by the vortex lattice method</td>
<td>[BASA-CASE-LAB-12261-1] p0353 80-22356</td>
</tr>
<tr>
<td>Effect of a flexibly mounted store on the flutter speed of a wing</td>
<td>[NASA-TR-159245] p0353 80-22356</td>
</tr>
<tr>
<td>Decoupler pylon: Wing/store flutter suppressor</td>
<td>[NASA-CASE-LAB-12466-1]</td>
</tr>
<tr>
<td>An aerelastic analysis of the Sheriff wing</td>
<td>p0354 80-22359</td>
</tr>
<tr>
<td>Capture of an axisymmetric free jet in a pipe with application to power-augmented-ramp wing theory</td>
<td>[PU-234] p0361 80-22374</td>
</tr>
<tr>
<td>Development of the Learjet 28/29 wing using FASTFAN analysis</td>
<td>p0415 80-24276</td>
</tr>
<tr>
<td>Transonic wing field analysis for wing-fuselage configurations</td>
<td>[NASA-TR-75752] p0427 80-24650</td>
</tr>
<tr>
<td>Works on theory of flapping wing --- considering boundary layer</td>
<td>[NASA-TR-75750] p0431 80-25295</td>
</tr>
<tr>
<td>Boundary layer measurements on a two-dimensional wing with flap and a comparison with calculations</td>
<td>p0478 80-26275</td>
</tr>
</tbody>
</table>
Subject Index

Alleviation of the side force and the yawing moment acting on a slender cone-cylinder body at high angles of attack, using small jet injection at subsonic and transonic speeds
[AD-A080317] p0019 N80-10046

Roll control of a attitude-controlled aerodynamic vehicle which has strong roll-yaw coupling
[AM-AF-79-1540] p0422 N80-28330

Yawing Moments

Description of a new high-alpha, high-load, pitch-attitude dynamic stability test mechanism at ARDC
[AI A 60-0651] p0303 N80-21289

Note on the yawing moment due to side slip for swept-back wings
[ESDO-79006] p0322 N80-33280

Wing-body yawing moment and sideforce derivatives due to side slip: u, v and u
[AD-A080317] p0019 N80-10046

Yaw Moment

Application of Nd:YAG optical communications technology for aircraft to satellite links
[SA-PAPER 800725] p0576 N80-49681

On modeling sensitivity of a linear system to reduction of its order by the infinitesimal transformation method in the yaw motion control problem
[AD-A080317] p0352 N80-22360

Z

Zinc Nickel Batteries
[AD-A080317] p0032 N80-10344

Zirconium compounds

By Zirconium Oxides

Analysis of the response of a thermal barrier coating to sodium and vanadium doped combustion gases
[AM-AF-79-1540] p0422 N80-28330
<table>
<thead>
<tr>
<th>Personal Author</th>
<th>Title</th>
<th>Report Number</th>
<th>Page Number</th>
<th>NASA Accession Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABBASON, R. J.</td>
<td>The FAA satellite airport program</td>
<td>p0576 A80-49705</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBINNE, F. J.</td>
<td>Calibration evaluation with a computer-controlled avionics-data acquisition system</td>
<td>p0430 N80-25287</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, A.</td>
<td>The monopropellant isopropyl nitrate - its characteristics and uses, and possible future applications</td>
<td>p0402 A80-39008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, G. W.</td>
<td>A study to develop optimization algorithms for aircraft wing structures</td>
<td>p0027 N80-10196</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, I. H.</td>
<td>Airfoils - Significance and early development</td>
<td>p0275 A80-31003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, J. H.</td>
<td>Vertical Takeoff and Landing (VTOL) propulsion technology</td>
<td>p0629 N80-10218</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, T. S.</td>
<td>Early flight test experience with Cockpit Displayed Traffic Information (CDTI)</td>
<td>p0224 N80-18037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, W.</td>
<td>Flight investigation of cockpit-displayed traffic information utilizing coded symbology in an advanced operational environment</td>
<td>p0496 N80-27360</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, W.</td>
<td>Analysis of rotating stall in vaneless diffusers of centrifugal compressors</td>
<td>p0465 A80-42286</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, W.</td>
<td>Computer calculation of stationary temperature fields in air-cooled turbine rotor blades</td>
<td>p0003 A80-10612</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, W.</td>
<td>A direct method for synthesizing low-order optimal feedback control laws with application to flutter suppression</td>
<td>p0510 A80-45903</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, W.</td>
<td>Application of two design methods for active flutter suppression and wind-tunnel test results</td>
<td>p0357 N80-22737</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, W.</td>
<td>A simulator study of control and display augmentations for helicopters</td>
<td>p0521 A80-46136</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, W.</td>
<td>An Integrated Sensory Subsystem (ISS) for advanced VTOL aircraft</td>
<td>p0285 A80-32471</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABBOTT, W.</td>
<td>Processing and analysis of the data from a two-spool gas turbine engine</td>
<td>p0343 A80-36149</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAM, R.</td>
<td>Air transportation 2000 - A challenge for new technology</td>
<td>p0059 A80-16395</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, A. L.</td>
<td>A feasibility study of a 3-D finite element solution scheme for aerodynamic duct acoustics</td>
<td>p0320 A80-32899</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, A. L.</td>
<td>Designing of the test units for aircraft engines</td>
<td>p0156 A80-23069</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>An Integrated Sensory Subsystem (ISS) for advanced VTOL aircraft</td>
<td>p0058 A80-13032</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Vertical Takeoff and Landing (VTOL) propulsion technology</td>
<td>p0655 N80-34216</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Air components - Significance and early development</td>
<td>p0027 N80-10196</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Vertical Takeoff and Landing (VTOL) propulsion technology</td>
<td>p0629 N80-10218</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Early flight test experience with Cockpit Displayed Traffic Information (CDTI)</td>
<td>p0224 N80-18037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Flight investigation of cockpit-displayed traffic information utilizing coded symbology in an advanced operational environment</td>
<td>p0496 N80-27360</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Analysis of rotating stall in vaneless diffusers of centrifugal compressors</td>
<td>p0465 A80-42286</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Computer calculation of stationary temperature fields in air-cooled turbine rotor blades</td>
<td>p0003 A80-10612</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>A direct method for synthesizing low-order optimal feedback control laws with application to flutter suppression</td>
<td>p0510 A80-45903</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Application of two design methods for active flutter suppression and wind-tunnel test results</td>
<td>p0357 N80-22737</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>A simulator study of control and display augmentations for helicopters</td>
<td>p0521 A80-46136</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>An Integrated Sensory Subsystem (ISS) for advanced VTOL aircraft</td>
<td>p0285 A80-32471</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Processing and analysis of the data from a two-spool gas turbine engine</td>
<td>p0343 A80-36149</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Air components - Significance and early development</td>
<td>p0027 N80-10196</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Vertical Takeoff and Landing (VTOL) propulsion technology</td>
<td>p0629 N80-10218</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Early flight test experience with Cockpit Displayed Traffic Information (CDTI)</td>
<td>p0224 N80-18037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Flight investigation of cockpit-displayed traffic information utilizing coded symbology in an advanced operational environment</td>
<td>p0496 N80-27360</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Analysis of rotating stall in vaneless diffusers of centrifugal compressors</td>
<td>p0465 A80-42286</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Computer calculation of stationary temperature fields in air-cooled turbine rotor blades</td>
<td>p0003 A80-10612</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>A direct method for synthesizing low-order optimal feedback control laws with application to flutter suppression</td>
<td>p0510 A80-45903</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABRAHAMS, C. E.</td>
<td>Application of two design methods for active flutter suppression and wind-tunnel test results</td>
<td>p0357 N80-22737</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ADARSON, T. C., JR.
Analysis of two-dimensional interactions between shock waves and boundary layers p0100 A80-21232

ADCOCK, C.
Application of advanced technologies to small, short-haul air transports [NASA-CH-152364] p0066 880-33396

ADCOCK, J. B.
Full scale aircraft simulation with cryogenic tunnels and status of the National Transonic Facility p0131 880-24090
A theoretical analysis of simulated transonic boundary layers in cryogenic-nitrogen wind tunnels [NASA-TP-1631] p0245 880-19131

ADDELL, B.
Design for the future p0046 A80-40976

ADDIS, L.
Feasibility study for integrated flight trajectory control fighter [AD-A088766] p0051 880-30310

ADILIAN, E. H.
Preliminary design procedure for insulated structures subjected to transient heating [NASA-TP-1539] p0074 880-12438
Application of fully stressed design procedures to redundant and non-isotropic structures [NASA-TP-81192] p0958 880-29767

ADILOV, R. Y.
Organization of automatic control systems for technological processes in aircraft mechanical engineering p0001 880-10123

ADKINS, E. D.
CI-600 challenger p0590 880-31317

ADKINS, F. D.
CI-600 Challenger p0208 880-27387

ADKINS, R. C.
The hybrid diffuser [ASNE PAPER 80-GT-136] p0462 880-42269

ADLER, S. A.
Status of centrifugal impeller internal aerodynamics. I - Inviscid flow prediction methods II - Experiments and influence of viscosity p0511 880-45667

AFARASE, A. Y.
Aircraft torque rotors p0099 880-19199

AFFENIS, W. A.
Charging of jet fuel on polyurethane foams p0159 880-23263

AGABEESHA, S. G.
Pneumatic components of regulators p0279 880-32175

AGABEETS, P. A.
Automation of air navigation and air traffic control p0467 880-43107

AGABEET, S. A.
Some cases of instability of a gyroboreon compass p0008 880-11221

AGARAL, E. H.
Viscous flowfields induced by two- and three-dimensional lift jets in ground effect [AD-A070782] p0229 880-18363

AGARWALA, V. S.
Aircraft carrier exposure tests of aluminum alloys [AD-A081060] p0368 880-23433

AGELIKA, E. R.
Basic problem of gas turbine engine analytic design, part 1 p0018 880-10042
Optimal thermodynamic design of gas turbine engines using element prototypes, 1 p0033 880-11007

AGHEN, J.
NCI/II design philosophy for fighter aircraft departure and nose resistance [SAGE PAPER 791081] p0194 880-26637

AGHEN, J. W.
The linear and nonlinear aerodynamics of three-surface aircraft concepts [AIAA 80-1581] p0516 880-45878
Correlation of F-15 flight and wind tunnel test control effectiveness p0026 880-15152

AGHERAII, R. P.
Reactance-controlled short-backfire array p0263 880-29443

AGHEL, J.
The simulation and modeling of jet plumes in wind tunnel facilities [AIAA 80-0430] p0199 880-26941

AHRENS, H. M.
On supersonic flow with attached shock waves over delta wings p0012 880-12598

AHRENS, H. E.
Aircraft noise annoyance contours - Importance of overflight frequency and noise level p0043 880-40731

AHTER, N. V.
Noise generation by a lifting wing/flip combination at Reynolds numbers to 2.8 x 10 to the 6th [AIAA PAPER 80-0035] p0156 880-22729
A measurement of forward-flight effects on the noise from a JT15D-1 turbofan engine in the NASA-Ames 80- by 80-Foot Wind Tunnel [AIAA PAPER 80-1026] p0393 880-38641
Evaluation of approximate methods for the prediction of noise shielding by airframe components [NASA-TP-1004] p0137 880-15129

AHUSA, K. E.
Characteristics of internal- and jet-noise radiation from a multi-lobe, multi-tube suppressor nozzle tested statically and under flight simulation [AIAA PAPER 80-1027] p0393 880-38642
Studies of the acoustic transmission characteristics of coaxial nozzles with inverted velocity profiles, volume 1 [NASA-CH-159698] p0045 880-11870

AIKIDO, H.

AIKIM, E. W.
A mathematical representation of an advanced helicopter for piloted simulator investigations of control system and display variations [NASA-TP-81203] p0536 880-28371
Results of a simulator investigation of control system and display variations for an attack helicopter mission [AD-A085812] p0554 880-29370

AILMANN, C. M.
Turbulent-boundary-layer-excitation and response thereto for a high-performance conical vehicle p0228 880-18229

AKAY, H. O.
Investigation of transonic flow is a cascade using an adaptive mesh [AIAA PAPER 80-1630] p0452 880-41617

AKHDEHIANOV, A. H.
Generalized approach to aircraft gas turbine engine equivalent test regime determination p0564 880-47413

AKHDEHIANOV, A. E.
Parametric method of aircraft engine status diagnostics based on limited information p0017 880-10003

AKTIUNOV, S. V.
Some characteristics of the operation of T3E with reverser during airplane landing p0616 880-51890

AKITA, H. M.
Shipboard antenna tests for GPS p0190 880-25444

AKKINCHAN, J. W.
Hydrazine monopropellant reciprocating engine development [ASNE PAPER 78-WA/AEB-012] p0524 880-46588

AKRUSEK, N. V.
Concerning the separated flow about an inflating parachute [RAE-TRANS-2031] p0628 880-32336

AKSRDOB, S. R.
Account for working fluid compressibility in the gas turbine engine transient operating regime p0616 880-51892
Continued study of NASSTAR/GPS for general aviation

Light airplane crash tests at three pitch angles

Active control of rotor blade pitch for vibration reduction - A wind tunnel demonstration

A design and test of a prototype scale ejector wing

Design and test of a prototype scale ejector wing

High integrity fiber optic data transmission

Comparative resistance of Beta-513N4 solid solutions to molten silicon attack

A hingeless rotor XV-15 design integration feasibility study. Volume 1: Engineering design studies

Protective coatings for aircraft composites in nuclear environments

Development of a fire test facility for graphite fiber-reinforced composites

Wind tunnel investigation of an oblique wing transport model at mach numbers between 0.5 and 1.4

Light airplane crash tests at three roll angles

Light airplane crash tests at three pitch angles

Slovak factors in aircraft accidents

Motor-bearing dynamics technology design guide. Part 5: Dynamic analysis of incompressible fluid bearings

Airflow measurements in a large irregularly shaped tunnel using anemometer and pitot-static tube traverses
ANDREUS, F. P.
The graphical display of multi-dimensional aerodynamic flow field data
[AD-A080359] p0301 A80-21280

ANBULIYAN, A. V.
Experimental investigation of the strength of rotor materials in the presence of surface cracks
[PS003 A80-10482]
Experimental investigation of the strength of rotor materials with surface cracks
[PS027 A80-32040]

ANDERSSON, B.
Noise of a model helicopter rotor due to ingestion of turbulence
[HASA-CH-3213] p0036 B80-11057

ANDREWS, G. M.
Analytical determination of the influence of elasticity and mass distribution on the aerodynamic characteristics of an aircraft in quasi-steady motion
[PS020 A80-27132]

ANGDROP, F. A.
Opportunities analysis of potential advanced vortex systems separation standards
[AD-A081479] p0361 B80-23281
Procedural feasibility of reduced spacing under WVSS operation with applications to Atlanta and other [AD-A081480] p0362 B80-23287

ANDERLE, R. J.
The Global Positioning System
[PS010 A80-20992]

ANDERSON, W. C.
JT9D-7A /SP/ jet engine performance deterioration trends
[PS0507 A80-44230]
JT9D-7A (SP) jet engine performance deterioration trends
[HASA-TH-81459] p0293 B80-20274

ANDERSON, B.
Influence of pressure driven forced flows on the behavior of turbofan forced mixers
[AAIA PAPER 80-1198] p0451 A80-41515

ANDERSON, B.
Numerical simulation of supersonic inlets using a three-dimensional viscous flow analysis
[AAIA PAPER 80-0384] p0108 A80-20969
Computational fluid mechanics of internal flow
[PS029 A80-10211]
Computation of three-dimensional flow in turbofan mixers and comparison with experimental data
[HASA-TH-81410] p0148 B80-15360

ANDERSON, C. R.
Aircraft wingtip coupling experiments
[PS0595 B80-31319]

ANDERSON, C. P.
Aerodynamic characteristics and store loads of the 1/4-scale F-111 aircraft model with several external store loadings
[AD-A078677] p0286 B80-20235

ANDERSON, J. C.
The Discrete Address Beacon System data link
[PS0282 A80-32435]

ANDERSON, J. D., JR.
The effects of leading edge modifications on the post-stall characteristics of wings
[AAIA PAPER 80-0119] p0097 B80-18375

ANDERSON, J. L.
Estimating aircraft true airspeed using temperatures from two different probes
[PS0558 A80-15125]
Application of parametric weight and cost estimating relationships to future transport aircraft
[SAWE PAPER 1292] p0105 A80-20637

ANDERSON, J. E.
3-1A 3DO evaluation program
[AD-A081725] p0370 B80-23536

ANDERSON, J. E.
Evaluation of a high performance fixed-ratio tractor drive
[HASA-TH-81425] p0230 B80-18404

ANDERSON, G. E.
Evaluation of an analysis for axisymmetric internal flows in turbomachinery ducts
[PS02711 A80-27742]

ANDERSON, W. J.
Mechanical components
[PS029 A80-10213]
The capabilities and operational roles of Boysal
Propulsion characteristics of flapping wings
Parametric study of modern airship productivity
One basic aerodynamic research work on helicopters
Fatigue strength testing employed for evaluation
Analysis of fault isolation criteria/techniques
Determination of the loading capacity of wave
Jet engine demountable test cell exhaust system phase.
Determination of the noise emitted by a profile in
Structure and service life verification for the
Aerodynamic Computation
Results for dispersed solar electric power systems
Tornado/landing trajectory system /
Investigation of the thermal state of
Advanced structures - Meeting the challenge of
Modeling of the noise emitted by a profile in
Analysis of fault isolation criteria/techniques
Coanda/refraction noise suppression
design considerations for attaining 250-knot test
The 'Hartello' 3D radar antenna
Optimization of turbine nozzle cooling by
PERSONAL AUTHOR INDEX

[BAHATTI, H. B.]
Combining impingement and film injection
[AIAA PAPER 80-0299]
p0101 A80-19316

[BAHATTI, H. B.]
A methodology for long range prediction of air
transportation
[SAE PAPER 800-768]
p0077 A80-49712

[BAHATTI, J. A.]
A dynamic model of the air transport industry
[AIAA PAPER 80-2760]
p0488 A80-27301

[BAHATTI, J. A.]
A methodology for long-range prediction of air
transportation
[AIAA PAPER 80-39305]
p0547 A80-29305

[BAGHEL, J. H.]
The analysis of measured surface loads as a basis for
the derivation of acceptable load limits for
military aircraft components
[ASCE-PM-WH-79-9]
p0175 A80-17038

[AUBERT, A.]
Rotational noise of helicopter rotors
p0089 A80-17718

[BADGELOCK, C. D.]
Leading edge flutter of supercavitating hydrofoils
[AD-1073502]
p0073 A80-12236

[BADGER, T. C.]
Barn/blast tests of miscellaneous graphite
composite parts
[NASA-CR-163310]
p0042 A80-28371

[BADDESHI, A. I.]
Determination of requirements placed on airframe
components from a dimensional analysis of the
standard design relations
p0563 A80-47387

Influence of fitting jobs on the quality and price
cost of aircraft assembly
p0563 A80-47388

[BACH, R. E., JR.]
Aircraft motion analysis using limited flight and
data radar
p0206 A80-27281

A variational technique for smoothing flight-test
and accident data
[NASA 80-2501]
p0518 A80-25649

Equations for determining aircraft motions for
accident data
[NASA-TM-76009]
p0432 A80-25306

[BADEN, R. H.]
Application of fracture mechanics to USAP aircraft
structural integrity requirements
[AIAA PAPER MT 79-25]

Designing light airplanes
p0378 A80-36660

Influence of S-shaped air intake inlet section
efficiency on outlet flow uniformity
p0376 A80-36778

[BADER, H.]
Conditions of airship utilization in forests
p0406 A80-39314

[BAIER, C. P.]
Preliminary studies of a turbofan engine and fuel
system for use with liquid hydrogen
General aviation propulsion for the nineties
[AIAA PAPER 79-1158]

p0391 A80-38366

[BABY, V. K.]
A pulsed radiography technique for studying the
internal structure of fuel injection jets
p0327 A80-36588

An experimental study of multiple jet mixing
[NASA-CR-161537]
p0610 A80-31760

[BAGLEY, J. A.]
Computer modeling of terrain effects on Instrument
Landing Systems (ILS) glide slope systems
[AD-1070228]
p0290 A80-20252

[BAGLIT, J. A.]
Jet interference on supercritical wings. Part 1:
Experiments on a two-dimensional wing. Part 2:
Experiments on a swept wing
[ARC-EM-3845]
p0660 A80-31365

[BABE, D. W.]
Fuel property effects on life characteristics of
aircraft turbine engine combustors
[AIAA PAPER 80-42186]
p0458 A80-42186

Quiet Clean Short-haul Experimental Engine
(QCSE). Double-oval clean combustor technology
development report

[HASA-CR-159483]
p0136 A80-15121

Evaluation of fuel character effects on JT9 engine
combustion system
[AD-10708840]
p0243 A80-19119

Evaluation of fuel character effects on the T701
engine combustion system
[AD-10709160]
p0296 A80-20405

Energy efficient engine
[NASA-CR-159685]
p0648 A80-33000

Determination of pollutant emissions characteristics of General Electric CF6-6 and
CF6-50 model engines
[AD-0809277]
p0648 A80-33412

[BABAIKOV, V. B.]
Aerodynamics and dynamics of aircraft flight
p0271 A80-30366

[BALLEY, D. B.]
Maritime Patrol Airship Study /MPS/:
Naval Airship Program for Sizing and Performance
[AIAA PAPER 80-0017]
p0373 A80-36320

A comparison of computer architectures for the
NASA demonstration advanced avionics system
p0201 A80-32427

Use of advanced computers for aerodynamic flow
simulation
p0299 A80-21257

[BALIEB, P. G.]
Low cost processes for manufacturing of Oxide
Dispersion Strengthened (ODS) turbine nozzle
components
[AD-1088019]
p0636 A80-32399

Aerodynamic interactions from reaction controls for
lateral control of the M2-P2 lifting-body entry configuration at transonic and supersonic Mach numbers
[NASA-TM-78538]
p0035 A80-11033

[BAILEY, S.]
Standard avionics packaging, mounting, and cooling
design baseline study
p0420 A80-24312

[BAKAYA, B.]
Active feedback control for stabilization of vibration in rotating machinery (24.034)
[DOE/ET-13151/T5]
p0639 A80-32725

[BAKER, A. J.]
Prediction and assessment of turbulent
earodynamic trailing edge flows
[AIAA PAPER 80-1395]
p0452 A80-41599

The CADAM system - The designers' new tool
p0374 A80-36548

[BARNET, C. B.]
Economics of hydrogen production and liquefaction
updated to 1980
[NASA-CR-159163]
p0043 A80-11238

[BARKH, D.]
An overview of the Sperry flight management
computer system for the Boeing 757/767 airplanes
p0282 A80-32536

[BARKH, D. J.]
Progress report 3 of cooperative program for
design, fabrication, and testing of high modulus
composite helicopter shafting
[NASA-TM-82727]
p0602 A80-31387

[BARKH, H. B.]
Man-in-the-loop simulation system
p0578 A80-49829

New concept study for repair of bomb-damaged
runways. Volume 1: Concept identification
[AD-1088168]
p0637 A80-32407

[BARKH, P. A.]
V/STOLABD avionics system flight-test data on a
HH-16 helicopter
[NASA-TM-78591]
p0225 A80-18047

[BARKH, G. J.]
Air speed and attitude probe
[NASA-CASE-PIC-11009-1]
p0223 A80-18036

[BARKH, G. R.]
A test of the method of Pink and Soh for following
vortex-sheet motion
p0620 A80-52719

D-6
Effect of propeller slipstream on the drag and...
BABTOS, J. L.

BARTH, H.

BASHEB, S. J.

BATEHAB, L. F.

BATET, I. B.

BAOBBICK, B. O.  

BAOB. B. K.

BAOBFEIBD, R.

BATILL, S. H.

BAOB. B. K.

BAOB. B. K.

BAOB. B. K.

BAOB. B. K.

BAOBB, A. B.

BAOB. B. K.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

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BAOBB, A. B.

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BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

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BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.

BAOBB, A. B.
Parametric study of helicopter aircraft systems costs and weights
[NASA-CR-152315] p0347 A80-22305
BENTLEY, R. J.
Computer simulation of canopy-pilot response to bird-strike
[AD-A005122] p0304 A80-21296
BENNETT, J.
Helicopter/BSA/ in-flight escape system - Component qualification
p0160 A80-23460
BENNETT, L. J.
Emergency in-flight egress opening for general aviation aircraft
[NASA-TM-800253] p0303 A80-21293
BENNETT, L. J.
Emergency in-flight egress opening for general aviation aircraft
p0369 A80-23511
BENNETT, H.
Flow induced spring coefficients of labyrinth seals for application in rotor dynamics
BENDER, W.
The secondary power system control unit, and electronic subassembly in the PANAVIA TORNADO
p0481 N80-26309
BENDIKER, O. G.
Coupled bending-torsion flutter in cascade with applications to fan and compressor blades
p0498 N80-27396
BENDO, J.
CH-46 composite rotor blade flight test survey data. Volume 3: Plotted forward rotor blade chord, torsion and absolute loads
[AD-A075612] p0130 A80-15077
BENNETT, G.
The reconstruction of flight paths from AIDS-data with the aid of modern filtering methods
p0430 N80-25288
BENNETT, J. A.
Separated and nonseparated turbulently flows about axisymmetric nozzle afterbodies. Part 1: Detailed surface measurements
[AD-A077184] p0175 A80-17032
BENNETT, G.
Evaluations of the performance of a deflector for an SSR monopulse system
p0395 A80-30830
BENNETT, G.
Statistical correlation models of SSR monopulse responses received during aircraft illumination
p0396 A80-38857
BENSUS, G. J.
Some applications of the methods of failure mechanism in analyzing the strength and service life of aircraft structures
p0528 A80-47355
BENZ, P.
An air traffic channel simulation by means of ray-tracing techniques
p0117 A80-14088
BENJAMIN, J.
Unmanned aircraft systems research in the UK
p0265 A80-29654
BENNETT, R.
Theoretical investigations of the release and trajectories of aircraft stores
p0455 A80-41902
BENNETT, A. G.
A study of stall deterrent systems for general aviation aircraft
[AAIA 80-1562] p0514 A80-65861
BENNETT, H. E.
Serious Vics the P-4 has flown
[AAIA 80-3082] p0276 A80-31010
BENNETT, P.
Technological trends in electronic warfare
p0097 A80-11172
BENNETT, R. W.
The development of the composite material engine nacelle
[AAIA PAPER 79-093] p0455 A80-41902
BENNETT, J.
A study of stall deterrent systems for general aviation aircraft
[AAIA 80-1562] p0514 A80-65861
BENNETT, P.
Technological trends in electronic warfare
p0097 A80-11172
BENNETT, H. W.
The development of the composite material engine nacelle
[AAIA PAPER 79-093] p0455 A80-41902
BENZ, R.
Jet transport performance in thunderstorm wind shear conditions
BENSON, H. M.
Inertially augmented approach couplers
[AD-A080488] p0290 N80-20248
BENNETT, H. E.
Spin profile tailoring for the improved 2.75-inch rocket
[AAIA 80-1575] p0516 A80-45870
BENTLEY, D. E.
The parameters and measurements of the destabilizing actions of rotating machines, and the assumptions of the 1950's
p0557 A80-29712
BENNETT, R. K.
Conically cambered delta wings in supersonic flow. I - Basic solutions
p0285 A80-32536
BENNETT, S. G.
Conically cambered delta wings in supersonic flow. II - Optical solutions
p0286 A80-32531
BENNETT, S. G.
Lightweight diesel aircraft engines for general aviation
p0352 N80-22330
BENNETT, G. P.
Combustion and operating characteristics of spark-ignition engines
p0003 A80-10607
BERGNER, D. H.
Spin profile tailoring for the improved 2.75-inch rocket
[AAIA 80-1575] p0516 A80-45874
BERGNER, R.
Avionics master plan data base, mechanization architecture
[AD-A071545] p0040 B80-11083
BERGNER, H. P.
Single pilot IFB autopilot complexity/benefit tradeoff study
[AAIA PAPER 80-1869] p0514 A80-45748
BERGNER, H. P.
Analysis of general aviation single-pilot IFB accident data obtained from the NASA aviation safety reporting system
BERGNER, H.
Series SS welding of high-loaded titanium structures
p0061 A80-16963
BERGLUND, K.
Aircraft noise annoyance contours - Importance of overflight frequency and noise level
p0443 A80-40731
BERGSHAN, R. W.
Spin profile tailoring for the improved 2.75-inch rocket
[AAIA 80-1575] p0516 A80-45874
BERGSHAN, R. W.
New concept study for repair of bomb-damaged runways. Volume 1: Concept identification
[AD-A088188] p0637 N80-32907
BERGSHAN, R. W.
New materials and methods for airframe construction
p0217 A80-28695
BERGSHAN, R. Y.
Experimental and computational study of transonic flow about swept wings
[AAIA PAPER 80-0005] p0091 A80-18235
BERGSTRA, R. R.
Calculation techniques for inviscid two-dimensional supersonic airflow
[AD-A085527] p0542 N80-29257
BERGOLCE, P. D.
Liquid metal slip ring
BERKOVESY, B. S.
Analytical complexes and the analysis of the dynamics of objects
p0617 A80-51990
BERKOWITZ, R.
Multifluid rotary aircraft engine
[AAIA PAPER 80-1237] p0400 A80-38982
BERNHARD, C. H.
Some analytical consideration in jet noise prediction
p0161 A80-23910
BERNHARD, C. A.
Capture of an axisymmetric free jet in a pipe with...
BERRUDA, J. E.

Application to power-augmented-ram wing theory
[AD-A082831]
p0615 880-24276

BERRUDA, J. E.

Effects of criteria on flight simulation study. I: Head-on deviation tolerance
[AD-A0878908]
p0650 880-33423

BEEBE, B. L.

Thrust-augmented spin recovery device
[SASA-CASE-619-11970-2]
p0225 880-18048

Investigation of axisymmetric and nonaxisymmetric nozzles installed on a 0.10 scale F-10 prototype airplane model
[SASA-TP-1638]
p0414 880-28427

BERRY, D. W.

A summary of an in-flight evaluation of control system time delays during landing using the F-100B airplane
[AIAS 80-1626]
p0520 880-45914

BERRY, P. W.

Vibration of high-angle-of-attack analysis methods
[AD-A087621]
p0060 880-31411

BERRY, T. F.

An evaluation of aircraft separation assurance concepts using airline flight simulators. Volume 1: Study report
[AD-A083966]
p0889 880-27310

An evaluation of aircraft separation assurance concepts using airline flight simulators. Volume 2: Appendices
[AD-A083977]
p0480 880-27311

BERRY, V. L.

Investigation of the crash-impact characteristics of advanced airplane structures
[AD-A075163]
p0179 880-17067

BERSCHE, C. F.

Ceramics in rolling element bearings
p0553 880-29351

BEYELDOR, A.

Experimental and computational study of transonic flow about swept wings
[AIAS PAPER 80-0005]
p0091 880-18235

Local skin friction and static pressure on a swept wing in flight
[AIAS 80-0043]
p0179 880-26937

Measurements on a three-dimensional swept wing at low speeds. Part 1: The flow around the leading edge
[FPA-130-PY-1]
p0036 880-11044

Measurements on a three-dimensional swept wing at low speeds. Part 2: The flow in the boundary layer on the main wing
[FPA-131-PY-2]
p0036 880-11045

A survey of the literature on surface roughness effects on the drag of subsonic aircraft
[FPA-AU-1224]
p0036 880-11049

Measurement of local skin friction and static pressure on a swept wing in flight
[FPA-AU-1370]
p0347 880-22202

A practical method for predicting roughness effects on aircraft
[FPA-AU-1413]
p0349 880-22316

Roughness effects on fuel consumption for two commercial aircraft: McDonnell Douglas DC-9 and DC-10
[FPA-AU-1456]
p0350 880-22320

BETZ, E. R.

An air traffic channel simulation by means of ray-tracing techniques
p0117 880-14088

BETZ, E. S.

Impact damage on titanium leading edges from small hard objects
p0618 880-52297

Impact damage on titanium leading edges from small soft body objects
[AD-A087205]
p0071 880-12095

BETTOLAER, P.

An automated conflict-alert function for an air traffic control system
p0621 880-52995

Tactical analysis of conflicts in an air traffic control system: Design and implementation of a provisional model
p0116 880-14072

BETTON, P.

OHEA ramjet test facilities
p0621 880-52915

BETTON, C.

A study for development of methods for air traffic management
p0491 880-27327

BESCH, P. K.

Accuracy of hydrofoil loading predictions obtained from a lift-surface computer program
[AD-A074702]
p0173 880-16233

BESSELING, H.

Gravitational investigation of the particle number density distribution function in the high speed cascade wind tunnel for laser-anemometry measurements
[DFVLR-FB-79-12]
p0356 880-22374

Experimental investigation of the particle-number concentration in the wind tunnel for use of the laser anemometry
[DFVLR-FB-79-28]
p0436 880-25352

BEST, J. T.

Aircraft store separation motion prediction via grid data trajectories
p0201 880-26959

BETZ, S.

Development trends of airport surface traffic control radar
p0117 880-14087

BETZ, D. S.

Propulsion characteristics of flapping wings
p0050 880-14015

BETZ, T. J.

Costs of graphite composite fabrication and repair
p0329 880-36810

BETZ, M. D.

Force and moment data from a wind-tunnel test of a tilt-nacelle V/STOL propulsion system with an attitude control vane
[SASA-TN-81517]
p0077 880-13003

BEYLAGA, P. M.

Design and test of a prototype scale ejector wing
p0024 880-10131

BEYLAGA, P. M.

Development of a nozzle to improve the turning of supersonic Coanda jets
p0016 880-31765

BEYER, H.

Radar resectoring
p0006 880-11164

BEYER, H. E.

The problem of wind tunnel flow nonuniformity in free-model aircraft dynamic stability
[CSIR-FIAT-79-60]
p0662 880-33352

BEYLSHOV, A. A.

Experimental study of fan-noise silencers of aircraft jet engines
p0326 880-34398

BEYLSHOV, V. I.

Effect of the relative area of the flow core on the performance of a hyperasonic wind tunnel
p0088 880-17673

BRENGLE, S. V.

Theoretical study of the thermodynamic parameters of the combustion products of solid gas-jet generator fuels
p0565 880-47425

BRENGU, J. L.

The development and application of improved combustor wall cooling techniques
[AIAS PAPER 80-07-66]
p0459 880-42196

BREVAT, H.

Radiation characteristics of printed slot antennas with a switchable parasitic slot
p0058 880-15869

BRETTE, P. E.

A unique coaxial plug nozzle jet noise prediction procedure
[AIAS PAPER 80-1007]
p0339 880-35968

BIANC, L.

A simulation model for aircraft sequencing in the near terminal area
p0512 880-14039

Automation of flight on-line strategic control: The case of speed control on pre-established routes
p0115 880-14070

Radial data utilization in automating the sequencing of aircrafts in terminal areas
p0716 880-14071

BIBER, B. H.

Lubrication of aircraft gas-turbine engines
p0006 880-11057
BICKHOL, S. H.  
A pulsed radiography technique for studying the internal structure of fuel injection jets  
p0327 A80-34588

BICKL, E. J.  
Error analysis of an algorithm for magnetic compensation of aircraft  
p0053 A80-19944

BICK, B. A.  
Pro tape measure to computer tape  
p0207 A80-27263

BIBB, B. J.  
Design and analysis of a stiffened composite fuselage panel  
[NASA-CR-159302] p0611 880-31820

BIBBY, B. L.  
Dependence and uncoordinated roll reversal boundaries for fighter configurations  
[AIAA 80-1566] p0515 A80-65865

BIBBY, W. J.  
The influence of wing, fuselage and tail design on rotational flow aerodynamics data obtained beyond maximum lift with general aviation configurations  
[AIAA 80-0457] p0200 A80-26955

BILKE, P. F.  
System for use in conducting wake investigation for a wing in flight  
[NASA-C5-E-PEC-11024-1] p0529 880-28300

BILL, R. C.  
Wear of seal materials used in aircraft propulsion systems  
p0213 A80-28010

Some considerations of the performance of two honeycomb gas path seal material systems  

Gas path seal  
[NASA-C5-E-12131-3] p0230 880-18400

Composite wall concept for high temperature turbine shrouds: Survey of low modulus strain isolator materials  

Composite seal for turbomachinery  
[NASA-C5-E-LNM-12131-2] p0485 880-26658

BILLIG, F. S.  
Analysis of mixing and combustion in a scramjet combustor with a co-axial fuel jet  
[APA PAPER 80-1256] p0499 880-81207

BILLINGS, C. W.  
Human factors in incident investigation  
p0625 A80-53566

BILLINGMAN, J. P.  
Aircraft store separation motion prediction via gold data trajectories  
[NASA 80-0462] p0201 A80-26959

BILK, B.  
Air traffic control/full beacon collision avoidance system, Knoxville simulation  
[AD-A076555] p0168 980-16093

BILDERBAUER, L. A.  
The application of reliability improvement warranty to dynamic systems  
[AD-A075820] p0230 880-18419

BILKES, L. H.  
Acoustic performance of a 50.8-cm (20-inch) diameter variable-pitch fan and inlet. Volume 2: Acoustic data  
[NASA-CR-135118] p0547 880-29299

BINDER, G.  
Supercritical wing design studies for transport aircraft. Volume 1: Wing design and wind tunnel measurements  
[DRF-TP-79-06-VOL-1] p0346 880-22275

BINGHAM, C. J.  
Aerodynamic characteristics of three helicopter rotor airflow sections at Reynolds number from model scale to full scale at Mach numbers from 0.35 to 0.90  
[NASA-TP-1701] p0626 880-32333

BINGHAM, D. A.  
A comparison of solid fuel ramjet flow characteristics and combustion behavior  
[AD-A085064] p0535 880-28359

BINGHAM, B. A.  
Performance of Omega H-field antennas recoated into airfoils  
[RAD-TS-79048] p0816 880-24290

BIRCH, S. F.  
Application of viscous analyses to the design of jet exhaust powered lift installations  

BIRB, W. L.  
Detailed design, fabrication and testing of an engineering prototype compensated pulsed alternator  
[NCHL-15213] p0556 880-29595

BIBBE, W. J.  
Influence of pitching moment characteristics on departure and uncoordinated roll reversal boundaries for fighter configurations  
[AD-A082335] p0922 880-24328

BIRKEL, V. J.  
Minimum-weight wing in the presence of lift constraints  
p0203 A80-27136

BIRK, W. L.  
Simulated Mission Endurance Test (SMET) for an aircraft engine to be used in a fighter/attack role  
[AD-A071907] p0040 880-11089

BIRCH, R. P.  
Future VTOL airplanes: Guidelines and techniques for acquisition program analysis and evaluation, executive summary  
[AD-A081925] p0410 880-24301

BIRK, R. E.  
Effect of background levels on community responses to aircraft noise  
p0514 880-45945

BISGOOD, F. L.  
Wind shear encounters during visual approaches at night. A piloted simulator study  
[SAR-TP-79126] p0417 880-24291

BISHOP, R. M.  
Study of lateral excess sound attenuation as determined from far field 36 aircraft noise certification measurements  
[AD-A882285] p0639 880-33183

BITES, C. J.  
Estimating aircraft true airspeed using temperatures from two different probes  
p0054 880-15125

BITTSER, R. J.  
Soot formation and burnout in flames  
p0549 880-29320

BITTREICH, W. C.  
Study for conceptual design of Y20, VTOL exhaust nozzle  
[NASA-CR-152388] p0646 880-33397

BJÖRKE, M.  
Aircraft noise annoyance contours - Importance of the overflight frequency and noise level  
p0492 A80-40731

BLACK, G. T.  
Flying qualities design requirements for sidestick controllers  
[AD-A085085] p0537 880-28375

BLACK, R. L.  
Wind tunnel investigation of an oblique wing transport model at Mach numbers between 0.6 and 1.4  
[NASA-CR-137697] p0068 880-12059

BLACK, W. E.  
High modulus/high strength organic fibers  
p0521 A80-46009

BLACKEBY, W. T.  
Aerodynamic investigation of C-141 leading edge modification for cruise drag reduction, volume 1  
[AD-A076610] p0170 880-17063

Aerodynamic investigation of C-141 leading edge modification for cruise drag reduction, volume 2  
[AD-A077688] p0236 880-19081
BOHRINGER, R. E.
High efficiency hydraulic power transfer units for multisection aircraft
p0619 A80-52558

BOHRANS, L. R. N.
Soaring flight optimization theory and an application in multiplane design
p0063 A80-17338

BOGACHENKO, A. S.
Optimal evaluation of angular coordinates of aircraft in multichannel radio direction finding
p0524 A80-66539

BOGAN, T. J.
Unsteady transonic flows in a two-dimensional diffuser
p0636 B80-32400

BOHATAKO, V. I.
Hyposonic flow of gas over a slender wing of variable shape
p0277 A80-31388

BOGGS, R. C.
The history of static test and Air Force structures testing
p0248 B80-19136

BOGUR, A. H.
Analysis of trunk flutter in an air cushion landing system
p0237 B80-19075

BOGOBOLOV, A. I.
Solution of a problem of analytical design
p0262 A80-29221

BOGOBOLOV, E. N.
On calculating gas turbine efficiency reduction under the influence of air cooling
p0564 A80-47415

BOGOBOLOV, S. B.
Experimental study of fan-noise silencers of aircraft turbojet engines
p0326 A80-34398

BOE, J. C.
Experimental study of the aerodynamics of a helicopter rotor blade model in an unsteady flow regime during wind tunnel tests
p0175 B80-17036

BORN, A. J.
Upper surface blowing noise of the NASA-Ames quiet short-haul research aircraft
p0341 A80-36602

BORN, J. C.
Analysis of T-3C high angle of attack flight test data with nonlinear system identification methodology
p0589 B80-30298

BORN, E. P.
Aerodynamics of the new generation of combat aircraft with delta wings
p0348 B80-22306

BOIR, A.
Calculation of axisymmetrical flows in the flow section of turbomachines in solving the problem of optimization of stages
p0268 A80-29988

BOILES, J. E.
All-Equipment Production Reliability Tests /ARPT/ for the F-15
p0163 A80-23962

BOINZ, R. N.
Flight evaluation of non-dimensional static longitudinal stability test methods
p0422 B80-24329

BOSTROM, T. W.
A review of nondestructive inspection reliability on aircraft structure
p0387 A80-37203

BOKS, V. D.
Approximate method of determining the wave drag of a profile in the presence of a local supersonic region
p0151 A80-21319

BOLAND, J. S., III
Design and simulation of a helicopter target hand-off computer
p0014 A80-12645

BOLDING, R. H.
F-16 flutter suppression system investigation
p0333 A80-35060

BOLY, T. D.
Analog aircraft weight and balance computer
p0104 A80-20631

BOLDOEK, V. N.
Shock absorption for rotating parts of mechanisms
p0395 A80-38670

BOLTON, R.
Recent and future engineering developments in flight training simulators
p0005 B80-10776

BOLY, K.
West Coast LOBRAN-C flight test
p0688 B80-27307

BONABO, J.
TIES - An integrated CHI system in hardware feasibility demonstration
p0283 A80-32551

BOISSART, R. J.
Kevlar reinforced plastic helicopter tail rotor assembly (pultruded spar)
[AD-A082352]
p0941 B80-24298

BOND, R. C.
ASTF Test Instrumentation System
p0263 A80-29486

BOKIVERTO, C.
A study for development of methods for air traffic management
p0091 B80-27327

BONNER, E.
Aerodynamic preliminary analysis system. Part I: Theory
[NASA-CR-145284]
p0076 B80-12999

BONNET, J.-E.
Laminar separation bubble with transition /theory and experiment/
[ONERA, TF NO. 1980-20]
p0204 A80-27203

BONN, J. H.
ADSEL: Selective address SSB, performance of the evaluation station
p0409 B80-27345

BOONE, D. H.
Overlay coatings for gas turbine airfoils
p0638 B80-25506

BOONE, J. O.
Air traffic control automation: Its impact and use in the selection and screening of air traffic controllers
p0691 B80-27329

BOOS, P.
Experimental results on axial flow compressor stages with high subsonic Mach numbers
p0260 A80-29097

BOPE, C. W.
Simulated transonic flows for aircraft with nacelles, pylons, and winglets
[AD-A310-0130]
p0162 A80-23933

BONN, E. P.
Tranonic flow field analysis for wing-fuselage configurations
[AD-A310-0130]
p0431 B80-25295

BORDONI, R.
Towards complete configurations using an embedded grid approach
[AD-A303-030]
p0541 B80-29249

BORGERSON, R.
Integrated rack concept study for Y/STOL type aircraft
[AD-A081864]
p0418 B80-24303

BOORON, J.
The variable-geometry wing
p0002 A80-10235

CHO, K. W.
Selective methods of determining the range of engine operation in aircraft crash investigations. I
p0320 A80-33106

BOSMA, J. A.
Selected methods for defining engine operating ranges in the investigation of aircraft accidents. II
p0336 A80-35184

BORDIS, R. A.
Improvement of control system dynamics of means of additional hydraulic load feedback
p0143 A80-21260

BOISNERICH, V. K.
Pressure in a liquid from a gas bubble generated by blasting a high-explosive in an inertially sealed parabolic chamber
p0564 B80-47407

BOSIYUH, V. N.
A study of the stress-strain state of shaped hollow blades for radial superchargers
p0326 A80-34351

BOSIYUH, V. N.
Application of spline approximations to the...
calculation of wall pressures in three-dimensional supersonic nozzles

BÖLLAND, C. J.
Numerical solution of three-dimensional unsteady transonic flow over swept wings
[ AIAA PAPER 80-1369] p0506 A80-04103

BOEN, G. J.
A simulator study of control and display augmentations for helicopters

BODEGGS, R. H.
Development of the Learjet 28/29 wing using EASTMAN analysis
Development and analysis of the learjet 54/55 fuselage EASTMAN model using substructure techniques
p0653 N80-33794

BODEMER, W. O.
Characteristics and operational conditions of aircraft turbojet engines
p0669 A80-13775

Basic problem of aircraft gas turbine engine
design analysis, part 1
p0034 N80-10042

Optimal thermodynamic design of gas turbine engines using element prototypes
p0034 N80-11007

BODENVERS, N.
Runway surface roughness
p0433 N80-25326

BODENVERS, E.
Have Bounce
p0594 N80-31311

BODIN, N.
Damping problems in acoustic fatigue
p0253 N80-19580

BOLES, P.
Trajectory behaviour of a control configured aircraft subjected to random disturbances
p0142 N80-15171

BOSKI, P. W.
Research plan for establishing the effects of time varying noise exposures on community annoyance and acceptability

BOSLEY, J. T.
Verification of digital autopilot microprocessor hardware and software via hard ware-in-the-loop simulation
p0107 A80-20501

BOSSI, J. A.
Estimation of wind shear and thrust loss during STOL aircraft landing approach
p0363 H80-23296

BOTTELY, D. P.
Propulsion and energetics panel working group 2 on aircraft fire safety. Volume 1: Executive summary
[ AGARD-AR-132-VOL-1] p0069 N80-12079

Propulsion and energetics panel Working Group 11 on aircraft fire safety. Volume 2: Main report

Integral aircraft fuel tank leak classification
p0634 N80-32388

BOTTELY, C.
The optimization of air-traffic control techniques and the problems of operational capacity
p0570 A80-08101

BOUDABAL, E.
Avisonics software and equipment
p0008 A80-11356

BOUDIGUES, S.
Technologies conceived for the utilization of ceramics in turboengines
[ ONERA TP NO. 1979-132] p0102 A80-20076

BOULAGE, H.
Glider accidents in France in the last ten years
p0056 A80-15628

BOULAY, J. L.
Suppression of electrostatic radioelectric interference on aircraft
p0315 N80-22234

BOUDIGUES, S.
Technologies for use of ceramics in turboengines
p0553 N80-29386

BOUDREAU, R. G.
Application of rapidly solidified alloys
p0485 N80-26431

BOULIL, R.
Evaluation of data technology applied to the integrated navigation system of a tactical transport
[ AD-8073068] p0037 N80-11061

BOUJLASW, W. G.
An experimental investigation of the effects of aeroelastic couplings on aeroelastic stability of a hingeless rotor helicopter
[ AD-8058919] p0546 N80-29294

BOUHOS, E.
Simulation for integration with dynamic tests of the logical elements of principal onboard computers
p0256 N80-19842

BOUWES, J. M.
Quiet Clean Short-haul Experimental Engine (QCSEE). Composite fan frame substructure test report

BOUNDE, J. W.
Stability survey of hydrocarbon fuels
[ BETC-B1778-4] p0296 N80-20247

BOWITSCHE, E.
Computational fluid mechanics of internal flow
p0029 N80-12011

BOUNDEY, F.
A Navier-Stokes scheme for the calculation of three-dimensional impinging jet flows
p0573 A80-09298

Vicous flowfields induced by two- and three-dimensional lift jets in ground effect
p0229 N80-18583

BOUDE, D. L.
Propulsive aerodynamics of an advanced nozzle/forward swept wing aircraft configuration
[ AIAA PAPER 80-11518] p0399 A80-38944

BOUWEY, F. J. III
Artificial icing test CH-47C helicopter with fiberglass rotor blades
[ AD-8081160] p0419 N80-24305

BOUSE, R. C.
ASSEL: Selective address SSR, performance of the evaluation station
p0494 N80-27347

BOUS, J. V.
Potential benefits for propfan technology on derivatives of future short- to medium-range transport aircraft
[ AIAA PAPER 80-1090] p0397 A80-38905

BOWLES, R. M.
Past and potential near term fuel savings in commercial aviation through modified operational strategies
[ JAE PAPER 800766] p0577 A80-09710

BOUH, Z. N.
Test and analysis of the ASAME-MTV insulated combustion chamber
[ ASME PAPER 79-EMAS-21] p0055 A80-15256

BOUZ, J. B.
The influence of wing, fuselage and tail design on rotational flow aerodynamics data obtained beyond maximum lift with general aviation configurations
[ AIAA 80-00455] p0200 N80-26955

BOUM, D. E.
Computer simulation as a first step towards computer-aided design of fluid power systems
p0373 A80-36467

BOUWSEL, D. A.
Acoustically swept rotor
[ NASA-CASE-ARC-11106-1] p0118 N80-14107
A spin-recovery parachute system for light general-aviation airplanes

Bradshaw, C. P.

A spin-recovery parachute system for light general-aviation airplanes

Bradford, J.

A spin-recovery parachute system for light general-aviation airplanes

Bradley, R. L.

Radar approach control (RADCOn) primary input power supply study

Bradley, R. W.

J-26 circulation wing contractor flight demonstration

Bradley, R. W.

Prediction of drag coefficients of a supersonic V/STOL configuration with various store arrangements

Bradley, R. P.

Magnetic suspension and balance system: A selective annotated bibliography

Bradley, R. C.

Evaluating potential VCS control modes with respect to performance, stability, and engine life utilization

Bradley, T.

Transport phenomena in labyrinth seals of turbomachines

Breaux, J. P.

Air terminal design - Decentralization and shape

Braeck, J.

Integrated Test - A must for reliability achievement

Braemer, J.

Required radar ranges for AW aircraft

Bradner, J. A.

Exploratory studies of the cruise performance of upper surface blown configurations: Experimental program, high-speed force tests

Bradner, J. A.

Exploratory studies of the cruise performance of upper surface blown configurations: Experimental program, high-speed pressure tests

Bradner, J. A.

Exploratory studies of the cruise performance of upper surface blown configurations: Program analysis and conclusions

Bradner, S.

Vorticity associated with multiple jets in a crossflow

Bradley, R. F.

Source book on materials for elevated-temperature applications: A comprehensive collection of outstanding articles from the periodical and reference literature

Bradley, J. C.

Far field monitor for instrument landing systems, phases 1 and 2

Bradley, R. P.

Thermal oxidative stability test methods for JPTS jet fuel

Bradshaw, C.

A spin-recovery parachute system for light general-aviation airplanes

BRAF, C.

UK approach to aircraft dynamic response on damaged and repaired runways

Bratvold, N. S. J.

A survey of the high frequency effects associated with the lightning discharge

Branny, K. G.

Technical and operational factors concerning the licensing and introduction of a new microwave landing system for category 2

Bransford, J. W.

LOI/GGQ mechanical impact tester assessment

Braslau, D.

Ground run-up noise control facilities for civil aircraft: A survey

Braslavskii, D. A.

Airframe and control systems/3rd revised and enlarged edition/

Bratanow, T.

Unsteady flow and dynamic response analyses for helicopter rotor blades

Braun, R.

Air-to-air engagement simulation

Bray, R. S.

A head-up display format for application to transport aircraft approach and landing

Breaker, A.

 Mirage 2000 - Export fighter for the 'eighties

Brand, B.

Minimum fuel flight paths for given range

Brand, J. E.

The minimum cost approach to flutter clearance

Brand, S. G.

Currents induced on crossed cylinders excited by a plane electromagnetic pulse

Brakke, K. A.

Microprocessor controlled ejection seat

Brarbell, J. W.

Minimum fuel flight paths for given range

Brehmer, J. E.

Aspects of flight test instrumentation

Brehmer, R.

Analysis of aircraft performance stability and control measures

Brehmer, R.

Stage maintenance considered in relation to the conditions of interflag

Brehmer, J. C.

Study of optical techniques for indirect generation of runway approach lights

Brehmer, R.

Extraneous characteristics of unsteady subsonic jets

Bredford, J.

The evaluation of annoyance provoked by aircraft noise by means of opinion surveys
<table>
<thead>
<tr>
<th>AUTHOR</th>
<th>TITLE</th>
<th>PUBLICATION DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRENDOES, J. V.</td>
<td>Evaluation of annoyance due to Concorde noise in the vicinity of Washington-Dulles International Airport</td>
<td>p0286 A80-32595</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Annoyance caused by general aviation</td>
<td>p0286 A80-32601</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Reactions of the French population to the supersonic bang</td>
<td>p0539 N80-28944</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Measurements of jet dispersions simulated in an aeronautical wind tunnel</td>
<td>p0185 N80-17401</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Atmospheric dispersion of high velocity jets</td>
<td>p0365 N80-23321</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Civil helicopter wire strike assessment study. Volume 1: Findings and recommendations</td>
<td>p0848 N80-33381</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Leading edge flatter of supercavitating hydrofoils</td>
<td>p0733 N80-12236</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>The development and operation of the RDC anechoic acoustic test facility</td>
<td>p0392 A80-38633</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Flow measurements in a rotating stall cell</td>
<td>p0733 N80-12334</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Induced drag and lift-drag ratio of swept wings at supersonic speeds</td>
<td>p0204 A80-27175</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Practical aspects of the calculation of structural vibrations</td>
<td>p0065 N80-12007</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>A plan for active development of LH2 for use in aircraft</td>
<td>p0150 A80-23204</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Characteristics of liquid hydrogen-fueled aircraft</td>
<td>p0363 A80-37400</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>A proposed liquid hydrogen development program for aircraft</td>
<td>p0383 A80-37345</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Prospects for hydrogen aircraft</td>
<td>p0576 A80-49708</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Hypersonic cruise aircraft propulsion integration study, volume 1</td>
<td>p0130 N80-15074</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Hypersonic cruise aircraft propulsion integration</td>
<td>p0130 N80-15075</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>Currents induced on crossed cylinders excited by a plane electromagnetic pulse</td>
<td>p0058 A80-15885</td>
</tr>
<tr>
<td>BRENDOES, J. V.</td>
<td>The pressure meter: Application of pavement design</td>
<td>p0296 N80-20432</td>
</tr>
<tr>
<td>BRIDGE, W. H.</td>
<td>IPP system concept based on time synchronization</td>
<td>p0626 A80-53913</td>
</tr>
<tr>
<td>BRIDGE, W. D.</td>
<td>Full scale visualization of the wing tip vortices generated by a typical agricultural aircraft</td>
<td>p0220 N80-17992</td>
</tr>
<tr>
<td>BRIDGE, B.</td>
<td>P-111 A/E digital bomb-nav system software analysis</td>
<td>p0071 N80-12089</td>
</tr>
<tr>
<td>BRICK, W. R.</td>
<td>Viscous flow in the region of a rounded trailing edge</td>
<td>p0233 A80-19045</td>
</tr>
<tr>
<td>BRICK, J. W.</td>
<td>Minimizing the sequenced delay time for escape from high-speed, low-level flight profiles</td>
<td>p0559 N80-30017</td>
</tr>
<tr>
<td>BRICK, R. F.</td>
<td>The viscoelastic behavior of a composite in a thermal environment</td>
<td>p0423 A80-24369</td>
</tr>
</tbody>
</table>

**PERSONAL AUTHOR INDEX**

<table>
<thead>
<tr>
<th>AUTHOR</th>
<th>TITLE</th>
<th>PUBLICATION DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRIFFNER, C. G.</td>
<td>New remotely piloted vehicle launch and recovery concepts: Computer program listings</td>
<td>p0223 N80-18035</td>
</tr>
<tr>
<td>BRIFFNER, C. G.</td>
<td>New remotely piloted vehicle launch and recovery concepts</td>
<td>p0374 N80-19066</td>
</tr>
<tr>
<td>BRIFFNER, C. G.</td>
<td>Development of panel methods for subsonic analysis and design</td>
<td>p0167 N80-16033</td>
</tr>
<tr>
<td>BRIFFNER, C. G.</td>
<td>Research in advanced flight control design</td>
<td>p0421 N80-26436</td>
</tr>
<tr>
<td>BRENTON, C. L.</td>
<td>Wind-shear encounters during visual approaches at night: A piloted simulator study</td>
<td>p0617 N80-24929</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>The aerodynamic interaction between a close-coupled canard and a sweptback wing in transonic flow</td>
<td>p0573 A80-19415</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Aerodynamic interaction on a close-coupled canard wing configuration</td>
<td>p0143 N80-15175</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Application of rapidly solidified alloys</td>
<td>p0485 N80-12331</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Reliability/safety analysis of a fly-by-wire system</td>
<td>p0511 A80-45547</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Force equilibrium and performance balance of aircraft longitudinal motion graphically presented in the forkerans diagram</td>
<td>p0044 A80-30892</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Permanent magnet and superconducting generators in airborne, high power systems</td>
<td>p0228 N80-18311</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Comparison of surface treatments of aluminum and their influence on long term strength of metal bonds</td>
<td>p0329 A80-34805</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Airship - A modern transport system</td>
<td>p0406 A80-39312</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Assessment of the environmental compatibility of differing helicopter noise certification standards</td>
<td>p0503 N80-24153</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Controlling adaptive antenna arrays with the Principle of Max Inversion algorithm</td>
<td>p0159 A80-23283</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Shielding effects of a meteoroid surface by reflecting and evaporating molecules. III - The case of strong shielding - The overall picture of the phenomenon</td>
<td>p0373 A80-36457</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Combined linear theory/impact theory method for additional flow quality measurements in the Langley Research Center 8-Foot Transonic Pressure Tunnel</td>
<td>p0374 N80-29343</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Acoustic measurements of three Prop-Pan models</td>
<td>p0373 A80-35958</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Advanced turbo-prop aircraft interior noise reduction-source definition</td>
<td>p0085 N80-13882</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Acoustics tests and analysis of three advanced turboprop models</td>
<td>p0364 N80-23311</td>
</tr>
<tr>
<td>BROCARD, Y.</td>
<td>Additional flow quality measurements in the Langley Research Center 8-Foot Transonic Pressure Tunnel</td>
<td>p0374 N80-29343</td>
</tr>
</tbody>
</table>
BROWN, P. F.  Development of mainshaft high-speed cylindrical roller bearings for gas turbine engines  [AD-A073381]  p0084  80-13475


BROWN, P. J.  Exploratory piloted simulator study of the effects of winglets on handling qualities of a representative agricultural airplane  [NASA-TH-81817]  p0536  80-28370

BROWNE, K. A.  Simulator results of an F-14A airplane utilizing an aileron-rudder interconnect during carrier approaches and landings  [NASA-TH-81833]  p0554  80-29368

BROWN, B. L.  Nickel-zinc batteries for aircraft and aerospace applications  p0571  80-48483

BROWN, B. D.  Evaluation of coatings for wear and corrosion - protection in air/liquid accumulators  p0329  80-34819

BROWN, S. S.  Aircraft transparency failure and logistical cost analysis: Supplemental study  [AD-A075500]  p0223  80-18033

BROWN, T. J.  Multicyclic control of a helicopter rotor considering the influence of vibration, loads, and motion control  [AIAA 80-0673]  p0330  80-34998

BROWNE, W. N.  3W approach to the investigation, analysis, and prevention of human-error aircraft accidents  p0579  80-50112

BROWNER, J. A.  Full scale visualization of the wing tip vortices generated by a typical agricultural aircraft  [NASA-CH-162796]  p0220  80-17992

BROWERSON, J. J.  Aerodynamic interactions from reaction controls for lateral control of the M2-F2 lifting-body entry configuration at transonic and supersonic and supersonic Mach numbers  [NASA-TH-78534]  p0035  80-11033

BROUGH, E. F.  Axial flow rotor unsteady performance  p0364  80-23308

BROWN, J.  Reliability of high-brightness CRTs for airborne displays  p0251  80-19563

BROWN, J. F.  Modern HF communications for low flying aircraft  p0248  80-19375

BROWN, G.  European turbines  p0411  80-40469

BROWN, D.  Evaluation of a Central Data Entry System (CDES) for transport aircraft  [DFVLB-FB-79-23]  p0304  80-21298

BROuno, A.  Environmental control system concept study for a Navy VTOL aircraft  [ASME PAPER 80-WAAS-47]  p0468  80-43221

Brow, E. L.  Cargo generation forecasting models  [AD-A076136]  p0124  80-14636

BROUSSE, J. S.  Accident investigation  p0176  80-17043

BROUSSEVSKII, A. L.  Detonation of strain fields near concentrators from strain gauge indicators  [AD-A076136]  p0019  80-10054

BROTONS, B. A.  Fatigue testing of vampire wings  [AD-76136]  p0066  80-33399


BRENNAN, H. G.  Cooperative estimation of targets by multiple aircraft  [AD-A085799]  p0631  80-32366
BOBISH, D. C.

Gladeon-Dale constant for CPV (NASA-TM-80220)

BOBISH, B.

Chicago monostatic acoustic vortex sensing system. Volume 1: Data collection and reduction (AD-0576299)

BOBISH, A. J.

An investigation of laser lighting systems to assist aircraft landing (AD-0771722)

GROUND WIND VORTEX SENSING SYSTEM CALIBRATION TESTS (AD-1056477)

BOBISH, B. D.

The outside has to be bigger than the inside (NASA-80-0726)

BOBISH, J. H.

The application of a parameteric method of fatigue load measurement to wings based on flight tests on a Lightning Mk T5 (ADC-N-89-3836)

BOBISH, B. B.

Fundamentals of design. VI - Tailplanes, tailless and canard design (AD-1057225)

Flight control systems. VII (AD-105190)

Fundamentals of design. VII - Efficient air intakes (AD-0094250)

Active controls for combat aircraft (AD-1043339)

BOBISH, K. B.

Protection and specification of clutches to be used with gas turbine generators (ASME PAPER 80-CG-33)

BOBISH, E. M.

Near-field pattern analysis of airborne antennas (AD-1051916)

BOBISH, L. D.

Research on near field pattern effects (AD-1079325)

BOBISH, B. S.

Aluminum antenna pattern code user's manual (AD-1066331)

BOBISH, B.

Advanced structures - meeting the challenge of low-cost future aircraft systems (AIAA PAPER 80-1668)

BOBISH, L. E.

Investigation of helicopter wire strike protection concepts (AD-10588)

BOBISH, D. L.

Quiet Clean Short-haul Experimental Engine (CCSHE), Double-annular clean combustor technology development report (NASA-CP-159483)

BOBISH, R. E.

Air vehicle store separation motion prediction via grid data trajectories (AIAA 80-0462)

BOBISH, D. X.

Installation for investigating the effect of non-steady-state supercritical gas flow on the blades of a plane cascade (AD-10508)

BOBISH, D.

Jet engine demountable test cell exhaust system phase (Coads/ refractive noise suppression concept, advanced development (AD-1076253)

BYK, V. I.

The Omega radio navigation system (AD-1010970)

BYK, R. M.

Tactical night terrain flight navigation (AIAA 80-19413)

CADDY, H. J.

Navy operational and support cost model (AIAA PAPER 80-1249)

CALKEND, R. W.

Study of an advanced transport airplane design concept known as Flatbed (NASA-CP-159937)

CALKEND, L. R.

Runway surface roughness (AIAA 80-21305)

CILC, F. J. S.

Stationary movement of wings in the transonic regime (AIAA 80-21304)

CILC, V.

Civil applications of global positioning systems (AIAA 80-21305)

CILC, L. A., JR.

A new look at C sub n beta, dyne (NASA-CP-159483)

CILC, T. M.

A singular perturbation analysis of minimum time long range intercept (NASA-CP-162885)

CILC, L. J.

A singular perturbation analysis of optimal aerodynamic and thrust magnitude control (NASA-CP-162885)

CALLAHAN, H. B.

Frequency-domain control design for variable linear systems (AIAA 80-24261)

CALLAWAY, A. A.

Trends in digital data processing and system architecture (AIAA 80-24261)

CALLAWAY, A. B.

Allocation of limited airport facilities to improve utilization in the deregulation environment (AIAA 80-24261)
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>DOIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenter, P. H.</td>
<td>A linearized theory for swirling supersonic jets and its application to shock-cell noise</td>
<td>[AIAA PAPER 80-1049] p0495 A80-46628</td>
</tr>
<tr>
<td>Carpentier, R. B.</td>
<td>Electronically steered antennas</td>
<td>p0323 A80-34169</td>
</tr>
<tr>
<td>Carr, J. B.</td>
<td>New tourches for 'optimum runway occupancy times'</td>
<td>p0505 A80-44111</td>
</tr>
<tr>
<td>Carr, L. W.</td>
<td>A directionally sensitive hot-wire probe for detection of flow reversal in highly unsteady flows</td>
<td>p0264 A80-32949</td>
</tr>
<tr>
<td>Carb, C. C.</td>
<td>Dynamic stall on advanced airfoil sections</td>
<td>p0541 N80-29252</td>
</tr>
<tr>
<td>Carbone, J. V.</td>
<td>Bifurcation analysis of aircraft high angle-of-attack flight dynamics</td>
<td>(AIAA 80-1059) p0517 A80-45892</td>
</tr>
<tr>
<td>Carbone, G.</td>
<td>Global stability and control analysis of aircraft at high angles of attack</td>
<td>(A80-88388) p0536 N80-28374</td>
</tr>
<tr>
<td>Carson, R. H.</td>
<td>Fuel efficiency of small aircraft</td>
<td>[AIAA PAPER 80-3347] p0471 A80-43305</td>
</tr>
<tr>
<td>Carson, C.</td>
<td>An analysis of the future requirements for materials handling equipment in the military airlift command</td>
<td>(AD-A087094) p0600 N80-31370</td>
</tr>
<tr>
<td>Carson, G. T., Jr.</td>
<td>Transonic aerodynamic characteristics of a supersonic cruise aircraft research model with the engines suspended above the wing</td>
<td>(NASA-TP-81415) p0976 N80-12997</td>
</tr>
<tr>
<td>Carter, P. C.</td>
<td>Unsteady aerodynamic measurement techniques for turbomachinery research</td>
<td>p0392 A80-26142</td>
</tr>
<tr>
<td>Carter, J. E.</td>
<td>Single rotor options for heavy lift and potential of multi lift</td>
<td>[SAGE PAPER 791087] p0195 A80-26642</td>
</tr>
<tr>
<td>Carter, J. E.</td>
<td>Interaction of a two-dimensional strip boundary layer with a three-dimensional transonic swept-wing code</td>
<td>[NASA-TP-78640] p0220 N80-17988</td>
</tr>
<tr>
<td>Carter, L. D.</td>
<td>Investigation of ground effects on large and small scale models of a three fan VSTOL aircraft configuration</td>
<td>[NASA-CR-152240] p0167 N80-16030</td>
</tr>
<tr>
<td>Carwight, B. J.</td>
<td>Green's functions in fracture mechanics</td>
<td>p0573 A80-49866</td>
</tr>
<tr>
<td>Carothers, J. E.</td>
<td>Aerodynamic analysis of a supersonic cascade vibrating in a complex mode</td>
<td>p0514 A80-45961</td>
</tr>
<tr>
<td>Casagusa, C.</td>
<td>A method for evaluating aircraft take-off</td>
<td>p0039 N80-11076</td>
</tr>
<tr>
<td>Case, A.</td>
<td>Integrated rack concept study for VSTOL type aircraft</td>
<td>(AD-A081694) p0410 N80-2303</td>
</tr>
<tr>
<td>Cassatt, G. C.</td>
<td>Evaluation of the crack gage concept for monitoring aircraft flaw growth potential, Volume 2</td>
<td>(AD-A076320) p0186 N80-17509</td>
</tr>
<tr>
<td>Cassatt, G. C.</td>
<td>Evaluation of the crack gage concept for monitoring aircraft flaw growth potential, Volume 1</td>
<td>Technical discussion p0186 N80-17510</td>
</tr>
<tr>
<td>Cassel, L. A.</td>
<td>Hypersonic interference flow experiment</td>
<td>p0233 N80-19204</td>
</tr>
<tr>
<td>Cassini, B. H.</td>
<td>A comparison of interstellar propulsion methods</td>
<td>(AIAA PAPER 80-1229) p0860 A80-30780</td>
</tr>
<tr>
<td>Cassidy, D. J.</td>
<td>X-ray radiography of gas turbine ceramics</td>
<td>p0307 N80-21335</td>
</tr>
<tr>
<td>Castella, F. E.</td>
<td>Moving target detector data utilization investigation</td>
<td>(AD-A086962) p0608 N80-31687</td>
</tr>
<tr>
<td>Castellan, A.</td>
<td>Damping effects in joints and experimental tests on riveted specimens</td>
<td>p0253 N80-19584</td>
</tr>
<tr>
<td>Castellani, V.</td>
<td>Onboard collision avoidance system: Environmental influence on the tracking algorithm requirements</td>
<td>p0117 N80-14105</td>
</tr>
<tr>
<td>Castillo, J. P.</td>
<td>Computational techniques for EHP interaction</td>
<td>p0212 A80-27777</td>
</tr>
<tr>
<td>Castler, C. B.</td>
<td>Light airplane crash tests at three roll angles</td>
<td>p0033 N80-10512</td>
</tr>
<tr>
<td>Castlenberry, G. A.</td>
<td>Stability of asymmetric equilibrium flight states</td>
<td>p0515 A80-45866</td>
</tr>
<tr>
<td>Catalano, G. D.</td>
<td>Pressure and velocity measurements in a three-dimensional wall jet</td>
<td>p0023 N80-10126</td>
</tr>
<tr>
<td>Cathey, G.</td>
<td>Design of a simulator for studying the helicopter - SDVER</td>
<td>p0254 N80-19829</td>
</tr>
<tr>
<td>Caughy, D. A.</td>
<td>Transonic inlet flow calculations using a general grid-generation scheme</td>
<td>p0211 A80-27744</td>
</tr>
<tr>
<td></td>
<td>Lubricating oil analysis for wear monitoring. Citations from the NTS data base</td>
<td>[PB80-807668] p0592 N80-30531</td>
</tr>
<tr>
<td>Cavallari, G.</td>
<td>Damping problems in acoustic fatigue</td>
<td>p0253 N80-19580</td>
</tr>
<tr>
<td>Caves, R. E.</td>
<td>A consideration of general aviation in the United Kingdom</td>
<td>[TT-7902] p0219 N80-17982</td>
</tr>
<tr>
<td>Cavin, F. W., Jr.</td>
<td>Passive control of wing/store flutter</td>
<td>p0579 A80-50100</td>
</tr>
<tr>
<td></td>
<td>Transonic unsteady airloads on an energy efficient transport wing with oscillating control surfaces</td>
<td>[NASA-TP-81768] p0287 N80-20228</td>
</tr>
</tbody>
</table>
Wind tunnel and free flight model identification experience p0241 880-19103

CHASING, J. P.
The scientific balloon program of the Centre National d'Études Spatiales - Status and perspectives p0405 A80-39309

CHATHT, J. J.
Calculation of transonic flows around wings p0066 880-12014
Calculation of three-dimensional unsteady transonic flows past helicopter blades [NASA-TP-1721] p0662 A80-33356

CHATTOT, A.-J.
Experimental and theoretical studies on helicopter blade tips at ONERA [ONERA, TP No. 1950-96] p0622 A80-53281

CHAUDHARY, B.
Limits of application of the damage tolerance concept to combat aircraft [AAP PAPER MT 79-32] p0379 A80-36866

CHER, K. C.
Transient corona effects on a wire over the ground p0313 880-21992

CHER, L. T.
Transonic inlet flow calculations using a general grid-generation scheme p0211 A80-27744

CHER, B. R. E.
Effects of primary rotor parameters on flapping dynamics [NASA-TP-1431] p0137 880-15138
Effects of rotor parameter variations on handling qualities of unaugmented helicopters in simulated terrain flight [NASA-TM-81190] p0605 880-31407

CHER, S.-H.
Unsteady wake of a plunging airfoil [AAP PAPER 80-1846] p0453 A80-41626

CHER, T.
Analysis and measurements of low frequency lighting component penetration through aerospace vehicle metal and graphite skins p0314 880-21951

CHERRY, B. E.
Air deployment of satellite-tracked drifters p0344 A80-36291

CHENG, C. Y.
Computer simulated passenger service levels for airport terminals p0581 A80-50273

CHENG, H. K.
Transonic swept-wing analysis using asymptotic and other numerical methods [AIAA PAPER 80-0342] p0156 A80-22751
Analysis of transonic swept wings using asymptotic and other numerical methods [NASA-TM-80762] p0541 A80-29255

CHENG, R. F. K.
Soil analyses and evaluations at the impact dynamics research facility for two full-scale aircraft crash tests [NASA-CR-155199] p0144 880-15299

CHESBEEKIN, C. A.
Local ground noise generated by supersonic transport planes p0192 A80-26206
Noise characteristics of supersonic passenger planes p0236 A80-34387
Selecting the geometric parameters and position of a nose flap on the root profile of a swept wing using tunnel test data, part 2 p0018 880-10094
Flow-around small-aspect-ratio delta wing with vortex "bursting" p0019 880-10060
Selection of geometric parameters and location of nose flap on swept wing root profile from tunnel test data, 1 p0034 880-11009

CHESBEEKIN, E. S.
The An-24 aircraft - Design and maintenance /3rd revised and enlarged edition/ p0158 A80-23084
Analysis of moisture exchange in aircraft fuel tanks p0564 A80-47412

CHERRYKOV, S. E.
On the espionage snare-through problem
CABBAGE, T.

CABBAGE, T.

CABBAGE, T. B.

CABBAGE, T. J.

CABBAGE, T. L.

CABBAGE, T. S.

CABBAGE, T. C.

CABBAGE, T. L.

CABBAGE, T. D.

CABBAGE, T. P.

CABBAGE, T. A.

CABBAGE, T. M.

CABBAGE, T. K.

CABBAGE, T. J.

CABBAGE, T. G.

CABBAGE, T. E.

CABBAGE, T. D.

CABBAGE, T. B.

CABBAGE, T. A.

CABBAGE, T. Y.

CABBAGE, T. X.

CABBAGE, T. W.

CABBAGE, T. V.

CABBAGE, T. U.

CABBAGE, T. S.

CABBAGE, T. R.

CABBAGE, T. Q.

CABBAGE, T. P.

CABBAGE, T. O.

CABBAGE, T. N.

CABBAGE, T. M.

CABBAGE, T. L.

CABBAGE, T. K.

CABBAGE, T. J.

CABBAGE, T. I.

CABBAGE, T. H.

CABBAGE, T. G.

CABBAGE, T. F.

CABBAGE, T. E.

CABBAGE, T. D.

CABBAGE, T. C.

CABBAGE, T. B.

CABBAGE, T. A.

CABBAGE, T. Y.

CABBAGE, T. X.

CABBAGE, T. W.

CABBAGE, T. V.

CABBAGE, T. U.

CABBAGE, T. S.

CABBAGE, T. R.

CABBAGE, T. Q.

CABBAGE, T. P.

CABBAGE, T. O.

CABBAGE, T. N.

CABBAGE, T. M.

CABBAGE, T. L.

CABBAGE, T. K.

CABBAGE, T. J.

CABBAGE, T. I.

CABBAGE, T. H.

CABBAGE, T. G.

CABBAGE, T. F.

CABBAGE, T. E.

CABBAGE, T. D.

CABBAGE, T. C.

CABBAGE, T. B.

CABBAGE, T. A.

CABBAGE, T. Y.

CABBAGE, T. X.

CABBAGE, T. W.

CABBAGE, T. V.

CABBAGE, T. U.

CABBAGE, T. S.

CABBAGE, T. R.

CABBAGE, T. Q.

CABBAGE, T. P.

CABBAGE, T. O.

CABBAGE, T. N.

CABBAGE, T. M.

CABBAGE, T. L.

CABBAGE, T. K.

CABBAGE, T. J.

CABBAGE, T. I.

CABBAGE, T. H.

CABBAGE, T. G.

CABBAGE, T. F.

CABBAGE, T. E.

CABBAGE, T. D.

CABBAGE, T. C.

CABBAGE, T. B.

CABBAGE, T. A.

CABBAGE, T. Y.

CABBAGE, T. X.
PBBS01AL AOIHOB.INDEX
COLE, R. T.

Langley transonic dynamics tunnel p0013 80-0-12621

COLE, R. T.

Composites in future transports, I - Non-metals p0374 80-30497

COLEMAN, R.

Mini-EPV research p0266 80-29660

COLES, J.

Material considerations for gas turbine engines p0616 80-52127

COLES, J.

Cost saving approach to Automated Test Equipment for P-10L program p0269 80-29998

COLLAND, D.

Synthesis of test results on the Concorde at high angle of attack [AIAA PAPER 80-019] p0370 80-30604

COLLEY, P.

The importance of runway capacity - An analytical approach p0322 80-33290

COLLI, G.

Composites in aircraft manufacturing - An impressive rise p0153 80-21923

COLLINS, J. H.

The application of microprocessors to the regulation of military aircraft engines: The design of electronic regulators p0481 80-26316

COLLINS, B. P.

Estimation of fuel consumption of commercial jet aircraft from path profile data [AIAA PAPER 80-007] p0575 80-49976

COLLINS, J. W. P.

Full authority microprocessor digital control [AIAA PAPER 80-1149] p0390 80-38938

COLLINS, R. N.

NDI policy and techniques for advanced composites p0326 80-39765

COLLINS, R. G.

Recent advances in fibre optics for high integrity digital control systems p0111 80-14025

COLLINS, J. R.

Meteorological input to general aviation pilot training p0124 80-14634

COLTHORPE, B. H.

An analytical and experimental study of a short S-shaped subsonic diffuser of a supersonic inlet [AIAA PAPER 80-0346] p0108 80-20970

Supersonic propulsion technology p0209 80-10216


COLWELL, S.

New aircraft technology: Report on the Farnborough International Air Show [PB-298305/0] p0039 80-11078

COMER, J. H.

Certification of avionics systems on the commercial airplanes of the 1980's p0470 80-43683

CONNELL, R. F.

Data analysis methodology for day/night inflight tactical navigation [AD-A082731] p0548 80-29297

CONGEYS, G. L.

Feasibility study for integrated flight trajectory control fighter [AD-A084784] p0591 80-30314

CONEN, P. N.

A quantitative assessment of the variables involved in crack propagation analysis for in-service aircraft [AIAA 80-0752] p0332 80-35007

CONGLO, J.

A comparison of calculated and experimental lift and pressure distributions for several helicopter rotor sections [NASA-TM-81160] p0168 80-16036

CONKELS, R. R.

Data analysis methodology for day/night inflight tactical navigation [AD-A082731] p0548 80-29297

PERSONAL AUTHOR INDEX

COBB, D. W.

Multimode cargo aircraft options and configurations [AIAA PAPER 790196] p0195 80-26465

Technology requirements and readiness for very large aircraft [AIAA PAPER 80-0935] p0320 80-32987

Outlook for advanced concepts in transport aircraft [AIAA PAPER 800074] p0575 80-89869

Multimode cargo aircraft options and configurations [NASA-Th-800177] p0037 80-11053

Technology requirements and readiness for very large aircraft [NASA-Th-801770] p0287 80-22223

Outlook for advanced concepts in transport aircraft [NASA-Th-801810] p0362 80-23283

CONNOLLY, D. W.

Voice data entry in air traffic control p0043 80-11273

CONNOR, R. E.

The impact of GPS on CV mission effectiveness p0191 80-25165

CONNOR, R. E.

New concepted Doppler microwave landing system p0341 80-36019

CONNOR, T.


CONRF, D. H.

Evaluation of safety programs with respect to the causes of air carrier accidents [AD-A080827] p0542 80-29265


CONWR, W. D., JR.

Allocating and accomodating small aircraft operations in the Baltimore-Washington DC-region p0576 80-97760

CONSTAD, E. W.

Turbine engine altitude chamber and flight testing with liquid hydrogen p0001 80-10034

CONNAY, R. E.

The challenge of designing reliable ECH transmitters p0562 80-50525

COOK, C. Q.


COOK, G.

A polymorphic reconfigurable emulator for parallel simulation [NASA-CR-167185] p0428 80-25010

COOK, P. H.

Wind tunnel measurements of the mean flow in the turbulent boundary layer and wake in the region of the trailing edge of a swept wing at supersonic speeds [NASA-TR-70626] p0415 80-24278

A brief investigation of the two-dimensionality of the flow over an airfoil in the 8 foot by 6 foot transonic wind tunnel [NASA-TR-AERD-1826] p0600 80-31368

COOK, R.

Induced effects of lightning on all composite aircraft p0212 80-27783

COOK, R. S.

Heat pipe avionic thermal control [AIAA PAPER 80-1511] p0580 80-14747


COOK, T. H.

Analysis of fault isolation criteria/techniques p0001 80-40305

Analysis of helicopter maintenance fault isolation criteria/techniques [AD-A080824] p0345 80-22257

Advanced structures maintenance concepts [AD-A087601] p0627 80-32300

Advanced structures concepts for transport aircraft [AD-A077373] p0632 80-32374
PERSONAL AUTHOR INDEX

COOK, C. E. C.
Series 9 cathode ray tube display system
[SRP-1980-5905] p0584 A80-60958

COOK, C. H.
A simplified model for the viscous crossflow in a slotted test section
[NASA CR-3206] p0078 880-12372

COOK, E. J.
A survey of the high frequency effects associated with the lightning discharge
[G0310-12970/9] p0370 880-23590

COOKER, J. M.
A V/STOL ground effects test facility
[p0013 880-12618

COOLY, R. E.
Investigation of internal control laws for wing/store flutter suppression
[ARIA-00-706A] p0332 880-35056

COOPS, M.
High-temperature ceramic heat exchanger
[EPRI-FP-1127] p0426 880-26588

COOPER, D. B.
Single rotor options for heavy lift and potential of multi lift
[SAP-PAPER 791087] p0195 880-26642

COOPER, L. P.
Effect of degree of fuel vaporization upon emissions for a premixed partially vaporized combustion system
[NASA TP-1502] p0120 880-16125

COOPER, T. D.
Fatigue in machines and structures - Aircraft
[p0196 880-26731

COOPER, R. H.
An assessment of the stability and opening characteristics of cruciform pectorals
[HU-228] p0361 880-23276

COPE, G. A.
AH-1S high-survivable transmission system
[AD-A080567] p0348 880-23211

COPEY, J. C.
Some measurements of buffetting on an aerelastic model of a slender wing aircraft
[HAE-TH-STUHOC-942] p0001 880-11305

On interacting structural information and loading data in aerelastic analysis
[ARC-8/H-K-3033] p0167 880-17521

Methods for determining unsighted normal modes and transfer functions from receptance measurements
[HAE-TH-17097] p0427 880-24676

COPEY, J. F.
Technology of the Bolls-Booye BB211 engine
[p0098 880-18684

The fate of civil turbofan engines
[SAP-PAPER 80-5939] p0319 880-32876

COOPER, G. K.
An approximate factorization solution of the Navier-Stokes equations for transonic flow using body-fitted coordinates with application to NASA 64A010 airfoils
[NASA CR-163376] p0529 880-28307

COOPGAL, E. N.
Experimental evaluation of catalytic flat plate stabilization for aircraft afterburners
[ASME PAPER 80-GT-56] p0459 880-42187

Military jet fuel from shale oil
[p0548 880-29308

COOBIN, J. C.
State-of-the-art methods for computing the electromagnetic interaction of light with aircraft
[p0313 880-21948

COOBIN, W. A.
Development of a metric half-space model for interference free testing
[ATAA PAPER 80-0460] p0268 880-29950

COOBIN, W. C.
Method and apparatus for rapid thrust increases in a turbofan engine
[NASA-CASE-LEH-12971-1] p0220 880-16839

COBESS, L. D.
F/A-18/RAVVED avionics system flight-test data on a B-1B, 1982
[NAVY-08-7951] p0225 880-18047

CONE, R.
Advanced risk assessment of the effects of graphite fibers on electronic and electric equipment
[NASA CR-159210] p0464 880-26393

CONE, R. N.
Assessment of the risk due to release of carbon, fiber in civil aircraft accidents, phase 2
[p0247 880-19200

CONE, J. E.
Method and apparatus for rapid thrust increases in a turbofan engine
[NASA PAPER-LEH-12971-1] p0224 880-16839

CONE, R. S.
Design of slotted ducts for supersonic flow development
[p0275 880-30976

CONE, W. H.
Investigation of infrared characteristics of three generic nozzle concepts
[ATAA PAPER 80-1160] p0450 880-85098

CONE, L. A.
The TX data flow architectures - The power of concurrency for avionics
[p0258 880-32421

COOFE, P.
Experimetal procedure to determine limits of ISM interfering with navigation and flight control equipment
[ATAA 80-0780] p0332 A80-35056

COOFE, S. H.
The effect of local parameters on gas turbine emissions
[ATAA PAPER 80-1230] p0401 880-39006

CONOLE, V. M.
Study of cooling air inlet and exit geometries for horizontally opposed piston aircraft engines
[ATAA PAPER 80-1242] p0401 880-38904

Effect of propeller slipstream on the drag and performance of the engine-cooling system for a general aviation twin-engine aircraft
[p0472 880-43315

CONOAK, T.
Surveillance and communication systems using mobile media on the airport surface
[PO8-13-18973] p0042 880-11110

Automatic systems for aircraft surface mobile media surveillance based on the use of secondary media
[p0117 880-14104

CONSEL, R. M.
FAA lightning protection study: Report of investigations relative to providing lightning protection for the Remote Center Air-to-Ground (RCG)
[AD-A0760943] p0173 880-16259

CONSEL, A. A.
Conduction heat transfer analysis in composite aircraft engine to be used in a fighter/attack role
[AD-A088741] p0651 880-33499

CONSER, J. P.
Compressor rotating stall is uniform and non-uniform flow
[ASME PAPER 79-07-18S] p0456 880-42055

COSTER, D.
F/STOL ground effects test facility
[p0499 880-42187

Military jet fuel from shale oil
[p0548 880-29308

COSTER, J. C.
State-of-the-art methods for computing the electromagnetic interaction of light with aircraft
[p0313 880-21948

COSTER, K. A.
Development of a metric half-space model for interference free testing
[ATAA PAPER 80-0460] p0268 880-29950

COSTER, R. C.
Method and apparatus for rapid thrust increases in a turbofan engine
[NASA-CASE-LEH-12971-1] p0220 880-16839

COBESS, L. D.
F/A-18/RAVVED avionics system flight-test data on a B-1B, 1982
[NAVY-08-7951] p0225 880-18047

CONE, R.
Advanced risk assessment of the effects of graphite fibers on electronic and electric equipment
[NASA CR-159210] p0464 880-26393

COTT, K.
Mechanization architecture for enhancement of avionics planning data-base
[AD-A075572] p0292 880-20267

COCHR, R. V.
Accident data systems study requirements analysis for a FAA accident data system

DABROWSKA, J.
Construction of black boxes and mechanical elaboration of electronic units in aviation

DADIA, J.
Electronic flight instrument system for B767/757

DADILIB, T. S.
Integrated rack concept study for V/STOL type

DADILIS, E. J.
Study of gas turbine engine autorotation regimes

DADKIS, B. A.
Modeling of water-fuel emulsions under laboratory conditions

DADREK, V. I.
Determination of start-up pressure losses for gas-turbine engine compressors

DALLE, A.
Evaluation of the performance of a deflector for an SSB monoplane system

DAMRA, V.
Impact of modern materials on the development of rotorcraft

DAMURIA, A. J.
Electronic flight instrument system for 8767/757 aircraft

DAHEB, S.
Theoretical and experimental determination of the aerodynamic characteristics of a helicopter rotor

PERSONAL AUTHOR INDEX

DANIEL, L. R.
Acoustic radiation from axisymmetric ducts — a comparison of theory and experiment

DANIEL, S. R.
Mechanisms of nitrogen heterocycle influence on turbine fuel stability

DANIELS, B. J.
Study of methane fuel for subsonic transport aircraft

DANIELS, H. W.
Carbon/graphite fiber risk analysis and assessment study: Assessment of risk to the Lockheed Model L-1011 commercial transport aircraft

DANILIN, V. S.
Optimum receivers and discrete-signal processors for hyperbolic radar navigation systems

DANISH, H. H.
Experimental and theoretical investigation of the internal duct hydraulics of stator and rotor bladings for a seacilled-cycle air cooling system

DANIELLES, R. F.
Reliability pays off

DARNELL, T. W.
Effects of fuel additives on plume opacity of a subscale turbojet test cell with a ramjet type dump combustor

DARBY, R. T.
Condition evaluation of jointed concrete airfield pavement

DARSEY, J. A.
On disturbance fields of moving singularities in aerodynamics and aeroacoustics

DASH, S. J.
Composites for aerospace applications
Effect of the surface state of gas turbine blading on the blading's aerodynamic characteristics when operating on products of combustion of high-sulphur oil

Some problems involving the assurance of the controllability of an aircraft in the control-wheel regime

Optimal-control synthesis for systems with distributed parameters in the case of a local performance index

Optimal control of flight vehicle with elastic elements

Parametric method of aircraft engine status diagnostics based on limited information

Variable cycle engine multivariable control synthesis: control structure definition

Design, evaluation and test of an electronic, multivariable control for the F100 turbofan engine

Passenger behaviour and expectations at an airport

VSTOL test techniques utilizing laser tracking

Numerical simulation of three-dimensional boattail afterbody flow fields

Aerostucture nondestructive evaluation by thermal field techniques

Aerostucture nondestructive evaluation by thermol field techniques

Some problems involving the assurance of the controllability of an aircraft in the control-wheel regime

Optimal-control synthesis for systems with distributed parameters in the case of a local performance index

Optimal control of flight vehicle with elastic elements

Parametric method of aircraft engine status diagnostics based on limited information

Variable cycle engine multivariable control synthesis: control structure definition

Design, evaluation and test of an electronic, multivariable control for the F100 turbofan engine

Passenger behaviour and expectations at an airport

VSTOL test techniques utilizing laser tracking

Numerical simulation of three-dimensional boattail afterbody flow fields
DEHBEB, E. P.

DEBEB, V. P.

DEBBIS, J.

DEBS, P. I.

DEBSEP, I. T.

DEBEBEB, P. I.

DEBSEPSEI, T. K.

DEBOSE, B. O.

DEBB4GOPIAB, J.

DEPAL8A, L. B.

DEBSEOFCBATBt, 1.

DEBSTOIHDEB, B.

DEBSHABAIS, B. B.

DEBSLASDES, B.

DEBSOPPEB, A.

DEBSJABDIIS, S. P.

DEBHPASDB, B. B.

DEBSEQPEB, A.

DEBSK-CR-159796

DEBSB, P. I.

DEBS0BOFCDBBT, 1.

DEBM4GOPIAB, J.

DEBEBEBEB, P. I.

DEBS- The right tool for small test jobs

DEBS4GOPIAB, J.

DEBPSEI, T. K.

DEBSEPSEI, T. K.

DEBS4GOPIAB, J.

DEBPSEI, T. K.

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DEBS4GOPIAB, J.

DEBPSEI, T. K.

DEBS4GOPIAB, J.

DEBPSEI, T. K.

DEBS4GOPIAB, J.
Dix, D. J.
Advanced structures maintenance concepts
[AD-A087609] p0627 80-32324

Dix, T. H.
Designing to life cycle cost in the Hornet program
[SAWE PAPER 1293] p0105 80-20638

Dillard, B.
The role of computational aerodynamics in airplane configuration development
p0300 80-21260

Diller, J. L.
Aerodynamic characteristics of a hypersonic research airplane concept having a 70 deg swept double-delta wing at Mach numbers from 0.80 to 1.20, with summary of data from 0.20 to 6.0
[NASA-TP-1552] p0068 80-12044

Dini, A. J.
Syntesis of a theoretical approach for employing adaptive configuration management in aeronautical weapon system programs
p0358 80-23196

Dix, D.
Engine intake control design for advanced fighter aircraft
p0481 80-26317

Dix, C. B.
Silicon nitride turbine blade development
p0553 80-29347

Dittmar, J. H.
High-speed-propeller wind-tunnel aeroacoustic results
p0352 80-22344

A comparison between an existing propeller noise theory and wind tunnel data
[NASA-TN-81519] p0428 80-25101

Ditte, D. F.
Effect of mutual interference loading on crack growth. Volume I: Technical summary
[AD-A072122] p0044 80-11513

Dix, B. E.
Comparison of wind tunnel and flight test measurements of static aerodynamic loading of a captive store
[AD-A087237] p0567 80-07-30281

Dix, C. G.
Multivariate optimum design of subsonic jet passenger airplane
p0830 80-36999

Dixon, R. H.
Nondestructive aspects of avionic system reliability
p0251 80-15355

Dixon, G. C.
Design, development, and flight demonstration of the loads and stability characteristics of a bearingless main rotor
[AD-A086754] p0589 80-30299

Dix, B. V.
Organization of automatic control systems for technological processes in aircraft mechanical engineering
p0001 80-10123

Dobbs, L. J.
Development of mainshaft high-speed cylindrical roller bearings for gas turbine engines
[AD-A073381] p0084 80-13475

Dobbs, L. K.
Concept definition study of small Brayton cycle engines for dispersed solar electric power systems
[NASA-CR-15992] p0357 80-22770

Dobbs, W. L.
Noise generation by jet-engine exhaust deflection
[ESA-TT-553] p0356 80-23104

Dodd, R. D.
Reliability of nondestructive inspections
[AD-A072097] p0033 80-10503

Dodd, W. J.
Advanced catalytic combustors for low pollutant emissions, phase 1
[NASA-CS-159535] p0080 80-13048

WASA/General Electric broad-specification fuel combustion technology program, phase 1
p0549 80-29316

Determination of pollutant emissions characteristics of General Electric CF6-6 and CF6-50 model engines
[AD-A086927] p0648 80-33412

Dobe, R.
Linearised methods in supersonic flow
p0664 80-33380

Doggelt, R. V. JH.
Experimental and analytical transonic flutter characteristics of a geared-elevator configuration
p0433 80-25224

Dollard, R.
Wind-tunnel experiments on divergence of forward-swept wings
[NASA-TP-1495] p0545 80-29287

Doleval, T.
Analytical modeling of the dynamics of aircraft powerplant subassembly units
p0054 80-15088

Dolge, R. P.
Pneumatic components of regulators
p0279 80-32175

Dollard, G.
Glider accidents in France in the last ten years
p0056 80-15628

Doloff, J. T.
The Navstar Global Positioning System and time
p0190 80-25146

Dollard, R.
Effect of swirl, wake parameter and wake Reynolds' number on recirculation in combustion chambers of jet engines
p0617 80-52021

Dore, A. V.
Study of the nature of the working process of a gas turbine engine exhauster with staged heat rejection
p0565 80-47431

Dorn, R. H.
Analysis and identification of subsynchronous vibrations for a high pressure parallel flow centrifugal compressor
p0557 80-29710

Dornaldson, T. S.
The redundancy of scheduled and unscheduled maintenance
[AD-A076662] p0298 80-21242

Dore, G. T. S.
Recent advances in helicopter vibration control
p0485 80-26687

Dorn, J. U.
Measurement of interference-to-navigation/communication avionics from cable television (CATV) systems
[AD-A081430] p0370 80-23530

Dorn, R. E.
Propeller signatures and their use
[AIAA PAPER 80-1035] p0340 80-35983

Reaction control system augmentation for V/STOL aircraft
p0024 80-10130

Dornell, H. L.
Decision analysis of Advanced Scout Helicopter candidates
[AD-A081483] p0363 80-23298

Dornell, U.
Aircraft noise monitoring at airports
p0845 80-40966

Dorso, P. J.
A strapdown inertial reference system for commercial airline use in navigation and flight control
p0808 80-17558

An integrated strapdown guidance and control system for launch vehicle application
p0808 80-17559
Assessment of operational automated ground equipment
Optimization intensity setting of approach and runway
Long range very large aircraft ground system
For core noise investigation of the CF6-50 turbofan
Boresight errors induced by missile radomes
A simple method for converting frequency domain
Electronically steered antennas
Aerospace; projections for civil aviation, 1995-2000
Singular values and feedback - Design examples
Application of superalloy powder metallurgy for
The role of technology as air transportation faces
Some unique characteristics of supersonic cruise
vehicles and their effect on airport community
noise
The role of technology as air transportation faces
the fuel situation
A study of two avionics life cycle cost models and
their applicability in the
communications-electronics-aerological
environment
Electronic flight rules /EFR/ - A concept for
enhanced freedom of airspace
Surveillance performance measurements of the SSR
mode of the discrete address beacon system
Electronic flight rules /EFR/ - A concept for
enhanced freedom of airspace
A cost effective approach to ATE
Optical control of flight vehicle motion in a
turbulent atmosphere
Experiments on superalloy powder metallurgy for
Effects of axisymmetric contraction on turbulence of
Application of superalloy powder metallurgy for
Aerospace: Projections for civil aviation, 1995-2000
Electronically steered antennas
Impact of commuter airlines on airports
Effects of thermally induced porosity on an as-HP
powder metallurgy superalloy
Application of superalloy powder metallurgy for
Effects of fine porosity on the fatigue behavior of
Electronically steered antennas
Contacting electro-optical contouring of
helicopter rotor blades
Using a language developed for aircraft simulators
Contacting electro-optical contouring of
helicopter rotor blades
An experimental study of two-dimensional
supersonic jet impingement on a flat plate
Experimental investigation of compressor rotor wakes
The role of technology as air transportation faces
the fuel situation
Density and viscosity of jet fuels
Density and viscosity of jet fuels
Atmospheric electricity interactions with
aircraft: An overview
The duration of false alarms in surveillance radar
Hypersonic slipflow of a viscous gas over a
slender delta wing
Heat transfer at a breaking point of the leading
edge of a plate in hypersonic flight
Geometry of circulation zones downstream of bluff
bodies and gasdynamic screens of various forms
and blockage ratios

DODG, A. E.
UK approach to aircraft dynamic response on damaged and repaired runways
p0646 A80-51088

DODG, A. E.

DODGE, L. P.
Measures for improving the teepellia airships for long distance transportation [NASA-TN-79142]
p0439 N80-25327

DODG, W. N.
Potential environmental effects of aircraft emissions
[UCUL-52861]
p0427 N80-24887

DODG, R. N.
General aviation dynamics: The impact of cost recovery
p0888 N80-27300

DODD, A. A.
The general aviation dynamic model. Volume 2: Technical report
p0486 N80-2774

DOGAN, D. C.
V/STOL/LD avionics system flight-test data on a DH-1B helicopter
[NASA-TN-78591]
p0225 N80-18047

DOGAN, D. D.
Effects of rotor parameter variations on handling qualities of unaugmented helicopters in simulated terrain flight [NASA-TN-81190]
p0605 N80-31607

DOGAN, J. P.
The NASA high-speed turboprop program [NASA-TN-81561]
p0604 N80-31601

DOGAN, J. P., JN.
Aircraft Energy Efficiency (ACEE) status report
p0326 N80-10206

DOGAN, J. P.
Systems research and development service report of B and D activity [AD-A088529]
p0543 N80-2973

DOGB, V. V.
Experimental investigation of the flow past a wing of finite width
Calculation of the flow in a supersonic air intake with allowance for the boundary layer on the fairings
p0525 A80-46847

DOGB, J. J.
Preliminary measurements of aerodynamic damping of a transonic compressor rotor
p0343 A80-36152

DODD, B. A.
Dynamics of a flexible rotor-tower system [NASA-TH-194-1]
p0371 N80-23862

DODG, A. A.
A simulator study of control and display augmentations for helicopters [NASA-CP-16351]
p0605 N80-31608

DODG, G. S.
Easy ACS dynamic analysis, volume 2. Part 2: Component computer programs [AD-A079803]
p0237 N80-19076

DODG, G. S.
Easy-ACS dynamic analysis. User's manual [AD-A081160]
p0339 N80-23258

DOKERAVICH, S. S.
Numerical calculation of transonic axial turbomachinery flows [NASA-TN-81856]
p0496 N80-27363

WIND: Computer program for calculation of three dimensional potential compressible flow about wind turbine rotor blades [NASA-TP-1729]
p0642 N80-3357

DOKERAVICH, S. S.
Investigation of the influence of the parameters of a wing/engine combination on the critical flutter speed
p0525 A80-46871

DODG, M.
Combinations of 148 navigation stars and the star tracker [NASA-TN-82203]
p0631 N80-32264

DODG, M. D.
ATS system acquisition for R-3A sentry/AACS/
p0271 A80-30033

DODG, T. C.
Hypersonic interference flow flight experiment design [AD-A078861]
p0233 N80-19044

DODG, V. J., Jr.
Optimal flow control of air traffic [PB40-105976]
p0291 N80-20258

DODG, W. J.
Active flutter suppression using Linear Quadratic Gaussian theory [AIAA 80-1758]
p0510 A80-45546

Application of two design methods for active flutter suppression and wind-tunnel test results [NASA-TP-16533]
p0357 N80-22737

DODG, J. C.
Tactical navigation system testing
p0206 A80-27237

DODG, J. L.
Testing the F-18 at the U.S. Naval Air Test Center
p0206 A80-27239

DODG, K.
p0076 N80-12998

DODG, W. N.
RAMP: A fault tolerant distributed microcomputer structure for aircraft navigation and control [NASA-CR-158615]
p0649 N80-33415

DODG, J. P.
Design study for a fuel efficient turbopfan engine [ASME PAPER 80-GT-141]
p0462 A80-42254

DODG, A. R.
Assessment of operational automated guideway systems-AIRTRAM, phase 2 (PH-80-18238)
p0613 N80-32302

DODG, W. A.
The application of reliability improvement warranty to dynamic systems [AD-A075520]
p0230 N80-18419

DODG, M. E.
Communication to REVS [AD-A083747]
p0267 A80-29674

DODG, J. A.
An analysis method for multi-component airfoils in separated flow [NASA-CR-159300]
p0530 N80-28308

DODG, J. P.
Impact of flow effects on multihub suppressor design
p0339 A80-35979

DODG, E. N.
Environmental control system design for the Tomahawk Cruise Missile [ASME PAPER 79-EHAS-7]
p0055 A80-15232

DODG, C.
The SDDS flight data processing system
p0430 N80-25285

DODG, B. A.
The effect of finite turbulence spatial scale on the amplification of turbulence by a contracting stream
p0509 A80-44862

DODG, N.
All-weather landing
p0408 A80-39587

DODG, D. J.
CP6-50 Short Core Exhaust Nozzle [AIAA PAPER 80-1196]
p0450 A80-41154

DODG, F.
Release-rate calorimetry of multilayered materials for aircraft seats
p0325 A80-34223

Release-rate calorimetry of multilayered materials for aircraft seats [AIAA 80-0759]
p0332 A80-35052

DODG, B. J.
The development and use of large-motion simulator systems—NASA/AFSC, phase 2 [PB80-182538]
p0613 A80-10765

DODG, L.
Engine aerodynamic installation by numerical simulation [AIAA PAPER 80-0108]
p0933 A80-18271

DODG, B. W. W.
Theoretical method for the analysis of airfoils in viscous flows
p0571 A80-48624

DODG, S.
State-of-the-art of S1/A materials
p0016 A80-13066

State-of-the-art S1/A materials
p0554 A80-29358
The airport video information system of Interflug

Nonparallel stability of three-dimensional

Design for continuing structural integrity

The thermal impact of external pool fires on

A contribution to the design of radial compressor

Cost estimating relationships for airframes in the

Combined design of Q-fan superchargers and

Microprocessor requirements for implementing

Gust response analysis by modal decomposition of

The development of the zeppelin dirigible for long

Further investigation of a finite difference

A users guide for A344: A program using a finite

An investigation of several factors involved in a

Calculation of the flow past a body of arbitrary

The chemical stability of hydro-treated fuels and

Rind tunnel measurements and analysis of sole

Selecting the passenger airplane fuselage

Calculation of the flow past a body of arbitrary

Experimental combustor study program

Nonparallel stability of three-dimensional

Design for continuing structural integrity

Summary of 1979 independent research on risk

Application of high-alpha control system concepts
to a variable-sweep fighter airplane

U.S. Navy studies of surveillance airships

Manufacture of low carbon astronomy turbine disk

shapes by hot isostatic pressing. Volume 2,
Advanced circulation control ving system for Davy Wake flow fields for Jovian probe Development of the A-6/circnlation control ving Loran-based buoy position auditing systems: An investigation of residual stresses in simulated Compressor response to spatially repetitive and A methodology for long-range prediction of air Effect of naphthenic aromatic hydrocarbons on the B2D2: A %OBTBAN program for tvo-dimensional Acoustic effects on the flow and the noise spectra of supersonic jets A numerical method of analysis of blade and channel profile geometry
ENKE, D. W.

Development of the 'D' vented thrust deflecting nozzle
[IAIA PAPER 80-1856] p0471 A80-43308

Investigation of ground effects on large and small scale models of a three fan V/STOL aircraft configuration
[NASA-CR-152240] p0167 A80-16030

ESSOCK, D. M.

PHS composites for advanced gas turbine engine components
[AD-A074287] p0117 A80-15137

ETSCHENBERG, H. R.

Fuzzy controls for maintenance scheduling in transportation systems
p0052 A80-14838

ETTINGER, R. C.

The operational roles of the F-16
p0559 A80-30020

EULRICH, R. J.

Identification of flexible aircraft from flight data
[IAIA 80-1633] p0521 A80-45921

EVANS, D. J.


EVANS, J. F. O.

Redundancy concepts in full authority electronic engine control, particularly dual redundancy
p0462 A80-26320

EVANS, D. E.

Development of a full authority digital fuel control for a gas turbine engine using a hybrid computer system as a design aid
p0579 A80-49839

EVANS, T. H.

A V/STOL ground effects test facility
p0013 A80-12618

EVERITT, R. A., Jr.

The significance of peel stresses in cyclic debonding
p0424 A80-29439

EVERITT, K. W.

Salving Barriens rotors
p0466 A80-41033

EVERS, P. W. R.

Noise zoning around airports in the Netherlands
p0278 A80-31810

EVERY, N. G.

Navy Combat Search and Rescue
p0580 A80-50224

EVIN, O. A.

Study of homogeneous combustion chamber temperature field nonuniformity with primary zone parameter variation
p0003 A80-10610

Influence of quality of fuel-air mixture preparation in prechamber on correlation of temperature fields before and after combustion chamber exit
p0565 A80-47433

Study of homogeneous combustion chamber temperature field nonuniformity with primary zone parameter variation
p0020 A80-10065

EVSHOV, D. D.

Calculation of some aerodynamic characteristics of a flexible aircraft by an influence coefficient method
p0152 A80-21363

Method of determining steady-state aerodynamic characteristics for an elastic aircraft in free longitudinal motion
p0204 A80-27173

EVSTANNOVA, S. P.

Acceleration of multicycle fatigue testing on alumina structural alloys
p0209 A80-27479

EWING, B. A.

High temperature radial turbine demonstration
[IAIA PAPER 80-0301] p0156 A80-22749

High-temperature radial turbine demonstration
[AD-A086120] p0497 A80-27370

EWING, L. B.

Evaluation of nondestructive inspection methods for aircraft tires
[AD-A082523] p0481 A80-25681

PERSONAL AUTHOR INDEX

EYRE, E.

"Fish-edge" fairing structure
p0404 A80-39297

The captive balloon - Wind tunnel tests - Stability
p0405 A80-39327

FAHRE, J.

Experimental techniques developed at ONERA for advanced compressor testing
[ONERA, TP 80, 1979-1297] p0015 A80-13060

Experimental and theoretical determination of the transfer function of a compressor
[ONERA, TP 80, 1980-1001] p0622 A80-53285

FAHRT, G. R.

Investigation of critical bursting of fuel droplets
[NASA-CR-159677] p0072 A80-12142

FAGAN, J. H.

The impact of GPS on CV mission effectiveness
p0191 A80-25165

FAILBANKS, P.

The determination of-deviation angles at exit from the nozzle of an inward flow radial turbine
[ASPE PAPER 80-67-1477] p0463 A80-42529

FAKHTUROV, E. D.

Computer determination of stationary temperature fields in cooled turbine discs
p0004 A80-10614

FALASSI, R. D.

Static calibration of a two-dimensional wedge nozzle with thrust vectoring and spanwise blowing
p0305 A80-23117

PALCIANCIUK, G.

Surveillance and communication systems using mobile media on the airport surface

Automatic systems for airport surface mobile media surveillance based on the use of secondary media
p0117 A80-14104

FALCOONE, F.

Circumpolar measurements of ozone, particles, and carbon monoxide from a commercial airliner
p0152 A80-21460

FALTEJ, J.

Application of a laminar lighting device to the smoke visualization of flows in a wind tunnel
p0316 A80-22242

FAH, A. T.

Design criteria for optimal flight control systems
p0138 A80-15139

FAREING, A. L.

Recommendations for obtaining nozzle/afterbody drag data based on a comparison of wind tunnel and flight data
[IAIA PAPER 79-1169] p0391 A80-38347

Planning technology development to achieve consistent component technology and flexibility of application
[IAIA PAPER 80-1081] p0447 A80-41176

FANTASTA, J. P.

An investigation of laser lighting systems to assist aircraft landing
p0490 A80-27315

FAROCCI, J.

An investigation of laser lighting systems to assist aircraft landing
[AD-A0777722] p0490 A80-27315

FARENO, J. B.

Vertical axis wind turbine development: Executive summary
[80-05135-77-5-SUM] p0371 A80-23805

Vertical axis wind turbine development
[80-05135-77-5] p0371 A80-23846

FARASSAT, F.

A collection of formulas for calculation of rotoric blade noise - Compact, and noncompact source results
[IAIA PAPER 80-0996] p0380 A80-35959

A survey of propeller discrete frequency noise prediction technology with emphasis on two current methods for time domain calculations
p0567 A80-47656

Research on helicopter rotor noise
[AD-A075259] p0187 A80-17824

FAREB, H.

An approximate feedback solution of an variable speed non-linear pursuit-evasion game between two airplanes in a horizontal plane
[79-05157] p0517 A80-45890

FAHIMA, A.

A survey of the stochastic filtering techniques for data processing in air-traffic control and
Survey of radar data-processing techniques in air-traffic-control and surveillance systems
Published: AIAA paper 790337-4

A fast method to control tackiness of fiber resin prepregs
Published: AIAA paper 80-0-1256

An overview [CONF-790337-4]
Published: AIAA paper 80-10&21

Experimental study of flapping wing lift and propulsion
Published: AIAA paper 80-0-1256

Evaluation of strength safety factors under multicomponent loading with consideration of material properties scatter
Published: AIAA paper 80-16831

On approximating the aerodynamic characteristics of a wing with two-element trailing flap
Published: AIAA paper 80-36779

On a smooth approximation method and its application to mathematical description of wing aerodynamic characteristics
Published: AIAA paper 80-11011

Airplane skijump takeoff
Published: AIAA paper 80-36780

Application of automated system to air traffic control
Published: AIAA paper 80-14370

Microwave radiometric aircraft observations of the Fabry-Perot interference fringes of an ice-water system
Published: AIAA paper 80-44232

Aircraft radio equipment adjustment and maintenance technology
Published: AIAA paper 80-32845

Navy combat Search and Rescue
Published: AIAA paper 80-50224

Foilborne hydrodynamic performance of Jetfoil [PAPER 79-0-40669]
Published: AIAA paper 80-14370

Transonic pitch damping of a delta wing aircraft determined from flight measurements [AD-A087771]
Published: AIAA paper 80-32381

Moving target detector data utilization investigation
Published: AIAA paper 80-31687

Preparing aircraft propulsion for a new era in energy and the environment
Published: AIAA paper 80-17737

Noise reduction
Published: AIAA paper 80-10&208

Development of corrosion-inhibited lubricants for gas turbine engines and helicopter transmissions [ASLE PAPER 80-AM-6C-3]
Published: AIAA paper 80-11011

A comparison of flight and simulation data for three automatic landing system control laws for the augmentor wing jet STOL research airplane [NASA-CR-152365]
Published: AIAA paper 80-32138

Large-scale wind-tunnel tests of inverting flaps on a STOL utility aircraft model [NASA-TP-1696]
Published: AIAA paper 80-25318

Development of gas turbine fuels and combustion: an overview [CONF-790337-4]
Published: AIAA paper 80-10&21

Experimental study of flapping wing lift and propulsion
Published: AIAA paper 80-0-1256

Experimental study of electrostatic dischargers for helicopters [AIAA paper 80-0-1256]
Published: AIAA paper 80-10&21

Structural integrity - The accident investigator's view
Published: AIAA paper 80-50224

Fundamental modelling of mixing, evaporation and kinetics in gas turbine combustors
Published: AIAA paper 80-27373

Automatic systems for airport surface mobile media
Published: AIAA paper 80-27373
surveillance based on the use of secondary media

FERGUSON, D. R.
Aircraft efforts to improve airfield and airspace operations - Atlanta
[SAA PAPER 800721]
p0574 A80-49679

FERGUSON, J. B.
Spin profile tailoring for the improved 2.75-inch rocket
[AIAA 80-1575]
p0516 A80-45879

FERRELL, R. B.
Flight evaluation of nondimensional static longitudinal stability test methods
[AD-A082831]
p0422 B80-24329

FERREY, G.
Simulation of a surveillance and control system of surface traffic in an airport
p0116 B80-14073

FERREYRER, H.
Design principles of the Dinosaure mini-airship
p0405 A80-39302

Superpressurized balloons - A new type of superpressurized balloon filled in large-scale for stratospheric flight
p0405 A80-39308

FERTY, G.
The heavy load airship - Response to the development of international transports
p0406 A80-39315

FERTT, P.
Airframe self-noise studies on the Lockheed L 1011 Tristar aircraft
[AIAA PAPER 80-1061]
p0341 A80-36000

FIDELL, L. L.
Release-rate calorimetry of multilayered materials for aircraft seats
p0325 A80-34223

Release-rate calorimetry of multilayered materials for aircraft seats
[AIAA 80-0759]
p0332 A80-35052

Flame-resistant materials for aircraft passengers
[contract construction]
N83188 B80-13255

FICK, S. R.
Ultrasonic and acoustic emission detection of fatigue damage
[AD-A079277]
p0310 B80-21510

FODDLER, J. R.
Active control of asymmetric vortex effects
[AD-A087698]
p0359 B80-23254

FODDLER, G. A.
Review of five years of flight testing the B-1
p0200 B80-27388

Review of five years of flight testing the B-1
p0595 B80-31321

FIELDS, R. A.
Loading tests of a wing structure for a hypersonic aircraft
[NASA-TD-1596]
p0129 B80-15068

FIELDS, J.
Assessment of risk due to the use of carbon fiber composites in commercial and general aviation
p0267 B80-19201

An assessment of the risk arising from electrical effects associated with the release of carbon fibers from general aviation aircraft fires
[NASA-TR-159206]
p0480 B80-26391

An assessment of the risk arising from electrical effects associated with carbon fibers released from commercial aircraft fires
[NASA-TR-159205]
p0484 B80-26392

FILANG, R. F.
Approximate estimation of the least number and optimal distribution of landing airports for maneuvering hypersonic vehicles
p0152 B80-21335

FILATPOV, V. N.
Antennas - Current status and problems
p001 B80-11890

FILLIUS, A. M.
ATIS/UTS simulation tests with site adaptation logic in the Philadelphia terminal area
[AD-A083716]
p0489 B80-27308

FILZ, J.
Avionics - The leading technology in flight guidance and air traffic control
p0216 B80-28492

FIMAS, R.
Aerodynamic testing in a straight cascade wind-tunnel
[ONERA TP NO. 1980-98]
p0622 A80-51326

FINS, D. G.
Contact stress analysis of ceramic-to-metal interfaces
[AD-A070491]
p0124 B80-1417

FINKEL, L. T.
Navy operational and support cost model
[AIAA PAPER 80-1249]
p0449 A80-41025

FINKE, R. C. P.
Wind tunnel measurements of the mean flow in the turbulent boundary layer and wake in the region of the trailing edge of a swept wing at subsonic speeds
[RFCF-TH-79062]
p0415 B80-24278

FIREY, O. I.
Investigation of flows in Taval nozzles at small Reynolds numbers
p0467 A80-42969

FISCHER, B.
Technological advances in the light of operational cost policies
p0522 B80-46260

FISCHER, C. F.
In-service inspection of advanced composite aircraft structure
[AD-A082331]
p0428 B80-24378

FISCHER, J. W.
The design of an air navigation services system
p0446 B80-40977

FISCHER, R.
The design of an air navigation services system
p0446 B80-40977

FISCHER, J. P.
Data reduction software for LOHN-C flight test evaluation
[NASA-CR-162730]
p0128 B80-15064

Results of a Loran-C flight test using an absolute data reference
[NASA-CR-162751]
p0169 B80-16051

FISCHER, K. A.
Wind tunnel force and pressure tests of a 21% thick general aviation airfoil with 20° ailerons, 25% slotted flap and 10% slot-lip spoiler
[NASA-CP-3081]
p0067 B80-12053

FISH, B. B.
Analysis of trunk flutter in an air cushion landing system
[AD-A079008]
p0237 B80-19075

FISBACH, L. R.
Computerized systems analysis and optimization of aircraft engine performance, weight, and life cycle costs
p0001 A80-10035

Computer simulation of engines systems
[NASA PAPER 80-0051]
p0092 B80-16025

Computer simulation of engine systems
[NASA-TH-792990]
p0137 B80-15132

Computerized systems analysis and optimization of aircraft engine performance, weight, and life cycle costs
p0301 B80-21271

FISBEC, R. D.
On some properties of the bypass turbojet engine
p0566 A80-40740

Characteristics of afterburning bypass turbojet engine with oxygen injection into the afterburner chamber
p0017 B80-10029

FISBER, V. D.
Influence of turbine first stator row cooling on turbine inlet gas temperature
p0616 A80-51896

FISBER, R. D.
Store hazards '79: P-1068 operations summary
[NASA-TH-21779]
p0361 B80-23228

FISCHER, D.
Discrete Address Beacon System (DABS) baseline test and evaluation
[AD-A085585]
p0544 B80-29276

FISCHER, B.
Design and engineering of carbon brakes
p0155 B80-22271

FISHER, R. J.
Calculations of lightning return stroke electric and magnetic fields above ground
p0312 B80-21929

P-44
Fault-surviving flight control, avionics

Influence of the heterogeneity of flow at the

A statistical model for multipath reflection

Lateral rollover protection concepts

A second generation instrumentation system for

Passive control of wingstore flutter

Military engine programs with cost objectives

System control of FIA communications

Integrated control techniques for advanced aircraft electrical power systems

Lateral rollover protection concepts

Piloted flight simulation study of low-level wind shear, phase 4. All-weather landing systems, engineering services support project, task 2

Airborne aids for coping with low-level wind shear. All-weather landing systems, engineering services support project, task 2

Some vertical and horizontal ejection problems

Some dynamic and time-averaged flow measurements in a turbine rig

Dynamic behavior of a beam drag-force sensor

Fault-surviving flight control avionics

Fault-surviving flight control, avionics

Influence of the heterogeneity of flow at the

A statistical model for multipath reflection

Lateral rollover protection concepts

A second generation instrumentation system for

Passive control of wingstore flutter

Military engine programs with cost objectives

System control of FIA communications

Integrated control techniques for advanced aircraft electrical power systems

Lateral rollover protection concepts

Piloted flight simulation study of low-level wind shear, phase 4. All-weather landing systems, engineering services support project, task 2

Airborne aids for coping with low-level wind shear. All-weather landing systems, engineering services support project, task 2

Some vertical and horizontal ejection problems

Some dynamic and time-averaged flow measurements in a turbine rig

Dynamic behavior of a beam drag-force sensor

Fault-surviving flight control avionics
Gude, P. A.
Helicopter electro-optical system display requirements. 2. Performance of helicopter pilots when using a low-light-level television system during simulated nap-of-the-earth flight.

Gable, J. P.
Approximate determination of helicopter vertical rate of climb.

Gaj, B.
The application of microprocessors to the regulation of military aircraft engines: The design of electronic regulators.

Gajewski, T.
Analysis of progress for regulating helicopter turbine engines.

Gajewski, B.
Development and evaluation of a general aviation real world noise simulator.

Gallaher, J. A.
Reliability growth testing of avionic equipment.

Gall, R. S.
Community noise measures.

Gallab, J. P.
Calculation of the supersonic flow past a winged body.

Gall, D.
Flight tests for the study of radioelectric perturbations of electrostatic origin.

Gallagher, J. P.
Variations in crack growth rate behavior.

Gallagher, D. G.
Helicopter electro-optical system display requirements. 3. The effects of CRT display size and luminance on dark adaptation of helicopter pilots.

Gallant, H. E.
Input-output, techniques and applications.

Gallant, H. P.
Cost/benefit tradeoffs available in aircraft noise technology applications in the 1980's.

Galliano, R.
Advanced research on helicopter blade airfoils.

Gallun, J.
Proprietary data for high fidelity flight simulation of commercial transports.

Galloway, T. L.
Small Transport Aircraft Technology.

Galloway, W. J.
Cost/benefit tradeoffs available in aircraft noise technology applications in the 1980's.

Gallus, H. E.
Reliability of high-brightness CRTs for airborne displays.

Gamble, B.
High power density superconducting generator.

Gamber, B.
Reliability growth testing of avionic equipment.

Gamber, K.
The Airlift/Prodair system at Boston-Logan Airport.

Garnett, K. P.
Methods of sound simulation and applications in flight simulators.

Gaffin, R. O.
Aircraft/air transport area navigation system (NAV).

Gasawski, P. A.
System tradeoffs available in aircraft noise technology applications in the 1980's.

Gasawski, B.
New mathematical formula for the cropduster operational cycle.
PERSONAL AUTHOR INDEX

GABBE, B. C., Ill
GABB, B.
GABBSAB. B.
GABBICK, I. E.
GABBDBBB, 8. B.
GÄBBDT, H. D.
GABOBKAB, G. B.
GABBEIL. B. A.
GABABEDIAB, P. B.
GABAFOLA. P. H.
GABBAH. J. B.
GABLABD, D. B.
GABIAHD, B. J.
GABGIOHE, P.
GABBEIL. B. A.
GABABEDIAB, P. B.
GABAFOLA. P. H.
GABBAH. J. B.
GABLABD, D. B.
GABIAHD, B. J.
GABGIOHE, P.
GABBEIL. B. A.
GABABEDIAB, P. B.
GABAFOLA. P. H.
GABBAH. J. B.
GABLABD, D. B.
GABIAHD, B. J.
GABGIOHE, P.

GABSIDE, F.
GABTH, B.
GABTH, B.
GABTH, B.
GABTH, B.
GABTH, B.
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GABTH, B.
GABTH, B.
GABTH, B.
GABTH, B.
range system
[ID-1082908] p0428 B80-24953
A demonstration test of the Modular Automated
Weather System (MAWS)
[ID-1082707] p0612 B80-32030

GERLACH, W.
A velocity potential panel method for the
prediction of unsteady airloads on oscillating
wings and bodies
[p0275 B80-30859
Instantaneous air forces on wings with an
oscillating c scrub
[DGEL PAPER 80-031] p0522 B80-46283
The harmonically oscillating body in subsonic
flow: Effect of compressibility
[ESA-ST-580] p0360 B80-23270
Method for inviscid subsonic flows about aircraft
configurations
[p0643 B80-33368

GELDER, T. F.
Aerodynamic performances of three fan stator
designs operating with rotor having tip speed of
337 meters per second and pressure ratio of
1.54. 1: Experimental performance
Aerodynamic performances of three fan stator
designs operating with rotor having tip speed of
337 meters per second and pressure ratio of
1.54. Relation of analytical code calculations
to experimental performance
[NASA-TN-1616] p0306 B80-21232

GELL, R.
Component evaluation and engine demonstration of
gamma/gamma-prime-delta D.S. eutectic solid
turbine blades
[p0003 B80-10289

GELLER, E. W.
A computer code to model swept wings in an
adaptive wall transonic wind tunnel
[ARIA PAPER 80-0156] p0100 B80-19287

GERTLI, G. B.
Experimental survey of the statistical properties of
dynamic clutter in NYC primary radars
[p0396 B80-38084

GETTE, G. L., JR.
Low-speed aerodynamic characteristics of a highly
swept arrow wing configuration with several
deflected leading edge concepts
[p0641 B80-33347

GEORGE, L. R.
Role due to tip vortex formation on lifting rotors
[ARIA PAPER 80-1010] p0393 B80-38366

GEPFART, L.
Landing system reliability and safety model
[AD-1087528] p0601 B80-31379

GERA, J.
Application of high-alpha control system concepts
to a variable-sweep fighter airplane
[ARIA PAPER 80-1502] p0579 B80-50098
Longitudinal stability and control in wind shear
with energy height rate feedback
[NASA-TN-81028] p0649 B80-33046

GERHARD, J.
Aircraft flutter and dynamic response
[p0065 B80-12010
Analytical tools for active flutter suppression
[p0309 B80-21350

GERARDI, A. G.
Runway surface roughness
[p0433 B80-25326

GERASIMOV, V. P.
Aerodynamic investigations of a bypass turbofan
stage
[p0563 B80-47371

GERDES, R. H.
A pilot's assessment of helicopter
handling-quality factors common to both agility
and instrument flying tasks
Effects of rotor parameter variations on handling
qualities of unaugmented helicopters in
simulated terrain flight
[NASA-TN-81180] p0605 B80-31407
GERHARD, G.
The Integrity of onboard computer programs: A
solution
[p0112 B80-14028

GERHOS, J. R.
Performance evaluation of image correlation
Techniques
[p0087 B80-17530

GESCH, A.
Weight Integrated Sizing Evaluation /WISE/ - A
tool for preliminary design
[SAEB PAPER 13172] p0105 B80-20646

GESHEB, K. A.
Hypersonic viscous shock layer on sweptback wings
of infinite span at different angles of attack
[p0008 B80-11208
Laminar boundary layer on swept wings of infinite
span at an angle of attack
[p0467 B80-42964

GESKROFT, I.
ASA communications cost model program
documentation: Revised
[AD-1086020] p0556 B80-29565

GESNER, J.
Guidance system position update by multiple
subarea correlation
[p0087 B80-17518

GESTUS, W.
Propulsion and energetics panel Working Group 11
on aircraft fire safety. Volume 2: Main report

GESZHEIDER, W.
Influence of pressure driven secondary flows on
the behavior of turbofan forced mixers
[ARIA PAPER 80-1198] p0511 B80-41515
Computation of three-dimensional flow in turbofan
mixers and comparison with experimental data
[NASA-TN-81410] p0144 B80-15364

GIANETTI, G.
A comparison of flight and simulation data for
three automatic landing system control laws for
the Augmentor wing jet STOL research airplane
[ARIA-CR-152365] p0268 B80-32338

GEYER, G. B.
Cooperative evaluation of firefighting foam agents
[AD-1074989] p0083 B80-13253
Advanced concept in aircraft crash firefighting
using carbon tetrafluoride
[p0415 B80-24281

GHAZI, M. A.
Experimental investigation of the two-dimensional
asymmetrical turbulent wake behind a blade
[p0322 B80-33282

GIACOTTO, V.
Detuning problems in acoustic fatigue
[p0253 B80-19580

GIBBS, G. E.
Communication to RFPs
[p0267 B80-29674

GIBLING, R. J.
A Navier-Stokes solution for laminar and turbulent
flow through a cascade of airfoils
[ARIA PAPER 80-1426] p0452 B80-41616

GIBLER, R. A.
Self-organizing bus control
[p0280 B80-32419

GIBSON, T.
Evaluation of transponder antenna coverage/FWCRS
during simulated flights of aircraft
[AD-1073647] p0043 B80-11275

GIBSON, W. C.
Angular vibration of aircraft. Volume 1:
Executive summary
[AD-1071895] p0027 B80-10197
Angular vibration of aircraft. Volume 2:
Prediction methods for angular vibration
[AD-1071749] p0027 B80-10197

GIBBARD, G. D.
Comparison of measured data with IT-77 propagation
model predictions
[AD-1076508] p0228 B80-18259

GIBBS, G.
Calculation of compressible inlet flows
[p0495 B80-40913

GIPPE, R. G.
Quiet Clean Short-haul Experimental Engine
(QCSEE). Aerodynamic and aeroacoustic
performance of a 50.8 cm (20 inch) diameter 1.34
PR variable pitch fan with core flow
[NASA-CR-1135017] p0131 B80-15087

GILBERT, R. A., III
System analysis of arctic fuels dispensing

B-50
<table>
<thead>
<tr>
<th>Author</th>
<th>Headline</th>
</tr>
</thead>
<tbody>
<tr>
<td>GILBERT, G. A.</td>
<td>Satellite navigation for helicopters</td>
</tr>
<tr>
<td>Civil aviation and the NAVSTAR/GPS</td>
<td></td>
</tr>
<tr>
<td>Civil applications of NAVSTAR GPS</td>
<td></td>
</tr>
<tr>
<td>Design study of a low cost civil aviation GPS receiver system [NASA-Ch-15976]</td>
<td>p0065 80–10175</td>
</tr>
<tr>
<td>GILBERT, J. P.</td>
<td>Lear jet boundary layer/shear layer laser propagation experiments</td>
</tr>
<tr>
<td>Cycle II, 5 aircraft aircraft-optical turbulent boundary-layer/shear-layer measurements</td>
<td>p0439 80–25605</td>
</tr>
<tr>
<td>GILBERT, K. G.</td>
<td>Inviscid Flow Field Effects: Experimental results</td>
</tr>
<tr>
<td>Aero-optics overview</td>
<td>p0038 80–25599</td>
</tr>
<tr>
<td>GILBERT, N. E.</td>
<td>Wessex helicopter/sonar dynamics study ABL program description and operation [ABL/ARNO-NOTE-385]</td>
</tr>
<tr>
<td>Reduction in swing of a sonar body winched from the sea by a helicopter</td>
<td>p0608 80–31668</td>
</tr>
<tr>
<td>GILBERT, W. P.</td>
<td>Application of high-alpha control system concepts to a variable-sweep fighter airplane [AIAA PAPER 80–1592]</td>
</tr>
<tr>
<td>Effects of fuselage forebody geometry on low-speed lateral-directional characteristics of twin-tail fighter model at high angles of attack [NASA-TP-1592]</td>
<td>p0171 80–14136</td>
</tr>
<tr>
<td>Simulator study of stall/post-stall characteristics of a fighter airplane with specified longitudinal static stability [NASA-TP-1536]</td>
<td>p0171 80–14136</td>
</tr>
<tr>
<td>Control considerations for CCV fighters at high angles of attack [NASA-TP-1689]</td>
<td>p0141 80–15160</td>
</tr>
<tr>
<td>Control-system techniques for improved departure/spin resistance for fighter aircraft [NASA-TP-1689]</td>
<td>p0550 80–29244</td>
</tr>
<tr>
<td>GILBERTSON, R.</td>
<td>Mechanization architecture for enhancement of avionics planning data base [AD-1075572]</td>
</tr>
<tr>
<td>GILES, G.</td>
<td>Improved MPG for the Bae 146 feeder-jet [AIAA PAPER 80–2549]</td>
</tr>
<tr>
<td>GILES, G. L.</td>
<td>Design considerations for attaining 200-knot test velocities at the aircraft landing loads and traction facility [NASA-PH-90096]</td>
</tr>
<tr>
<td>GILL, P. R.</td>
<td>Engineering of control systems and implications on control law design [PAPER 79–2004]</td>
</tr>
<tr>
<td>GILGORE, J. E.</td>
<td>Modular strapdown guidance unit with embedded microprocessors [AIAA PAPER 78–1239]</td>
</tr>
<tr>
<td>GILGOUR, A. S. J.</td>
<td>Vaccum arc switched inverter tests at 2.5 kVA [AIAA PAPER 78–1239]</td>
</tr>
</tbody>
</table>
GLADE, K. J.
Similarity tests of turbine vanes - Effects of
ceramic thermal barrier coatings
[AIAA PAPER 80-1529] p0495 A80-34210
Effects of a ceramic coating on metal temperatures
of an air-cooled turbine vane
[AIAA-TF-1598] p0185 B80-17397
Similarity tests of turbine vanes, effects of
ceramic thermal barrier coatings
[AIAA-TM-81473] p0312 B80-21706
Extension of similarity test procedures to cooled
core engine components with insulating ceramic coatings
[AIAA-TF-1615] p0425 B80-24577
GLOER, P. B.
Zero-length, slotted-lip inlet for subsonic
military aircraft
[AIAA PAPER 80-1205] p0499 A80-41203
GLOEX, T. N.
Materials and structures technology
p0029 B80-10210
GLOJE, J. N.
Digital Avionics Information System (DAIS): Life
cycle cost impact modeling system Reliability, Maintainability, and Cost Model (RBM):
User's guide
[AD-A089045] p0647 B80-33405
GLOSS, J. L.
Pressures inside a room subjected to simulated
sonic boom
p0278 A80-31809
GLOSMAN, A. J.
Maximum likelihood identification of linear
discrete stochastic systems
[AD-A072147] p0031 B80-10229
Loss model for off-design performance analysis of
radial turbines with pivoting-vane, variable-area stators
[AIAA-TF-81532] p0496 B80-27365
Some advantages of methane in an aircraft gas
turbine
[AIAA-TF-81559] p0556 B80-29502
GLOO, B. M.
Component evaluation and engine demonstration of
gamma/gamma-prime-delta D.S. eutectic solid
turbojet blades
p0003 B80-10289
GLOM, D. W.
The effects of ground wall-jet characteristics on
fountain upwash flow formation and development
[AD-A086127] p0546 B80-29292
GLOO, D. D.
Flow detection of aircraft components in operation
p0011 A80-11879
GLOOE, C. C.
Pollutant emission characteristics of future
aviation jet fuels
p0060 A80-16026
Fuel property effects on life characteristics of
aircraft turbine engine combustors
[AIAA PAPER 80-05-55] p0858 A80-42186
Fuel character effects on J79 and F101 engine
combustor emissions
[AIAA PAPER 80-05-50] p0640 A80-42200
Evaluation of fuel charater effects on J79 engine combustor system
[AD-A078860] p0243 B80-11919
Evaluation of fuel character effects on the F101
engine combustion system
[AD-A077860] p0296 B80-20405
GLOO, T. M.
Investigation of infrared characteristics of three
generic nozzle concepts
[AIAA PAPER 80-1160] p0480 A80-41508
GLOOE, D.
Design study of prestressed rotor spar concept
[AIAA-CR-159086] p0179 B80-17052
GLOOE, G. S.
Development and characterization of an evaporative
cold plate for thermal control of avionic
equipment
[AIAA PAPER 79-ERA-5-B] p0555 A80-15229
GLOOE, L. B.
The prediction of mass loaded natural frequencies
and forced response of complex, rib-stiffened
structures
[AD-A079056] p0297 B80-20625
<table>
<thead>
<tr>
<th>Personal Author Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOBORSHCHEKHO, N. W.</td>
</tr>
<tr>
<td>Calculations of asymmetrical flows in the flow section of turbomachines in solving the problem of optimisation of stages</td>
</tr>
<tr>
<td>GOHAR, E. J.</td>
</tr>
<tr>
<td>The NASA high-speed turboprop program</td>
</tr>
<tr>
<td>GOHACH, W.</td>
</tr>
<tr>
<td>GOHACHAK, V. Y.</td>
</tr>
<tr>
<td>Application of automated systems for traffic control</td>
</tr>
<tr>
<td>GOHARD, F. J.</td>
</tr>
<tr>
<td>Protective coatings for aircraft composites in nuclear environments</td>
</tr>
<tr>
<td>GOHART, S. B.</td>
</tr>
<tr>
<td>Exploratory investigation of the effects of vortex bursting on the high angle-of-attack lateral-directional stability characteristics of highly-swept wings</td>
</tr>
<tr>
<td>GOHAK, H.</td>
</tr>
<tr>
<td>The linear and non-linear aerodynamics of three-surface aircraft concepts</td>
</tr>
<tr>
<td>GOHAY, C. G.</td>
</tr>
<tr>
<td>boundary layer studies on high load cascades using heated thin films and a traversing probe</td>
</tr>
<tr>
<td>GOHAY, C.</td>
</tr>
<tr>
<td>Jw approach to the investigation, analysis, and prevention of human-error aircraft accidents</td>
</tr>
<tr>
<td>GOHAY, D. H.</td>
</tr>
<tr>
<td>Description and report on the calibration of an unsteady flow wind tunnel</td>
</tr>
<tr>
<td>GOHAY, R.</td>
</tr>
<tr>
<td>The analysis of an elliptic twist reflecting Cassegrain antenna using GTD</td>
</tr>
<tr>
<td>GOHAY, R.</td>
</tr>
<tr>
<td>Impact of new instrumentation on advanced turbine research</td>
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<td>GOHAY, R.</td>
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<td>Impact of new instrumentation on advanced turbine research</td>
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<td>GOHAY, R.</td>
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<tr>
<td>Technology requirements as derived from accident rate analysis</td>
</tr>
<tr>
<td>GOHAY, R.</td>
</tr>
<tr>
<td>Three dimensional supersonic flow through a cascade of twisted flat plates</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Analysis of residual stresses and displacements due to radial expansion of fastener holes</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Lockheed-Georgia's projects for the 1980s</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Research programs in general aviation - Next generation aircraft</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>The Mitsubishi Diamond I - What are its chances on the current market</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Airport construction in the Third World - a look at the problems</td>
</tr>
<tr>
<td>GOHAY, S.</td>
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<tr>
<td>Propulsion-system integration for tactical aircraft</td>
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<tr>
<td>GOHAY, S.</td>
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<tr>
<td>Airworthiness of long-life jet transport structures</td>
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<tr>
<td>GOHAY, S.</td>
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<tr>
<td>Inflow of turbine first stator row cooling on turbine inlet gas temperature</td>
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<tr>
<td>GOHAY, S.</td>
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<tr>
<td>Flow over a plate in the presence of a vortex sink</td>
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<td>GOHAY, S.</td>
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<tr>
<td>/Handbook/</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Hybrid bearings for aircraft engines</td>
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<tr>
<td>GOHAY, S.</td>
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<tr>
<td>Analytic design of turbine blade airfoil</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>The Ah-24 aircraft - Design and maintenance</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Structural analysis of variable-sweep wings</td>
</tr>
<tr>
<td>GOHAY, S.</td>
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<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Airport ground access</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>An analysis of airport authority operating costs</td>
</tr>
<tr>
<td>GOHAY, S.</td>
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<tr>
<td>A panel method for calculating the loads acting on a wing that performs harmonic oscillations in subsonic flow</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Antennas /Current status and problems/</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>A statistical method applied to pilot behavior analysis in multilooop systems</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>A new type of flap valve for generating sonic booms in a pyramidal horn</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>A controversial subject - The minimal pilot crew</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Project SQUID</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Minimim sensitivity controllers with application to VTOL aircraft</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Demand evolution in heavy transport</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Design criteria for optimal flight control systems</td>
</tr>
<tr>
<td>GOHAY, S.</td>
</tr>
<tr>
<td>Implicit model following and parameter identification of unstable aircraft</td>
</tr>
</tbody>
</table>
Preliminary design of a very advanced technology
Noise redaction characteristics of general
Structural parameters that influence the noise
New possibilities offered by a radio-inertial
An experimental investigation of a wing with
Concerning the information efficiency of
Comparison of theoretically predicted
The nonlinear supersonic potential flow over delta
Statistical aspects of carbon fiber risk
Preparing aircraft propulsion for a new era in
The development of the DAST 1 remotely piloted
Determining stress intensity factors in composite
Determination of the stress intensity factor of
Automation of flight on-line strategic control:
Preliminary design of a very advanced technology
Noise redaction characteristics of general
Noise reduction characteristics of typical general
Structural parameters that influence the noise
Preliminary design of a very advanced technology
Noise redaction characteristics of general
The growing age of specialization in air
Fuel-air mixture phase inhomogeneity on combustion efficiency in straight-flow chamber.
Evaluations of the performance of a defruiter for
Investigation of Air Force BIL-H-5606 hydraulic
Influence of fuel-air mixture phase inhomogeneity on combustion efficiency in straight-flow chamber.
The impact of fuels on aircraft technology through the year 2000
Alternative jet aircraft fuels
The impact of fuels on aircraft technology through the year 2000
Preparing aircraft propulsion for a new era in energy and the environment
Concerning the information efficiency of aerodynamic experiments
Noise reduction
Assessment at full scale of exhaust nozzle-to-wing size on STOL-OTW acoustic characteristics
Assessment at full scale of exhaust nozzle to wing size on STOL-OTW acoustic characteristics
The development of the DAST 1 remotely piloted research vehicle for flight testing an active flutter suppression control system
Statistical aspects of carbon fiber risk assessment modeling
An experimental investigation of a wing with controlled mid-span flow separation
New possibilities offered by a radio-inertial hybrid guidance system digital simulation study
The nonlinear supersonic potential flow over delta wings
Structural parameters that influence the noise reduction characteristics of typical general aviation materials
Preliminary design of a very advanced technology light twin for the mid-80's
Noise reduction characteristics of general aviation type dual-pane windows
Hackett, J. E.

Experimental studies of the cruise performance of upper surface blow configurations. Experimental program: Test facilities, model design instrumentation, and downspeed, high-lift tests [NASA-CR-3192] p0631 N80-25297
Hacking, R. L.

Computer graphics and related design processes in the UK p0295 N80-21252
Hacker, R.

Innovations in control and display of avionics and fireproo increase cockpit efficiency p0389 A80-37764
Haddock, R. N.
The cautious course to introducing new SEM technology into production systems p0193 A80-26343
Henderson, R. G.

Environmental-compatible and economic airport drainage p0505 A80-44116
Hale, D.

Transonic flow over airfoils with tangential injection p0391 A80-38263
Calculation of transonic viscous flows past wing profiles p0405 A80-40909
Harper, R. T.

Preliminary design of composite wing-box structures for global damage tolerance [AIAA 80-0755] p0332 A80-35049
Application of fully stressed design procedures to redundant and non-isotropic structures [NASA-TH-81842] p0558 B80-29767
Hughlornes, A. H.

Shipping by air - Is the value of your time worth it p0106 A80-20860
Hagen, J. F.

Preliminary Airworthiness Evaluation DH-18 helicopter equipped with Multiple Target Electronic Warfare System (MTEWS) [AD-A078476] p0236 N80-19067
Hagen, W. W.

Inequalities and approximation with applications to STOL aircraft [AD-A078087] p0941 N80-11099
Haggard, J. B., Jr.

Fuels research: Combustion effects overview p0549 B80-29317
Hagopian, J.

An assessment of the risk arising from electrical effects associated with carbon fibers released from commercial aircraft fires [NASA-CR-159205] p0485 N80-26362
Hagopian, J. B.

Analysis of expandability and modifiability of computer configuration concepts for AIC. Volume 1: Distributed concept [AD-A080495] p0490 N80-27314
Hague, D. S.

Multiple tactical aircraft combat performance evaluation system [AIAA PAPER 80-0189] p0096 A80-18358
Har, C.

A numerical and experimental study of the turbulent wakes of turbomachinery rotor blades, isolated airfoils, and a cascade of airfoils p0486 N80-27277
Har, N. J.

Experimental evaluation of the predicted behavior of squeeze-film-bearing-supported rigid rotors p0272 A80-30592

Haidly, G.

Flight flutter testing p0666 N80-12012
Excitation and analysis technique for flight flutter tests [NASA-D-174-804(0)] p0122 N80-14110
Dynamic environments and test simulation for qualification of aircraft equipment and external stores p0240 N80-19092
Hague, W. W.

Feasibility study of applying laminar flow control to an LTA vehicle [AD-A088146] p0629 N80-32351
Halsey, R.

Airborne radar coherent transmitters p0323 A80-34159
Halling, B.

Digital avionics - From research to production p0280 A80-32410
Hain, L. M.

Haines, P. G.

Investigation into the reliability and cost of ownership of the Plessey air motor servo unit - Type 306 p0149 A80-21241
Halford, G. E.

Materials and structures technology p0299 N80-10210
Halfpenney, P. F.

Aircraft humidification system development [AIAA PAPER 79-EMAS-9] p0955 A80-15233
Hall, D. L.

Opportunities analysis of potential advanced vortex systems separation standards [AD-A081479] p0361 N80-223281
Hall, F. L.

Effect of background levels on community responses to aircraft noise p0514 A80-45845
Hall, J.

Airworthiness of long-life jet transport structures p0582 A80-50586
Hall, R. M.

Full scale aircraft simulation with cryogenic tunnels and status of the National Transonic Facility p0163 A80-24090
Hall, W. R., Jr.

Design, evaluation and test of an electronic, fireproo increase cockpit efficiency system, and lowspeed, high-lift tests [NASA-CR-159413] p0631 N80-19007
Analysis of T-2C high angle of attack flight test data with nonlinear system identification methodology [AD-A086327] p0509 B80-30298
Haley, W. J.

The 'Marcello' 3D radar antenna p0058 A80-15815
Haller, R. L.

P-16 flutter suppression system investigation [AIAA 80-0758] p0033 A80-35060
Hallor, R. P.

Antecedents of the Space Shuttle [AD-A088492] p0373 A80-36446
Halliss, J. E.

Aerodynamic characteristics of a hypersonic research airplane concept having a 70 deg swept double-delta wing at Mach numbers from 0.6 to 1.20, with summary of data from 0.20 to 6.0 [NASA-TF-1552] p0068 N80-12064
Hallace, J. W.

Vortex advisory system. Volume 1: Effectiveness for selected airports [AD-A089082] p0588 B80-30286
Halsey, R. D.

Conformal mapping analysis of multielement airfoils with boundary-layer corrections [AIAA PAPER 80-0069] p0093 A80-18261

A simple system for helicopter
BAHBD, A.

UBBOBG, 6...

HABILTOH, D. A.

BAHILTOB, C. I.

BAHBL, P. e.

BABHB1, B. O.

HAHH, B. A.

HABBEB, a.

BABHBB, B. L.

BABBBB, J. A.

• Calibration of a two probe synchronized sampling
  Optimation of turbine nozzle cooling by combining impingement and film injection
  Aircraft parameter identification methods and their applications: Survey and future aspects

HARLI, J.

North Atlantic HPS... . . 1980

HARLITON, C. W.

Evaluation of safety programs with respect to the
  causes of air carrier accidents
  Evaluation of safety programs with respect to the
  causes of general aviation accidents: Volume 1:
  Technical report
  Evaluation of safety programs with respect to the
  causes of air carrier accidents: Volume 1:

HARLTON, J. W.

Reliability of nondestructive inspections

HARLTON, D. A.

Orbiter landing loads with model description and
  correlation with ALT flight data

HARLTON, K.

Proceedings of the 7th Ann. Tri-Service Meeting
  for Aircraft Engine Monitoring and Diagnostics

HARLTON, T. A.

An analysis of the evolution of the reliability
  and maintainability disciplines

HARR, R. A.

Honeycomb sandwich joints for primary structure

HARR, N. O.

Sealed lead acid batteries for aircraft applications

HAR, J. A.

Calibration of a two probe synchronized mapping
  technique for measuring flows behind rotors

HARRE, E. L.

Surface pressure measurements at two tips of a
  model helicopter rotor in hover

HARRE, R.

The advanced-composites hurdle for 767 production

HARTON, K. D.

An analytical investigation of the effect of
  varying rotor tip speed to reduce helicopter
  acoustic detection

HARTZ, D. G.

Report on the task force on aircraft separation
  assurance, appendices

HAR, S. G.

Investigation of the boundary layer behavior on
  turbine airfoils

HARCO, G. J.

Unsteady aerodynamics of two-dimensional spoilers
  at low speeds
  On the effects of gaps on control surface
  characteristics
  Some introductory concepts based on the unsteady
  flow about circular cylinders
  Role of unsteady aerodynamics in aircraft response

HARCO, J. P.

Test of a high efficiency transverse fan

HARBOUR, S. J.

Exploratory studies of the cruise performance of
  upper surface blown configuration: Experimental
  program, high-speed force tests
  Exploratory studies of the cruise performance of
  upper surface blown configurations: Experimental
  program, high-speed pressure tests
  Exploratory studies of the cruise performance of
  upper surface blown configurations: Program
  analysis and conclusions
  Exploratory studies of the cruise performance of
  upper surface blown configurations.

In-flight handling qualities investigation of
  combined flap-spoiler direct lift controls

HARKE, N.

Mathematical modeling and analysis of the
  technological processes of air traffic control. I

HARKE, N.

Mathematical modeling and analysis of the
  technological processes of air traffic control. II

HARKE, N.

In-flight handling qualities investigation of
  combined flap-spoiler direct lift controls

HARKE, N.

Aerodynamics of wings in subsonic shear flow

HARNE, D.

In-flight measured characteristics of combined
  flap-spoiler direct lift controls

HARNE, D.

In-flight handling qualities investigation of
  Airbus A 310 DLC: Configurations on landing
  approach using the DPL-HPB 320 variable
  stability aircraft

HARNE, N.

Investigation of vibration reduction through
  structural optimization

HARNE, J. A.

Future production of hydrogen from solar energy
  and water - A summary and assessment of U.S.
  developments

HARNE, N.

NLR rotor box fatigue test

HARNEG, P. W.

An assessment of the future roles of the National
  Transonic Facility and the Langley Transonic
  Dynamics Tunnel in aeroelastic and unsteady
  aerodynamic testing

HAPP, H. B.

HIF of Rene 95

HAPPEL, L. J.

Study of optical techniques for indirect
  generation of runway approach lights

HARBOUR, S. J.

Ground reflection effects on aircraft flyover noise
Harcourt, J.

Air transport of dangerous materials - Safety and administrative simplification can go hand in hand

Harland, B. L.

A new weighting coefficient for adaptive state estimation

Harland, R. V.

Aircraft operations and logistics simulation

Harley, G. J.

Cross flow fan experiment development and finite element modeling

Harney, W. E.

Advanced subsonic status monitor

Harvey, H.

Silicon nitride turbine blade development

Harvey, R. F., Jr.

Direct force control and testing

Hart, R.

Investigation of engine performance degradation of TF33-3-7 engines

Harshbarger, P. T.

Modeling techniques for the analysis of ramjet combustion processes

Harshbarger, R. A.

Computer graphics, related design and manufacture process at Dornier

Hartman, A. L.

Designing for long-life aircraft structures

Harrison, R. F.

Radar cross sections of conducting bodies over a lossy half space

Microscopic radiometric aircraft observations of the Valdry-Perot interference fringes of an ice-water system

Harries, D. H. W.

Applying computer aided design (CAD) to the 767

Harries, D. J.

Software development for TORNADO: A case history from the reliability and maintainability aspect

Harries, J. L.

Phase 2 and 3 wind tunnel tests of the J-97 powered, external augmentor V/STOL aircraft

Harries, G. G.

A new weighting coefficient for adaptive state estimation

Harries, R. A.

Technology to enhance airport capacity

Harries, S. J.

High power HF and noise cancellation system

Harris, T.

Optimal design studies on composite wings with static and dynamic constraints

Harris, W. L.

On the acoustic power emitted by helicopter rotor blades at low tip speeds

Harris, W. G.

Model rotor low frequency broadband noise at moderate tip speeds

Harper, B. M., Jr.

National Washington Airport flight extension tent. Noise monitoring data report

Harper, A.

Computer simulation of an air cargo small package sorting system

Hrovat, D.

AVIONICS: Projections for civil aviation, 1995-2000

Hrovat, W. J.

Advanced flight controls for transport aircraft

Harrison, A. N.

Aircraft operations and logistics simulation

Harvey, C. D.

NACE Convair 580 aeromagnetic program

Harder, G.

A summary of joint US-Canadian augmentor wing powered-lift STOL research programs at the Ames Research Center, NASA, 1975-1980

Hardee, J. H.

Engine aerodynamic installation by numerical simulation

Hardee, J. B., Jr.

Washington National Airport flight extension tent. Noise monitoring data report

Hargrove, A.

Computer simulation of an air cargo small package sorting system

Hayes, P. A.

AVIONICS: Projections for civil aviation, 1995-2000

Hargrove, W. J.

Advanced flight controls for transport aircraft

Harley, G. J.

Cross flow fan experiment development and finite element modeling

Harney, W. E.

Air traffic density and distribution measurements

Harper, H.

Advanced subsonic status monitor

Harper, J. E.

Silicon nitride turbine blade development

Harper, R. F., Jr.

Direct force control and testing

Harper, R. F.

Designing for long-life aircraft structures

Harrington, R. F.

Radar cross sections of conducting bodies over a lossy half space

Microscopic radiometric aircraft observations of the Valdry-Perot interference fringes of an ice-water system

Harries, D. H. W.

Applying computer aided design (CAD) to the 767

Harries, D. J.

Software development for TORNADO: A case history from the reliability and maintainability aspect

Harries, J. L.

Phase 2 and 3 wind tunnel tests of the J-97 powered, external augmentor V/STOL aircraft

Harries, G. G.

A new weighting coefficient for adaptive state estimation

Harries, R. A.

Technology to enhance airport capacity

Harries, S. J.

High power HF and noise cancellation system

Harris, T.

Optimal design studies on composite wings with static and dynamic constraints

Harris, W. L.

On the acoustic power emitted by helicopter rotor blades at low tip speeds

Harris, W. G.

Model rotor low frequency broadband noise at moderate tip speeds

Harper, B. M., Jr.

National Washington Airport flight extension tent. Noise monitoring data report

Harper, A.

Computer simulation of an air cargo small package sorting system

Hayes, P. A.

AVIONICS: Projections for civil aviation, 1995-2000

Hargrove, W. J.

Advanced flight controls for transport aircraft

Harley, G. J.

Cross flow fan experiment development and finite element modeling

Harney, W. E.

Air traffic density and distribution measurements

Harper, H.

Advanced subsonic status monitor

Harper, J. E.

Silicon nitride turbine blade development

Harper, R. F., Jr.

Direct force control and testing

Harper, R. F.

Designing for long-life aircraft structures

Harrington, R. F.

Radar cross sections of conducting bodies over a lossy half space

Microscopic radiometric aircraft observations of the Valdry-Perot interference fringes of an ice-water system

B-60
Command-and stability systems for aircraft - A new digital adaptive approach

The cryogenic wind tunnel: another option for the European Transonic Facility

An experimental evaluation of the performance of an aircraft engine starter turbine

Influence of acceleration on the critical speed of a Jeffcott rotor

Simulated vortex encounters by a twin-engine commercial transport aircraft during final approach

Preliminary results of simulated vortex encounters by a twin-engine, commercial aircraft during final landing approach

Accuracy and repeatability indices for joint oil analysis program data

High pressure turbine blade life sensitivity

Low cost simulation of piloting tasks

Experimental investigation of a 0.15 scale model of a conformal variable-ramp inlet for the P-16 airplane

Contribution to the study of nonstationary signals emitted by moving jet engines - Application to spectral analysis and listening

Theoretical feasibility of digital communication over ocean areas by high frequency radio

Crash tests of four identical high-wing single-engine airplanes

Weather detection using airport surveillance radar

Computer simulation model of the logistic support system for electrical engineering test equipment

Hardware-in-the-loop simulation of a digital autopilot

Transponder Performance Analyzer (TPA)

Breaking the STO1 free of Catch 22

Digital processing of unsteady periodic signals

Effectiveness of the STHADA trajectory system: landing trajectory systems

Durability testing at 5 atmospheres of advanced catalysts and catalyst supports for gas turbine engine combustors

Investigation of the boundary condition at a wind tunnel test section wall for a lifting wing-body model at low supersonic speed

Calculation by a first order theory of supersonic flow around Delta wings

Visualization of the acoustic excitation of a subsonic jet

A compilation and analysis of helicopter handling qualities data. Volume 1: Data compilation

A numerical strain and stress analysis of radial compressor impellers with riveted cover disks

A numerical strain and stress analysis of radial compressor impellers with riveted cover disks

Development of advanced avionics systems applicable to terminal-configured vehicles
A unifying theory for determining human response to sound

HILL, H. G.

Design study for ATA vacuum system aperture

HILL, K. N.

Study and experimental tests of fibrous acoustic treatment for reduction of fan noise from XF3-1 turbofan engine

HILL, K. N.

Design study for ATA vacuum system aperture

HILL, H. K.

USAF bioenvironmental noise data handbook. Volume
HILLIARD, D. A.

117: F-16A in-flight crew noise
([AIAA PAPEB 80-22051]

HILLIARD, D. A.

Low cycle fatigue testing, a necessary part of advanced development
([AIAA PAPERS 80-1153]

HILLIR, E. E.

The advanced flight deck
([AIAA PAPEB 80-38940]

HILTOB, D. A.

GE-SI supersonic PFL window
([AIAA PAPEB 80-19948]

HILTON, G. E.

Nonelectronic aspects of avionic system reliability
([AIAA PAPEB 80-19535]

HILLIKER, J. B.

Analysis and correlation of test data from an advanced technology rotor system
([NASA CR-152366]

HICHERY, R.

Research on the stability of air cushion systems
([OTIAS-238]

HICHEY, R.

([AIAA PAPEB 80-27840]

HINDEID, W. S.

A summary of joint US-Canadian augmentor wing powered-lift STOL research programs at the Ames Research Center, NASA, 1975-1980
([NASA TP-81215]

HINKLE, R. L.

Spectrum resource assessment in the 2.7-2.9 GHz band phase 2: Radar signal processing
([P880-129323]

HINKLE, R. L.

Spectrum resource assessment in the 2.7 to 2.9 GHz band. Phase 2: LOR deployment in the Los Angeles and San Francisco areas
([P880-194467]

HINKLE, T. V.

Effect of service environment on F-15 horon/epoxy stabilator
([AIAA PAPEB 80-17064]

HINSON, B. L.

The aerodynamic design of an advanced rotor airfoil
([NASA CR-2961]

HINSON, B. L.

Acquisition and application of transonic wing and far-field test data for three-dimensional computational method evaluation, volume 1
([AIAA PAPEB 80-5258]

HINTON, R. S.

Advanced combustion systems for stationary gas turbine engines. Volume 2: Bench scale evaluation
([P880-175007]

HINTZ, T.

Gravimetric investigation of the particle number density distribution function in the high speed cascade wind tunnel for laser-anemometry measurements
([NASA TP-79-12]

HINZNO, T.

Wind tunnel design and performance for rough wall turbulent boundary layer
([AIAA PAPEB 80-22374]

HISCEH, T.

Digital processing of unsteady periodic signals with application to the turbulence structure around oscillating airfoils
([AIAA PAPEB 80-29505]

HISCH, E.

Test study of the vortex regime of highly sweepback wings by extrapolation of the Jones method
([AIAA PAPEB MT 80-25]

HISCH, E. H.

Verification of the experimentally determined laminar-turbulent transition on a swept wing
([AIAA PAPEB 80-12046]

HISLOP, A.

The economics of air traffic control
([AIAA PAPEB 80-18723]

HITCH, R.

Gust load alleviation
([AIAA PAPEB 80-21346]

HITT, E. P.

F-111 A/j digital bomb-nav system software analysis
([AIAA PAPEB 80-12089]

HITT, E. P.

DACS - A prototype general aviation digital avionics control system
([AIAA PAPEB 80-32430]

HITM, J. A.

Installation of C-6533(XE-2)/ABC ICS in UH-1H helicopter
([AIAA PAPEB 80-33650]

HOG, C. M.

Pressure fields generated by instability waves and coherent structures in an impling jet
([AIAA PAPEB 80-09800]

HOG, C. M.

Unsteady wake of a plunging airfoil
([AIAA PAPEB 80-14666]

HOG, C. S.

Stability of asymmetric equilibrium flight states
([AIAA PAPEB 80-15676]

HOGAN, A.

Approach procedures
([AIAA PAPEB 80-53558]

HOBBS, D. E.

Design and performance evaluation of supercritical airfoils for axial flow compressors
([AIAA PAPEB 80-12066]

HOBBS, J.

Armament Programmable Test Set /APTS/
([AIAA PAPEB 80-30034]

HOBBS, N. A.

High-speed, low-level flight survival on ejection
([AIAA PAPEB 80-30016]

HOCH, C. J.

Energy conservation in terminal airspace through fuel consumption modeling
([SAE PAPEB 80-0745]

HOCKADAY, S. L. B.

Capacity payoffs at large hub airports from ATC initiatives
([AIAA PAPEB 80-28380]

HODDER, J.

Design and analysis of CH-47 external cargo handling system (snubbed load)
([AIAA PAPEB 80-08057]

HODGE, G.

Subsonic transport noise
([AIAA PAPEB 80-0858]

HODGE, K. E.

Research developments for aircraft safety
([AIAA PAPEB 80-22148]

HODGES, W. F.

Comparison of analytical and flight test identified aerodynamic derivatives for a tandem-rotor transport helicopter
([NASA TP-1561]

HODGES, D. E.

On the nonlinear deformation geometry of Euler-Bernoulli beams
([NASA TP-1566]

HODGKINSON, J.

Quantification of V/STOL equivalent system characteristics through analysis and ground-base simulation
([AIAA PAPEB 80-1629]

HODGSON, T. R.

Investigation of trailing-edge noise
([AIAA PAPEB 80-23901]

HODGSON, C. H.

Status of cavity noise phenomena measurement and suppression on the B-1 aircraft
([AIAA PAPEB 80-16202]
PERSONAL AUTHOR INDEX

BOEKES, T.
Helicopter-ship qualification testing
[NASA-TM-79027-0] p0603 800-31391

BOEHLER, H.
External store flutter suppression with active controls
p0309 800-21351

BOWEN, A. V. D.
Preliminary design of a very advanced technology light twin for the mid-80's
[IAEA PAPER 80-1862] p0571 800-43305

BOEHN, K. E., Jr.
Design and operation of multi-specimen fully reversed fatigue systems for advanced composite materials
p0002 800-10206

Failure mechanisms for advanced composite sandwich construction in hostile environments
p0197 800-26884

BOFFMAN, D. J.
The 737 graphite composite flight spoiler flight service evaluation
[NASA CR-159094] p0182 800-17147

BOFFMAN, J. B.
Evaluation of aircraft windshield materials in a simulated supersonic flight environment
[AD-0701973] p0236 800-19082

BOFFMAN, K. F.
Probabilities of vertical overlap: a sensitivity analysis
[AR0-16151] p0991 800-27323

BOFFMAN, L. G.
Manned engineering flight simulation validation, Part 1. Simulation requirements and simulator motion system performance
[AD-1071394] p0031 800-10235

BOFFMAN, R.
Vibrational modes of an aircraft simulator motion system
p0163 800-23988

BOFFMAN, R. E.
The influence of colors on the visibility of aircraft and ground obstacles
p0047 800-13176

BOFFMAN, R. N.
Effects of free-stream turbulence on diffuser performance
[NASA CR-163194] p0043 800-24264

BOFFMAN, L. G.
Practical optimal flight control system design for helicopter aircraft. Volume 1: Technical Report
p0367 800-23328

BOHALY, J. T.
Hybridized polymer matrix composites
[NASA TM-161546] p0650 800-33489

BOHESI, P. D.
Discrete address beacon system
p0991 800-27349

BOHLEND, L.
Swedish EMP research
p0212 800-27766

BOHLEND, R. F.
Project SQUID
[AD-A0880086] p0636 800-32401

BOGUE, J. E.
Development of aerodynamic disturbance test procedures, volume 1: Executive summary
[PB80-108145] p0258 800-19991

[PB80-1108380] p0296 800-21219

BOL, B.
Development of VTOL flying qualities criteria for low-speed and hover
[AD-0709911] p0239 800-19085

BONISHEL, E.
Contract research on aerodynamic problems of turbomachinery vanes
p0485 800-40966

The combined effect of axial velocity density ratio and aspect ratio on compressor cascade performance
[ASRE PAPER 80-GT-138] p0462 800-42251

BOLDRICK, G. T.
Preliminary results of simulated vortex encounters
by a twin-engine, commercial aircraft during final landing approach
[NASA-TM-8782] p0478 800-26285

BOLDMAN, J. D.
Measurements of cabin and ambient ozone on 737 airplanes
p0217 800-28653

Simultaneous cabin and ambient ozone measurements on two Boeing 747 airplanes, volume 1
[NASA TM-79166] p0128 800-15059

BOLFORD, D.
On interfacing structural information and loading data in aeroelastic analysis
[ARC-N/R-3833] p0187 800-17521

BOLL, R.
Reliability and life of aircraft gas turbine engines
p0054 800-15090

BOLL, T.
Flex cambered delta wings with leading edge separation
p0265 800-32527

BOLLADAY, R. P.
The effect of the Western Union Weather Data System on the preflight briefing position at the Chicago Flight Service Station
[AD-0884151] p0639 800-33065

BOLLAND, D. J.
Motor blade cooling in high pressure turbines
p0380 800-36998

BOLLAND, R.
Code optimization for solving large 3D Aer problems
p0101 800-19764

BOLLOOAY, R. E.
Aerodynamic and acoustic investigations of axial and radial turbomachinery vanes and compressor blade rows, including three-dimensional effects
[AD-07077412] p0243 800-19116

BOMBEITZ, A.
On the use of vibration self-damping materials in
Adaptive main-beam nulling for narrow-beam antenna arrays

CONTROLLING ADAPTIVE ANTENNA ARRAYS WITH THE SAMPLE MATRIX INVERSION ALGORITHM

THE CHANGING HORIZONS FOR TECHNICAL PROGRESS. II

THE ECONOMIC IMPACT OF MATERIALS TECHNOLOGY ON AIRCRAFT PERFORMANCE.

SOME EFFECTS OF CRUISE SPEED AND ENGINE MATCHING ON AIRCRAFT PERFORMANCE.

OPTIMIZATION OF GAS TURBINE COMBUSTOR STOICHIOMETRY AND EXPANDED OPERATING REGIME.

THE STATE-OF-THE-ART OF FLUTTER SUBSTANTIATION.

PROGRESS IN AIRSHIP FLIGHT CONTROL.

STATIC AND TRANSIENT PERFORMANCE OF TF-102 ENGINE WITH UP TO 10 PERCENT CORE AIRBLEED FOR THE QUIET SHORT-RAIL RESEARCH AIRCRAFT.

PRODUCTION ORIENTED MAINTENANCE ORGANIZATION: A CRITICAL ANALYSIS OF SORTIE-GENERATION CAPABILITY AND MAINTENANCE QUALITY.

PRODUCTION ORGANIZATION: A STRATEGIC APPROACH TO OPTIMIZATION.

THE EFFECT OF ADVANCED AIR TRANSPORT TECHNOLOGY ON SYSTEMS DESIGN.

A STUDY OF CHATTING CRUISE.

HYBRID COMPOSITES THAT RETAIN GRAPHITE FIBERS ON BURNING.

AN EXPERIMENTAL AND NUMERICAL INVESTIGATION OF A THREE-DIMENSIONAL SHOCK WAVE SEPARATED TURBULENT BOUNDARY LAYER.

ASYMMETRIC TRAILING-EDGE FLOWS AT HIGH REYNOLDS NUMBER.

ROLL CONTROL BY DIGITALY CONTROLLED SEGMENT SPOILERS.

WING PROFILE DESIGN OF THE WORLD CHAMPIONSHIP SAILPLANE SB 11.

THE IMPACT OF GLOBAL POSITIONING SYSTEM ON COMMERCIAL TRANSPORT AIRCRAFT OPERATIONAL PLANNING.

A LIGHT AIRCRAFT CAMERA POD - THE ENVIRONMENTAL COLLABORATION BETWEEN THE AIRCRAFT AND THE CAMERA SYSTEM.

A STUDY OF CHATTING CRUISE.

A HYBRID AIRCRAFT WITH MULTIPLE ENGINE CONFIGURATIONS FOR THE QUIET SHORT-HAUL RESEARCH AIRCRAFT.

A COLD-AIR INVESTIGATION OF A 4 1/2 STAGE TURBINE WITH STAGE-LOADING FACTOR OF 4.66 AND HIGH SPECIFIC WORK OUTPUT.

A COMPONENT ANALYSIS OF THE RISK TO DOUGLAS COMMERCIAL TRANSPORT AIRCRAFT.

A REVIEW OF THE RISK TO DOUGLAS COMMERCIAL TRANSPORT AIRCRAFT.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.

A STUDY OF CHATTING CRUISE.
BOTTBBL, J. J.
BOSTOB, B. J.
BOS, B.
HOBTBB, I.
HUTTEB, B.
HUTCHISOB, B. A.
BUSfBB, L. I.
BTJSCBKE, B. 8.
HOSBABDS, C. B.
BOBBASS, R.
BOBTBB, I. P.
BOBS, B. I.
HOBT, B. B.
HOHI, J.
BDHI, B. L.
HOH6, B. K.
BUBDBBABB, A. S.

Collection and analysis of in service flight
investigation of internal control laws for
Application of finite element analysis to
The agricultural aircraft PZL-106A and Its testing
Airborne integrated communications systea
The reconstruction of flight paths froa AJDS-data
Aerotberial analysis of a wing-elevon cove with
An investigation of possible electrical hazards of
Approach to the assessment of the hazard
Achieving effective Badar Cross Section flight
Military weather calculations for the BATO
Influence of the heterogeneity of flow at the
Routine maintenance of high life structures
Comparison of international flutter requirements
On site determination of vertical beam location
A computerized method for calculating flutter
The reconnection of flight paths froa AIDS-data
Influence of the heterogeneity of flow at the
Military weather calculations for the NATO
Achieving effective Radar Cross Section flight
Approach to the assessment of the hazard
An investigation of possible electrical hazards of
Investigation of advanced thrust vectoring exhaust systems for high speed propulsive lift
The agricultural aircraft PZL-106A and its testing at the agricultural aviation factory of INTERFLUG
Collection and analysis of in service flight histories of the initiation of fatigue damage
Application of finite element analysis to derivation of structural weight
Investigation of internal control laws for wing/store flutter suppression
dynamic flight measurements

IGAWASAKI, L. A.

Perturbing influence of the probe on the characteristics of a semicircular wake behind a two-dimensional model

p0173 A80-16226

IGOWA, Y. N.

Full scale aircraft simulation with cryogenic tunnels and states of the National Transonic Facility

p0475 A80-93787

ILICHNY, V. V.

The use of the spectral summation of fatigue damages in order to examine the combined stress state of structures

p0203 A80-27152

ILYENKO, K. W.

Estimation of the accuracy of dynamic flight-determined coefficients

[ADIA PAPER 80-0171] p0089 A80-17700

Stall-slip flight results for the remotely piloted spin research vehicle

[AIAA 80-1563] p0515 A80-85862

Determination of an oblique wing aircraft's aerodynamic characteristics

[AIAA 80-1630] p0520 A80-45918

Application of high-alpha control systems to a variable-sweep fighter airplane

[AIAA PAPER 80-1582] p0579 A80-50098

Aircraft identification experience

p0241 A80-19100

ILINSKII, L. V.

Range of applicability and energetic characteristics of small-scale high-pressure-gradient birotational turbines

p0526 A80-47777

IRABUCHI, K.

Rotating stall in a vaned diffuser of a centrifugal fan

p0210 A80-27734

IZABE, H.

Aircraft Maintenance Effectiveness Simulation (AMES) model

[AD-A087516] p0595 H80-31325

IZAKA, A.

Improvement of weapon system performance in air to air and air to ground operation with airborne radar

p0006 A80-11170

IZBERGAND, R. F.

Dynamic stall on advanced airfoil sections

[AD-A085809] p0541 H80-29252

IZBEHO, M. D.

Atmospheric characteristics of swirl in combustor modules with swirl liquid fuel injectors

[ASME PAPER 80-GT-36] p0457 A80-42164

IZBRAH, B. C.

Flight evaluation of configuration management system concepts during transition to the landing approach for a powered-lift STOL aircraft

[SARS-TR-01146] p0245 A80-19127

IZUKAI, G. J.

Elevated temperature structural testing of advanced missiles

p0335 A80-35093

IZUEK, S. C.

A hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands

[SARS-CAES-LAR-12412-1] p0038 H80-11065

IZUESE, L. A.

Application of ECS guidelines to weight effective aircraft design

[SAVE PAPER 1270] p0193 A80-20626

IZUVOKA, M.

New possibilities offered by a radio-inertial hybrid guidance system digital simulation study

p0255 H80-19836

IZUMI, K. L.

Propeller proptor optimization based upon analytical and experimental methods

[AIAA PAPER 80-1281] p0505 A80-94109

IZUKADO, V. Y.

Pressure in a liquid from a gas bubble generated by blasting a high-explosive in an inertially sealed parabolic chamber

p0564 A80-47807

IZUYA, Y. V.

Selecting the geometric parameters and position of a nose flap on the root profile of a swept wing using tunnel test data, part 2

p0018 H80-10044

Selection of geometric parameters and location of nose flap on swept wing root profile from tunnel test data

p0336 H80-11009

IZUTDA, N.

On the pressure losses due to the tip clearance of centrifugal blowers

[AIAA PAPER 80-05-139] p0462 A80-42252

IZUGKO, N.

Asynchronous vibration problem of centrifugal compressor

p0557 H80-29713

IZUKABA, K.

Experimental investigations on the vibration of blades due to a rotating stall

p0337 A80-35912

IZUMI, A.

Local laminarization in turbulent diffusion flames

p0185 A80-24249

IZUKABA, K.

Study and experimental tests of fibrous acoustic treatment for reduction of fan noise from Y3-1 turbofan engine

[AIAA PAPER 80-0988] p0337 A80-35953

IZUKIYAMA, E.

Development of simulator instructional feature design guidelines

[AD-A084428] p0537 H80-28379

IZUKENO, T.

Structural analysis of hollow blades: Torsional stress analysis of hollow fan blades for aircraft jet engines

[SARS-TR-75718] p0242 H80-19111

IZUKO, L. H.

Beach scale dynamic evaluation apparatus for integral fuel tank seals

[AIAA 79-0810] p0619 A80-52647

Dynamic evaluation of experimental integral fuel tank seals, part 1

[AD-A088573] p0651 H80-33573

IZUKO, L. S.

Hardware-in-the-loop simulation of a digital autopilot

p0578 A80-49830

IZUKIYAMA, N.

Heat transfer of the critical air flow in a nozzle. IV - The flow and heat transfer characteristics of an accelerated transonic air flow in a divergent nozzle

p0566 A80-47463

ITO, H.

Asynchronous vibration problem of centrifugal compressor

p0557 H80-29713

ITO, S.

Aerodynamic loss in a gas turbine stage with film cooling

[ASME PAPER 80-GT-38] p0457 A80-42171

ITUKHOSKII, B. P.

An engine fuel chemistry solution to the problem of jet fuel supplies

p0002 A80-10199

IVANOV, G. E.

Experimental investigation of the flow past a wing of finite width

p0262 A80-29222

IVANOV, V. F.

Free vibrations of a turbomachinery rotor as a system of structural rotational symmetry

p0409 A80-39912

IVANOV, V. G.

Basic problem of aircraft gas turbine engine analytic design, part 1

p0018 H80-10042

Optimal thermodynamic design of gas turbine engines using element prototypes, part 1

p0033 H80-11007

IVANOV, M. M.

Computer calculation of stationary temperature fields in air-cooled turbine rotor blades

p0003 A80-10612

IWATA, A.

A possible effect of atmospheric waves on 100 kHz loran-C signals

p0578 A80-49678
J

JACKSON, A.
Standard avionics packaging, mounting, and cooling [AIAA 80-0948] p0420 880-24512

JACKSON, A. C.
Durability and consistency of composite components [AIAA 80-0811] p0334 880-35052

JACKSON, J. E.
Thermostructural analyses of structural concepts for hypersonic cruise vehicles [AIAA PAPER 80-0407] p0162 880-23950

JACOB, T. A.
Fuel character effects on the JT9 and F101 engine combustion systems [AIAA PAPER 80-0404] p0548 880-29312

JACOB, D. O.
Advanced electronic warfare test set - Ballistic [AIAA PAPER 80-0156] p0094 880-19287

JACOB, I. D.
Evaluating and minimizing noise impact due to aircraft flyover [NASA-CR-153187] p0371 880-23784

JACOB, R. C.
Avionics Reliability, Its Techniques and Related Disciplines [AGARD-CP-261] p0250 880-19519

JACOB, R. J.
Sonic fatigue design data for bonded aluminum aircraft structures [AIAA PAPER 80-0303] p0094 880-18304

JACOB, D. G.
Flight evaluation of nondimensional static longitudinal stability test methods [AIAA PAPER 80-0156] p0100 880-19287

JADK, S.
The effect of viewing time, time to encounter, and practice on perception of aircraft separation on a cockpit display of traffic information [NASA-TM-81773] p0224 880-18038

JABOT, H.

JAJ, A. L.
Heating, mass and momentum transfer through sprays [AIAA PAPER 80-0156] p0229 880-19519

JABB, A.
A computer code to model swept wings in an adaptive wall transonic wind tunnel [AIAA PAPER 80-0156] p0100 880-19287

JAKKIRA, D. S.
Summary of theoretical and experimental investigations of vortex lift at high angles of attack [AD-A074405] p0168 880-16037

JALEKIS, J. J.
Aircraft carrier exposure tests of aluminum alloys [AIAA PAPER 80-0156] p0368 880-23433

Jorre, C. J.
A non-Gaussian atmospheric turbulence model for flight simulator studies of aircraft handling [AIAA PAPER 80-0156] p0557 880-29715

Stability problems of rotor systems p0608 880-31663

JASON, T.
Aerospace vehicle detection /ADV/ - Design trade-offs p0402 880-39109

JAP, C.
Towards a reliable air traffic control p0408 880-39592

JAP, E.
Aircraft turbine oils - Problems and future aspects p045 880-40972

JAPKE, W.
An overvoltage safety system for direct current aircraft generators p0098 880-19051

JARVE, W. F.
Development of improved abradable compressor gas path seal [AIAA PAPER 80-1717] p0044 880-11474

JARVE, P. D.
Novel ceramic receiver for solar Brayton systems [AIAA PAPER 80-1382] p0085 880-13694

JARVIS, R. C.

JARVIS, E. F.
Improved packaging for the LN-31 inertial measurement unit (Y-15 aircraft) [AIAA PAPER 80-23293] p0362 880-22393

JARVYSEK, S.
Analysis of the influence of design parameters on the characteristics of an aircraft in spinning nose dive. I [AIAA PAPER 80-1270] p0066 880-42799

JARVYSEK, S.
Analysis of the influence of structural parameters on the properties of an aircraft in downwind spin. II p0569 880-48123

JAVARDI, S. H.
Composition structure of burning sprays of Jet A fuel and its emulsions with water [NASA-CP-57] p0459 880-42188

JEATKUSCH, V.
Verification of the experimentally determined laminar-turbulent transition on a swept wing p0057 880-12046

JEAT, A.
Effect of time dependent flight loads on JT9-7 performance deterioration p0033 880-10351

JEAT, R. L.
Time-variant aerodynamics for torsional motion of large-turning airfoils [AD-A03736] p0087 880-27829

JEAYSE, D. N.
V/STOL avionics system flight-test data on a new Mi-24 helicopter [NASA-TM-8591] p0225 880-18047

JEFFERT, R. W.
Measurements of the dynamic performance of the main drive fan of the ECO 5 metre pressurised low-speed wind tunnel [AIAA PAPER 80-0456] p0200 880-26596

JEFFERT, R. W.
A system for the measurement of the attitude of wind tunnel models [AIAA PAPER 80-0456] p0201 880-26592

JELLY, A. H.
Airframe self-noise studies on the Lockheed L 1011 TriStar aircraft [AIAA PAPER 80-1061] p0391 880-36000

JENSEN, L. A.
Recent developments in aerothermodynamic test techniques at the AEVC von Karman gas dynamics facility p0263 880-29477

JENNIS, R. C.
VTOL in-ground effect flight for closely spaced jets [AIAA PAPER 80-1088] p0529 880-56693

JENNIS, R. W.
A Doppler technique for measuring an aircraft's velocity from the spectrum of its RF transmissions [AIAA PAPER 80-14495] p0050 880-14495

JENNIS, R. W.
Flight evaluation of non-dimensional static longitudinal stability test methods p0050 880-14495
JOHNSON, K. G.
Pseudosteady state analysis of nonlinear aircraft maneuvers  
[AIAA 80-1600] p0518 880-45593
JOHNSON, K. B.
Comparison of measured data with HP-77 propagation model predictions  
[AD-A076508] p0228 880-18259
JOHNSON, R. M.
A study of two avionics life cycle cost models and their applicability in the  
communications-electronics-astronautical environment  
[AD-A076981] p0292 880-20268
JOHNSON, K. M.
A computer code to model swept wings in an adaptive wall transonic wind tunnel  
[AIAA PAPER 80-0156] p0100 880-19287
JOHNSON, R. N.
Aircraft survival design guide. Volume 5: Aircraft postcrash survival  
[AD-A089513] p0432 880-25308
JOHNSON, N. D.
Gas path seal  
[NASA-CASE-RPO-12131-3] p0230 880-18400
JOHNSON, R. H.
Development of aiding GPS/strapdown inertial navigation system  
[78S0-1802] p0112 880-16031
JOHNSON, R. M.
Helicopter electro-optical system display requirements. 2: Performance of helicopter pilots when using a low-light-level television system during simulated nap-of-the-earth flight  
[AD-A086855] p0090 880-30308
Helicopter electro-optical system display requirements. 3: The effects of CRT display size and luminance on dark adaptation of helicopter pilots  
[AD-A086527] p0635 880-32391
JOHNSON, R. D., JR.
Investigation of leading-edge devices for drag reduction of a 60-deg. delta wing at high angles of attack  
[AIAA PAPER 80-0310] p0094 880-18309
JOHNSON, V. E.
Minimum time turns with thrust reversal  
[AIAA 80-1595] p0517 880-45888
Minimum time turns with thrust reversal  
[AIAA 80-1595] p0517 880-45888
JOHNSON, W.
Application of unsteady airfoil theory to rotary wings  
[p0217 880-28856
Comparison of calculated and measured model rotor loading and wake geometry  
A comprehensive analytical model of rotorcraft aerodynamics and dynamics. Part 1: Analysis development  
[NASA-TM-81182] p0529 880-28296
A comprehensive analytical model of rotorcraft aerodynamics and dynamics. Part 2: User's manual  
A comprehensive analytical model of rotorcraft aerodynamics and dynamics. Part 3: Program manual  
Comparison of calculated and measured blade loads on a full-scale tilting propceptor in a wind tunnel  
[NASA-TM-81122] p0602 880-33186
Comparison of calculated and measured helicopter rotor lateral flapping angles  
[NASA-TM-81213] p0641 880-33349
JOHNSON, D. E.
Effects of the aerodynamic cross-coupling and lateral acceleration derivatives on airplane dynamic characteristics  
[AIAA PAPER 80-0170] p0089 880-17699
High-angle-of-attack flying qualities - An overview of current design considerations  
[SAE PAPER 791085] p0195 880-26640
JOHNSON, R. A.
Quiet Clean Short-haul Experimental Engine (QCSEE) Under-The-Wing (UTW) composite nacelle subsystem test report  
[NASA-CR-135075] p0133 880-15100
 Quiet Clean Short-haul Experimental Engine (QCSEE) Under-The-Wing (UTW) composite nacelle

JOHNSON, J. P.
Propeller signatures and their use  
[AIAA PAPER 80-1635] p0340 880-35893
JOHNSON, P. J.
Straight-walled, two-dimensional diffusers - Transitory stall and peak pressure recovery  
[78S0-1802] p0211 880-27746
An experimental investigation of two large annular diffusers with swirling and distorted inflow  
[AIAA 80-1628] p0219 880-17904
JOHNSON, R. H.
The economic impact of materials technology on supersonic transport selection  
[AIAA PAPER 80-1842] p0470 880-43300
JOHNSON, R. P.
Future trends in subsonic transport energy efficient turbofan engines  
[AIAA PAPER 80-2717] p0464 880-42283
JOHNSON, J. C.
A standardization evaluation potential study of the common multi-mode radar program  
[AD-A076768] p0296 880-20459
JONES, K.
Roll control by digitally controlled segment spoilers  
[78S0-15156] p0104 880-15156
JONES, A. B.
Rotor-bearing dynamics technology design guide. Part 4: Cylindrical roller bearings  
[AD-A082355] p0440 880-25662
JONES, P. C.
Operations manual: Vertical Motion Simulator (VMS) 5.08  
[NASA-TM-81180] p0362 880-23295
JONES, C.
Multi-fuel rotary aircraft engine  
[AIAA PAPER 80-1237] p0400 880-30892
Advanced rotary engine studies  
[78S0-22339] p0352 880-22339
JONES, D.
On the use of vibration self-damping materials in the manufacture of parts for rotating machinery  
[p0121 880-14135
JONES, D., J. G.
Vibrations of a compressor blade with slip at the root  
[p0183 880-17263
Viscoelastic damping in USAF applications  
[p0253 880-19582
Vibrations of a compressor blade with slip at the root  
[AD-A086652] p0591 880-30312
JONES, D. L.
MDS - The right tool for small test jobs  
[p0205 880-27230
JONES, E.
The effects of leading edge modifications on the post-stall characteristics of wings  
[AIAA PAPER 80-0199] p0097 880-18375
JONES, R. J.
Design to life cycle costs interaction of engine and aircraft  
[p0598 880-3134] p0124 880-18375
JONES, R. E.
The interrelationships between engineering development simulation and flight simulation  
[p0005 880-10777
JONES, G.
Investigation into the reliability of various fuel, hydraulic and air conditioning components in military aircraft  
[p0149 880-21240
JONES, R. E.
Computer program to prepare airfoil characteristic data for use in helicopter performance calculations  
[NASA-TM-78627] p0126 880-15031
JONES, R. H.
Magnetic position and orientation tracking system  
[NASA-CASE-HPO-12131-3] p0135 880-15119
JONES, E. S., JR.
Some novel design techniques for conformal antennas  
[p0053 880-18950
JONES, J. C.
Implications of requiring new production of older
a design study in crack patching

comparison of several inflow control devices for

a special crack tip element for three-dimensional

crack problems

[APL/STTRC-MEM-8774]

a design study in crack patching

[APL/STTRC-MEM-8776]

emission reduction

[job6] 80-10207

never users of older aircraft

[job6] 80-41790

the performance estimation of an axial-flow

compressor stage using theoretically derived

blade element characteristics with experimental

comparison

[job6] 80-13566

some observations on supersonic wing design

[AIAA 80-1000]

wing chapling with minima energy

[NASA-TM-81174]

application of flight simulator record/playback

feature

[jaa] 80-26353

comparison of several inflow control devices for

flight simulation of fan tone noise using a

JT15D-1 engine

[AIAA PAPER 80-1025]

predictions of the flow field and local gas

composition in gas turbine combustors

[job6] 80-38640

mathematical modelling of gas-turbine combustion

chambers

[job6] 80-11773

a resin injection technique for the fabrication of

eaero-engine composite components

[job6] 80-47206

ferrographic and spectrographic analysis of oil

sampled before and after failure of a jet engine

[NASA-TM-81490]

aspects of flight test instrumentation

[job6] 80-19908

analysis of aircraft performance stability and

control measures

[job6] 80-19999

establishment of engineering design data for

hybrid steel/ceramic ball bearings

[AIAA 80-08934]

development of test methods for scale model

simulation of aerial inspections in the NASA

Langley Vortex Facility

[AIAA 80-08272]

development of test methods for scale model

simulation of aerial inspections in the NASA

Langley Vortex Research Facility

[NASA-TM-81805]

development of model in the vicinity of airports. Application

to various airports: Orly and Roins-en-France

[job6] 80-28952

a long European experience - The adhesive bonding of

metals

[AIAA PAPER WT 79-27]

the nonlinear impedance of perforated walls in the

case of two-pure-tone excitation

[jobs] 80-26435

situation of welding in engine maintenance

[jobs] 80-16966

computer prediction of three-dimensional potential

flow fields in which aircraft propellers operate: Computer program description and users

manual

[NASA-CR-162816]

design and experimental results using the

INTEL 8080/8085 microprocessors

[job6] 80-26315

experimental investigation of flutter in mid-stage

compressor designs

[AIAA 80-0786]

K

aerodynamic characteristics of a concave

large-aspect-ratio trapezoidal profile in a

monochromatic free-molecular rarefied-gas flow

in the case of specular-reflection interactions

[job6] 80-30882

the aerodynamic characteristics of oscillating

airfoils

[job6] 80-45701

calculation of radial-axial turbine wheel thermal

and stress states

[jobs] 80-35073

aerodynamic investigations of a bypass turbofan

stage

[job6] 80-47371

aerodynamic investigations of a bypass turbofan

stage

[job6] 80-47371

wind tunnel design and performance for rough wall

turbulent boundary layer

[job6] 80-21980

effect of wake-type nonuniform inlet velocity

profiles on first appreciable stall in plane-wall diffusers

[job6] 80-27747

the aircraft, the pilot, and flight safety

[job6] 80-30438

aircraft radio equipment adjustment and

maintenance technology

[jobs] 80-32845

an automatic fault identifcation system (AFIS)

on board

[job6] 80-25289

an assessment of the risk arising from electrical

[job6] 80-19201


KENDALL, J. N.

Noise generation by a lifting wing/flap combination at Reynolds numbers to 2.8 x 10 to the 6th power [AIAA 80-0035] p0156 A80-22729

KENNEDY, C. V.

Nonelectronic aspects of avionic system reliability [AIAA 80-19535] p0251 B80-29352

KENNEDY, P.

The fabrication and properties of KEPEL silicon carbide in relation to gas turbine components [AIAA 80-29352] p0553 B80-29352

KENNEDY, P. J.

Further encounters with clear air turbulence in research aircraft [AIAA 80-3070] p0402 A80-3070

KENNEDY, J. E.

The Surface Contour Radar, a unique remote sensing instrument [AIAA 80-26005] p0192 B80-26005

KENNEDY, J. B.

Non-steady flow thrust-augmenter ejector [AIAA 80-32454] p0284 A80-32454

KENNEDY, J. S.

An evaluation of the bird/aircraft strike hazard at selected United Kingdom bases: RAF Mildenhall, RAF Alconbury, RAF Upper Heyford, RAF Bentwaters, RAF Fairford, RAF Lakenheath, and RAF Woodbridge [AD-A073062] p0069 B80-12077

An evaluation of the bird/aircraft strike hazard at Backdale Air Force Base, Louisiana (SAC) [AD-A073830] p0115 B80-14063

KENNYFIELD, J. A. C.


KENNAN, B. Y.

Installation effects on cycle selection for small turbofan engines [AIAA 80-0106] p0099 A80-19280

KENN, C. A.

Nonoperating failure rates for avionic study [AD-A087908] p0590 B80-30309

KERNODLESKII, I. S.

Elastic ribbons based on thermally stable low-modulus fibers for the autoclaveless forming of glass-plastic aircraft components [AIAA 80-38759] p0395 A80-38759

KEEB, J. E.

Time-temperature-stress capabilities of composite materials for advanced superpersonic technology application, phase 1 [AIAA 80-33496] p0651 B80-33496

KEEBREHDEC, J. L.

Flow in transonic compressors [AIAA 80-0124] p0096 A80-18357

Preliminary measurements of aerodynamic damping of a transonic compressor rotor [AIAA 80-36152] p0343 A80-36152

KEESBRIER, H. J.

Fan noise caused by the ingestion of anisotropic turbulence - A model based on axisymmetric turbulence theory [AIAA 80-1021] p0339 A80-35977

KEESVAN, W. R.

Acoustic fatigue failure of inlet guide vanes due to intake flow distortions in an aircraft engine [AIAA 80-16099] p0059 A80-16099

KEES, D. A.

Determination of instrumentation errors from measured data using maxian likelihood method [AIAA 80-1602] p0518 A80-45595

Inclusion of unsteady aerodynamics in longitudinal parameter estimation from flight data [AIAA 80-1536] p0076 B80-12995

Maxwell likelihood identification of aircraft maneuver with unsteady aerodynamic modelling [AIAA 80-16027] p0167 B80-16027

KEESTER, A. S.


KETCHAM, S. J.

Aircraft carrier exposure tests of aluminum alloys [AIAA 80-23433] p0368 B80-23433

KEY, D. L.

A critique of handling qualities specifications for U.S. military helicopters [AIAA 80-1592] p0517 A80-45887

Key, K. F.

Effects of concentration interference on annoyance due to aircraft noise [AIAA 79-TF-1712] p0550 B80-29911

KEYS, N. D.

Test and evaluation of graphite/epoxy composite structures [AIAA 80-12123] p0072 B80-12123

KESIBS, G. L., JH.

Simulated vortex encounters by a twin-engine commercial transport aircraft during final approach [AIAA 80-0221] p0229 B80-16037


Preliminary results of simulated vortex encounters by a twin-engine, commercial aircraft during final landing approach [AIAA 79-TF-1752] p0078 B80-26285

Preliminary investigation of cockpit-displayed traffic information utilizing coded symbology in an advanced operational environment [AIAA 79-TF-1752] p0096 B80-27360

KEHIBLULBB, H. G.

Pneumatic distributor for turbojet engine control system [AIAA 80-10635] p0004 A80-10635

Some characteristics of the operation of TF3 with reverser during airplane landing [AIAA 80-25190] p0016 B80-25190

Pneumatic distributor for turbojet engine control system [AIAA 80-10091] p0021 B80-10091

KHALIK, N. E.

Reliability of aircraft disconnect joints [AIAA 80-16594] p0060 B80-16594

KHALIVKOB, H. N.

On determining the temperatures at given points of cooled turbine blades made from multilayer perforated materials [AIAA 80-15189] p0066 B80-15189

KHALITZKII, I. D.

Experimental study of fan-noise silencers of aircraft turbojet engines [AIAA 80-34398] p0326 A80-34398

Experimental investigation of sound absorption in a flow-carrying channel with a sound-absorbing lining [AIAA 80-34399] p0326 A80-34399

KHALID, H.

Stability derivatives of blunt slender cones at high Mach numbers [AIAA 80-13571] p0048 A80-13571

High Mach number dynamic stability of pointed cones at small angles of attack [AIAA 80-15189] p0015 A80-15189

KHALID, S. J.

Enhancing dynamic model fidelity for improved prediction of turbofan engine transient performance [AIAA 80-10083] p0397 A80-38900

KHARIMDILLOV, F. A.

Cooperative analysis of the basic combustion characteristics of some heavy hydrocarbon fuels in application to aircraft gas turbine engines [AIAA 80-47424] p0565 A80-47424

Dynamics of diesel fuel combustion in turbulent flow [AIAA 80-10074] p0020 B80-10074

KHAPIN, N. E.

Airborne semiconductor radiometers [AIAA 80-14196] p0049 A80-14196

Aircraft radiometers based on semiconductor devices [AIAA 80-52205] p0618 A80-52205

KHARK, J. H.


KHARIMHOV, I. E.

An experimental method for investigating the mutual aerodynamic interference of aircraft components at supersonic velocities [AIAA 80-10125] p0023 B80-10125

B-76
Optimized discretization of two-dimensional continuous contours

Study of the actual influence of combined powerplant air passage inlet channels

Integral methods of solving thermal conduction problems and their application to heat exchange calculations in gas turbine engine components

Optimal design studies on composite wings with static and dynamic constraints

Gasdynamic analysis of gas-turbine combustion chambers with graduated air admission

Geodynamic analysis of gas-turbine combustion chambers with graduated air admission

Numerical optimization of circulation control airfoils

Numerical optimization of circulation control airfoils

Advanced technology components for model GTP305-2 aircraft auxiliary power system

Investigations on unsteady pressure distribution measurements in rotating systems

Angular vibration of aircraft. Volume 1: Executive summary

Angular vibration of aircraft. Volume 2: Prediction methods for angular vibration

LSI radar signal processor

An empirical approach for checking flutter stability of gliders and light aircraft

Problems involved in the detection of aircraft defects

Design of perfect model following systems by geometric approach

Advanced digital data processing for onboard missile guidance and control

Full scale aircraft simulation with cryogenic tunnels and status of the National Transonic Facility

Development of the cryogenic tunnel concept and application to the US National Transonic Facility

Magnetic suspension and balance system: A selective annotated bibliography

Cryogenic wind tunnels: A selected, annotated bibliography

Instrumentation for calibration and control of a continuous-flow cryogenic tunnel

Thermal-structural design study of an airframe-integrated scramjet

Remote sensing of turbine engine gases

Noise due to tip vortex formation on lifting rotors

Improved gas turbine engine maintenance through management and analysis of engine performance data

In-flight performance evaluation of experimental information

Software for a correlation velocity sensor

Survey of forced and precautionary landing costs

The on route alternate and a rational basis for contingency fuel

A new procedure for linear optimal flight control

Measurement of shock waves around a delta-wing semicone

Reliability pays off

Instrumentation for a tactical aircraft air-to-ground full-mission simulation

Calculations of transonic flow about an airfoil in a wind tunnel

Airflow measurements in a large irregularly shaped tunnel using anemometer and pitot-static tube traverse

Silicon nitride turbine blade development

On wings of circular design

Thermal information processing system

Contact research on aerodynamic problems of turbomachinery vanes
Boundary layer studies on highly loaded cascades using heated thin films and a traversing probe [ASME Papers 80-GT-137] p0062 A80-42250
Experimental investigation of the particle-number concentration in the wind tunnel for use of the laser anemometry [DFVLR-FB-79-28] p0554 A80-25352
KHALIL, L. J.
Digital system for dynamic turbine engine blade displacement measurements p0343 A80-36151
KIECHBAUM, H. H.
Acousto-optic devices for use in radio frequency target simulators p0508 A80-45514
KIEZIAKOFF, A. A.
Effect of naphthenic aromatic hydrocarbons on the oxidizability of hydrogenated jet fuel p0088 A80-17675
KIK, C. U.
An integrated strapdown guidance and control system for launch vehicle application p0088 A80-17559
KIK, H. G.
Analysis and identification of subsynchronous vibration for a high pressure parallel flow centrifugal compressor p0557 B80-29710
KIKERAN, R. B.
Medical and toxicological factors in aircraft accidents [ASA-TR-87690] p0601 B80-31373
Aircraft crashworthiness studies: Findings in accidents involving an aerial application aircraft [ASA-TR-86410] p0629 B80-32356
KISBERBAUM, B. H.
Wind-turbine power improvement with modern airfoil sections and multiple-speed generators [ASA-TR-90-5533] p0247 A80-28819
KISBERBAUM, W. V.
The autonomous airship - An integrated whole system p0043 A80-35929
KISBENKO, B. A.
Synthesis of piloting properties of training simulators with allowance for the human factor p0465 B80-42342
KISBERBAUM, R. A.
Definition of a two level control system for nonlinear aircraft motion [ONERA-BT-1979-7] p0355 B80-22364
Definition of a two-level control system for nonlinear motion of an aircraft [ESA-FT-614] p0367 B80-23330
KISER, J. J.
AB-16 lateral flight performance test [AD-1072688] p0070 B80-12088
KISER, L. G.
Air Research CAGT engine: Acoustic test results p0351 B80-22330
KISTLER, R. H.
KITTNER, D. C.
Aeronautical systems technology needs: Escape, rescue and survival [AD-1074906] p0114 B80-19651
Aeronautical systems technology needs: Escape, rescue and survival [AD-1083552] p0478 B80-26288
Aeronautical systems technology needs: Test facilities and test equipment [AD-1083551] p0094 B80-26336
KJELGAARD, S. O.
Effect of sweep and aspect ratio on the longitudinal aerodynamics of a spanloaded wing in and out of ground effect [NASA-TM-80199] p0220 B80-17993
KLAJJER, J. J.
Influence of noise reduction on weight and cost of general aviation propellers [AD-102120] p0497 B80-27366
KLAUER, D. W.
Experimental investigation of the strength of rotor materials in the presence of surface cracks p0003 A80-10462
Experimental investigation of the strength of rotor materials with surface cracks p0108 A80-32044
KLEBAUER, R.
A theoretical investigation of the shock location on an axisymmetric body and on a two dimensional airfoil in transonic flows affected by axial pressure gradients and shifts in pressure level [NASA-FD-126/5/F/269] p0587 B80-30283
KLEMBRNER, R.
Wire obstacle warning system /WOWS/ - A real-time airborne sensor for automatic detection and recognition of wirelike objects p0007 A80-37240
KLEIDER, A.
Wire obstacle warning system /WOWS/- A real-time airborne sensor for automatic detection and recognition of wirelike objects p0007 A80-17402
KLEIN, E. H.
Development of aerodynamic disturbance test procedures, volume 1: Executive summary [PB80-10814] p0801 A80-19991
KLEIN, V.
Determination of instrumentation errors from measured data using maximum likelihood method [ASA-TR-80-1602] p0528 A80-45285
Identification evaluation methods p0240 B80-19096
Maximum likelihood method for estimating airplane stability and control parameters from flight data in frequency domain [ASA-TR-9167] p0421 B80-24232
KLEIN, B.
Aircraft Maintenance Effectiveness Simulation (AMES) model [AD-108516] p0595 B80-31325
KLEINBERG, D.
Closed loop models for analyzing engineering requirements for simulators [NASA-CR-2965] p0235 B80-19663
KLEIN, E.
The maintenance of transport aircraft at Air France p0407 B80-39563
KLEINS, M. S.
A description of a velocity-damped Schuler erected AHES system p0283 B80-32469
KLEYSE, R.
Temperature field as a means of evaluating excitation intensity of aircraft turbine blades p0618 B80-52193
KELYNS, J. L.
Instrumentation and techniques for parachute wind tunnel testing p0264 B80-29498
KELLY, J. L.
Axial compressor exit guide apparatus with sudden passage expansion at the entrance p0565 B80-67435
KLEIN, B. N.
An analysis of the evolution of the reliability and maintainability disciplines p0250 B80-19520
KLEIN, A. P.
Hybrid bearings for aircraft engines p0616 B80-51597
KLOCHEN, K. H.
Use of sign statistics for sequential signal detection in a pulse radar system p0011 B80-12031
KLOPEL, R.
Blade excitation by elliptical whirling in viscous-damped jet engines [ASME Papers 80-GT-168] p0446 B80-42277
KLOKIS, J. H.
Plane unsteady flow of inviscid and incompressible fluid around a system of profiles p0391 B80-38273
**PERSONAL AUTHOR INDEX**

- KOBAN, E. D.
  - A theoretical and experimental investigation of propeller performance methodologies
  - [AIAA PAPER 80-1260] p0468 A80-31283
  - An acoustic sensitivity study of general aviation propellers
  - [AIAA PAPER 80-1871] p0580 A80-50191
  - Propeller aeroacoustic methodologies
  - p0352 A80-22346

- KOBAN, R. F.
  - Data reduction and analysis of graphite fiber release experiments
  - [NASA CR-159032] p0234 A80-19048

- KOBAN, V. A.
  - Core compressor exit stage study, 2
  - [NASA CR-159812] p0364 A80-23312
  - Long-life GTS operation based on technical condition
  - p0017 A80-10027

- KOBANE, V. A.
  - Aerodynamic efficiency of gas turbine intake duct
  - p0020 A80-10077

- KOBAN, V. A.
  - Alkyl derivatives of resorcinol used as antioxidants in jet fuels
  - p0336 A80-35601

- KOBAN, V. B.
  - An experimental investigation of endwall profiling in a turbine vane cascade
  - [AIAA PAPER 80-1068] p0397 A80-38094

- KOBAN, Z.
  - A theoretical study of tilt proprotor aircraft dynamics in airplane cruise configuration
  - including the effects of fuselage longitudinal rigid body motion
  - p0363 A80-23297

- KOBAN, Z. A.
  - The reliability of the mechanical components of flight vehicles
  - p0158 A80-23086

- KOBAN, Z. A.
  - Performance variations in high aspect ratio subsonic diffusers due to geometric constraints in supersonic tactical aircraft inlet installations
  - [AIAA PAPER 80-1106] p0447 A80-81180

- KOBAN, Z. A.
  - Constraints on the strength of asphalt pavement
  - p0326 A80-34400

- KOBAN, Z. A.
  - Acoustic effects on the flow and the noise spectra of supersonic jets
  - p0326 A80-34402

- KOBAN, Z. A.
  - A system for measuring and recording wind-tunnel balance data
  - p0191 A80-25221

- KOBAN, Z. A.
  - Future V/STOL airplanes: Guidelines and techniques for acquisition program analysis and evaluation, executive summary
  - [AD-A082424] p0421 880-21326

- KOBAN, Z. A.
  - Interactive design system for aircraft dynamic control problems
  - [AVIATION/80-1240] p0468 A80-43283

- KOBAN, Z. A.
  - Aerodynamic investigations of a bypass turbofan stage
  - p0563 A80-47371

- KOBAN, Z. A.
  - Shock loading on reinforced splice joints of ultra high modulus graphite/epoxy composite structure
  - p0329 A80-33411

- KOBAN, Z. A.
  - Test and evaluation of graphite/epoxy composite structure
  - p0072 B80-12123

- KOBAN, Z. A.
  - An analytical method of testing pavement strength
  - p0091 A80-17998

- KOBAN, Z. A.
  - A system for measuring and recording wind-tunnel balance data
  - p0191 A80-25221

- KOBAN, Z. A.
  - Theoretical fundamentals of long distance flight vehicles
  - p0375 A80-36770
  - Theoretical principles of long distance flight vehicles
  - p0375 A80-36772

- KOBAN, Z. A.
  - Stability and control aspects of the CCF-P104G
  - [BBB-FE-324/S/PDB/11] p0483 H80-26329
  - Interactive aided design system for aircraft dynamic control problems
  - p0301 B80-12724
  - Interactive design system for aircraft dynamic control problems
  - p0301 B80-12724

- KOBAN, Z. A.
  - Application of the method of exoelectron emission to the quality control of gas-turbine engine components
  - p0365 A80-35601

- KOBAN, Z. A.
  - Heat transfer to a plane wall from a heated, ventilated plane jet
  - p0263 A80-29469

- KOBAN, Z. A.
  - Investigation of the stress distribution in the surface layer of aircraft engine components
  - p0325 A80-34235

- KOBAN, Z. A.
  - Engine parameter trend analysis by LEADS 200: Possibilities and limitations
  - p0429 B80-25277

- KOBAN, Z. A.
  - Common Lycoming GCGAT program design cycle, demonstrated performance and emissions
  - p0351 B80-22332

- KOBAN, Z. A.
  - Aerodynamic performance of a centrifugal compressor with vane diffusers
  - p0210 A80-27735

- KOBAN, Z. A.
  - Plane stabilization by impinging jets in high-speed flow
  - p0566 A80-47437

- KOBAN, Z. A.
  - Geometry of circulation zones downstream of bluff bodies and gasdynamic screens of various forms and blockage ratios
  - p0616 A80-51898

- KOBAN, Z. A.
  - Viscous flowfields induced by two- and three-dimensional lift jets in ground effect
  - [AD-A078782] p0229 B80-18343

**KOBAN, A. P.**

- Axial compressor exit guide apparatus with sudden passage expansion at the entrance
  - p0277 A80-31388

**KOBAN, E. D.**

- An analytical study of tilt proprotor aircraft dynamics in airplane cruise configuration
  - p0565 A80-47435

- Improvement of control system dynamics of means of additional hydraulic load feedback
  - p0149 A80-21260
Concerning the separated flow about an inflating parachute

Calculation of the aerodynamic characteristics of an aircraft at supersonic speeds

On the influence of steady state temperature and pressure disturbance on the flow characteristics in an installed multistage jet engine compressor

Supercavitating hydrofoils with wetted upper sides

Outline of air traffic flow control

Development of high temperature resistant ceramic parts for gas turbines

Effect of the surface state of gas turbine blading when operating on products of combustion of high-sulfur oil

Effect of the surface state of gas turbine blading on the blading's aerodynamic characteristics when operating on products of combustion of high-sulfur oil

Optimised aerodynamic design process for subsonic transport wing fitted with winglets

Unsteady swirling flows in gas turbines

Optimised aerodynamic design process for subsonic transport wing fitted with winglets

Practical method of fatigue crack growth analysis for damage tolerance assessment of aluminum structure in fighter type aircraft

Operation of airborne equipment and flight safety

Gyroscope and optical flight support systems and arrangements

Centralized fueling of aircraft

Minimising axial flow fan noise

A method for assessing the impact of wake vortices of USAF operations

Optimal washout for control of a moving base simulator

Effect of the surface state of gas turbine blading on the blading's aerodynamic characteristics when operating on products of combustion of high-sulfur oil

Stability of nonuniform rotor blades in hover (using a mixed formulation)

Use of an 'off-the-shelf' data acquisition system for wind tunnel data processing

Optimized aerodynamic design process for subsonic transport wing fitted with winglets

Hysteresis of aerodynamic characteristics

Jet interference on supercritical wings. Part 1: Experiments on a two-dimensional wing. Part 2: Experiments on a swept wing

Operation of airborne equipment and flight safety

Experiments on a swept wing

Flight test of all-electronic propulsion control system

Effect of the surface state of gas turbine blading on the blading's aerodynamic characteristics when operating on products of combustion of high-sulfur oil

Minimising axial flow fan noise

Experiments on a two-dimensional wing. Part 2: Experiments on a swept wing (ANC-84-3045)

Experiments on an installed multistage jet engine compressor

Experiments on a swept wing

Stability of nonuniform rotor blades in hover (using a mixed formulation)
On the sound field generated by a fan in a hard-walled baffled duct with uniform flow

Flight test evaluation of airborne tire pressure indicating systems

The analysis of measured surface loads as a basis for the derivation of acceptable load limits for military aircraft components

The study and control of aircraft turbine engine blade vibrations. II

The investigation and monitoring of aircraft engine seals

The optimization of Diesel fuel combustion in turbulent flow

The reliability of the mechanical components of flight vehicles

Selection of assembly clearances for gas-turbine engine seals

Experience in correcting dynamic designs on the basis of resonance test data

Examination of the flap-lag stability of rigid articulated rotor blades

Applying the discrete-phase method /DPH/ to the investigation and monitoring of aircraft turbine engine blade vibrations. I

Application of the discrete-phase method /DPH/ to the investigation and monitoring of aircraft turbine engine blade vibrations. II

The reliability of the mechanical components of flight vehicles

Automation of air navigation and air traffic control systems used in simulation

Recent advances in control loading and motion systems used in simulation

The reliability of the mechanical components of flight vehicles

Experience in correcting dynamic designs on the basis of resonance test data

Examination of the flap-lag stability of rigid articulated rotor blades

Application of the discrete-phase method /DPH/ to the investigation and monitoring of aircraft turbine engine blade vibrations. I

Application of the discrete-phase method /DPH/ to the investigation and monitoring of aircraft turbine engine blade vibrations. II

The analysis of measured surface loads as a basis for the derivation of acceptable load limits for military aircraft components

The study and control of aircraft turbine engine blade vibrations. II

The investigation and monitoring of aircraft engine seals

The optimization of Diesel fuel combustion in turbulent flow

The analysis of measured surface loads as a basis for the derivation of acceptable load limits for military aircraft components

The study and control of aircraft turbine engine blade vibrations. II

The analysis of measured surface loads as a basis for the derivation of acceptable load limits for military aircraft components
LAJOS, T. Pressure rise of axial flow fans with whirling outflow p0217 A80-28852
LAKE, V. Moving surface boundary layer control for aircraft operation at high incidence [AIAA 80-1621] p0519 A80-65909
LAKSHMIKANTHAN, R. Characteristics of lightly loaded fan rotor blade wakes [NASA-CR-3180] p0035 N80-11034
Nature of inlet turbulence and strict flow disturbances and their effect on turbomachinery codes [AD-A084355] p0097 N80-27369
LALABBB, B. On the use of vibration self-damping materials in the manufacture of parts for rotating machinery p0121 N80-16135
LAB, J. E. Development of a vortex-lift-design method and application to a slender maneuver-wing configuration [AIAA PAPER 80-0327] p0094 A80-16316
Water-tunnel and analytical investigation of the effect of strake design variables on strake vortex breakdown characteristics [NASA-TP-1676] p0529 N80-28304
LABBD. B. I. A rotary inverter system for a multiple-electrode HHD generator p0190 A80-25093
LABB, H. A study of panel loads and centers of pressure of three different cruciform aft-tail control surfaces of a wingless missile from Mach 1.60 to 3.70 [NASA-TR-8170] p0358 N80-23251
Effect of Reynolds number on stability characteristics of a cruciform wing-body [NASA-TP-1683] p0467 N80-27203
LABBD. B. I. Aeropotable’s double squirrel Bell tilt-rotor - The strut V/STOL p0060 A80-16397
Europe’s combat aircraft - Will it happen p0157 A80-22763
Helicopters breaking the 200 km barrier - Three systems could do it this decade p0572 A80-68625
LABBD. B. I. Dynamic stall on advanced airfoil sections [AD-A085809] p0541 N80-29252
LABDORSON, J. An analysis of acoustic tone sources upstream of a fan p0274 A80-30809
LABDORSON, W. C. Experimental techniques in unsteady aerodynamics p0641 N80-33373
LAB, C. E. A computer program for calculating aerodynamic characteristics of low aspect-ratio wings with partial leading-edge separation [NASA-CR-165362] p0477 N80-26268
LANHART, G. A. Measuring unsteady pressure on rotating compressor blades p0013 A80-12630
LANCRITT, R. Pilot/vehicle model analysis of visual and motion cue requirements in flight simulation [NASA-CR-3312] p0646 N80-33399
LANDABER, S. Y. Transonic kernel function method for unsteady flow calculations using a unified linear pressure panel procedure [AD-A080227] p0345 N80-22267
LANDER, B. P. Influence of antimisting polymer on aviation fuel breakup [AIAA PAPER 80-1287] p0451 A80-41523
LANDER, J. J. New separator materials for nickel-cadmium aircraft batteries p0571 A80-48848
LANDOR, R. N. Aircraft model store trajectory testing at A.E.A. [DGSE PAPER 79-099] p0455 A80-41907
LANDRUM, R. S. Assessment of analytic methods for the prediction of aerodynamic characteristics of arbitrary bodies at supersonic speeds [AIAA PAPER 80-0071] p101 A80-19308
LANE, J. M. A cooled laminated radial turbine technology demonstration [AIAA PAPER 80-0300] p0156 A80-22740
High temperature radial turbine demonstration [AIAA PAPER 80-0301] p0156 A80-22749
LANE, N. G. Management of a stored program controlled ATC communication system p0387 A80-37694
LANE, N. H. Modeling the human operator: Applications to system cost effectiveness p0256 N80-19984
LANE, J. D. Control and data acquisition aircraft for Alcm flight tests [AIAA 80-0046] p0200 A80-26950
LANE, R. H. Future multi-mission transport aircraft - Requirements and design possibilities [SAND PAPER 791097] p0195 A80-26646
Future large cargo aircraft technology p0207 A80-27269
LANDHAM, T. Y. Aircraft motion sensitivity to dynamic stability derivatives [AD-A079421] p0294 N80-20283
LANDLEY, R. J. The design of axisymmetric cowl for podded scraminers for high by-pass ratio turbofan engines [ARC-5/4-3866] p0603 N80-31394
LANDLEY, R. J. Aircraft nickel-cadmium battery chargers and fault warning systems p0571 A80-48848
LANDGHE, P. Man’s role in the automation of aviation - All weather landing systems p0570 A80-48142
LEUK, R. J.  
Multivariable synthesis with inversions.  
p0164 A80-2426

 Lydia, J. V.  
Implicit model following and parameter identification of unstable aircraft.  
p0214 A80-26019

 LEBBE, D. F.  
Human factors in high-speed low-level accidents:  
A 15 year review  
[AD-A076221]  
p0221 B80-10012  
Human factors in high-speed low-level accidents:  
A 15 year review  
p0559 B80-30013

 LECY, G.  
Finite elements and the optimization of aerocustical structures.  
p0301 B80-21268

 LEDONDE, L. R.  
P-16 avionics intermediate shop/UIS user involvement during development.  
p0270 A80-30029

 LEB-BOYDOL, S.  
Thermodynamics of organic compounds.  
[AD-A080072]  
p0296 B80-20410

 LEE, A. R.  
The YC-14 upper surface blown flap:  
a unique control surface.  
p0140 B80-15157

 LEE, B. G. W.  
Fastener hole quality, volume 1  
[AD-A077859]  
p0255 B80-19567

 LEE, B. H.  
Theoretical analysis of the transient response of a wing to non-stationary buffet loads  
[AD-A073702]  
p0180 B80-17083

 LEE, G. G.  
Low speed aerodynamic characteristics of wings of aspect ratio 3 and 4 equipped with high lift systems.  
[AD-A087768]  
p0628 B80-32347

 LEE, D. W.  
Advanced simulator for pilot training (ASPT):  
G-neat optimization.  
[AD-A049875]  
p0031 B80-10233

 LEE, J.  
Constrained optimum trajectories with specified range.  
p0097 B80-18538

 LEE, J. A.  
Durability testing at 5 atmospheres of advanced catalysts and catalyst supports for gas turbine engine combustors.  
[NASA-Cr-159059]  
p0427 B80-24748

 LEE, R. F.  
Development of advanced avionics systems applicable to terminal-configured vehicles  
[NASA-Cr-3280]  
p0601 B80-31375

 LEE, T. Y.  
Meteorological and air pollution modeling for an urban airport.  
p0466 A80-42659

 LEE, J. D.  
Development of a nozzle to improve the turing of supersonic Coanda jets  
[AD-A087709]  
p0610 B80-31765

 LEE, J. G.  
A plan for developing and validating a gun system design trade-off methodology.  
[AD-A087239]  
p0590 B80-30304

 LEE, K.  
Induced effects of lightning on all composite aircraft.  
p0212 B80-27783

 LEE, K. D.  
Numerical simulation of the wind tunnel environment by a panel method.  
[AIAG 80-0419]  
p0190 A80-26933

 LEE, R.  
Vocabulary specification for automatic speech recognition in aircraft cockpits.  
[AD-A073703]  
p0123 B80-18303

 LEE, R.  
Development of fire-resistant, low smoke generating, thermally stable end items for commercial aircraft and spacecraft using a basic polysilane resin.  
[NASA-Cr-160576]  
p0356 B80-22492

 LEE, R. A.  
Community noise exposure resulting from aircraft operations.  
Volume 7:  Acoustic data on aircraft ground runup noise suppressors.  
[AD-A087301]  
p0502 B80-27837

 LEE, T.  
Test and evaluation of the Airport Surveillance Radar (ASR)-9 wind shear detection system, phase 2  
[AD-A086005]  
p0548 B80-29280

 LEFFER, J. L.  
The Discrete Address Beacon System data link.  
p0282 B80-32435

 LEFFLER, R. F.  
Atomization of broad specification aircraft fuels.  
p0549 B80-29318

 LEFFLER, R. F.  
Development of advanced avionics systems applicable to terminal-configured vehicles.  
[AD-A087648]  
p0601 B80-31375

 LEIGHTON, R.  
Noise emitted by vortex tubes during their development.  
p0621 B80-52913

 LEIGHTON, R. C.  
Noise generated aerodynamically.  
p0316 B80-22238

 LEIGHTON, R. C.  
Noise generated by an eddy.  
p0316 B80-22253

 LEICH, G. C.  
Experimental full-authority digital engine control on Concorde.  
p0481 B80-26308

 LEHAN, J. H.  
A compilation and analysis of helicopter handling qualities data.  
Volume 1:  Data compilation  
[NASA-Cr-3144]  
p0041 B80-11097

 LEHAN, L. O.  
Firebrand anti-ship missile target - Flight test program objectives and vehicle instrumentation requirements.  
p0206 B80-27236

 LEICHE, S.  
Supercritical wing design studies for transport aircraft.  
Volume 2:  Theoretical studies  
[NASA-PF-W-79-07-VOL-2]  
p0346 B80-22276

 LEIGHTON, J. M.  
Airfield packages - A help for developing countries.  
p0048 B80-13482

 LEIGHTON, G.  
Identification and dual adaptive control of a turbojet engine.  
p0001 B80-10033

 LEIGHTON, R.  
Hydrazine or airfield defusers.  
p0048 B80-13485

 LEIGHTON, R.  
Fueling operations as a function of aircraft positioning.  
p0581 B80-50272

 LEIGHTON, R.  
External stores technology in subsonic wind tunnels  
[DGLR PAP-82-79-098]  
p0455 B80-41905

 LEHOCKE, S. G.  
Resonant wave interactions on a swept wing.  
p0062 B80-17006

 LEHMAN, A.  
Aeroacoustic characterization of free jets.  
p0066 B80-12025

 LEHMAN, A.  
Blade-to-blade flow of ideal fluid with wall injection.  
p0315 B80-22228

 LEHMAN, F. E.  
Primary Adhesive Bonded Structure Technology (PABSST).  
Phase 3:  Tooling, fabrication and quality assurance  
[AD-A083228]  
p0099 B80-27486

 LEHMAN, R. R.  
Ceramics for small airborne engine applications.  
p0552 B80-29344

 LEHMAN, R. H.  
Design of a strapdown navigator aided by position measurements.  
p0007 B80-11187

 LEONARD, J. T.  
Charging of jet fuel on polyurethane foams.
LEONARD, P. A.

- Turbopropulsion combustion - Research needs
  (AIAA PAPER 80-GT-164)
- Current and projected use of carbon composites in United States aircraft
  (AIAA PAPER 80-GT-358)
- Application of a microprocessor for aircraft electrical generator control and protection
  (IEEE PAPER 80-382)
- Noise suppressors for jet engine testing
  (AIAA PAPER 80-WAES-28)
- Noise generated aerodynamically
  (AIAA PAPER 80-GT-160)
- Design of a simulator for studying the helicopter - SDVEH
  (AIAA PAPER 80-1573)
- Combustion-gas temperature sensors for turbine and turbojet engines
  (AIAA PAPER 80-1863)
- An operating and support cost model for avionics automatic test equipment
  (AIAA PAPER 80-GT-83)
- Energy conservation and management study of aircraft hangars at selected Air Force Bases
  (AIAA PAPER 80-9075)
- Optimum twisting of blades in axial turbomachines
  (AIAA PAPER 80-GT-160)
- Preliminary evaluation of coal-fired fluid bed combustion-augmented compressed air energy storage power plants
  (AIAA PAPER 80-GT-160)
- Construction of stiffness matrices of thin-wall systems using sliding interpolation
  (AIAA PAPER 80-GT-358)
- A vortex-lattice method for the calculation of the nonsteady separated flow over delta wings
  (AIAA PAPER 80-1803)
- Application of spline approximations to the calculation of wall pressures in three-dimensional supersonic nozzles
  (AIAA PAPER 80-1863)
- Aircraft delays at major U.S. airports can be reduced
  (AIAA PAPER 80-9075)
- Investigation of flows in Laval nozzles at small Reynolds numbers
  (AIAA PAPER 80-1863)
- Cycle optimization for a 10,000 SHP high efficiency gas turbine system
  (AIAA PAPER 80-GT-157)
- Thermal barrier coatings for aircraft gas turbines
  (AIAA PAPER 80-0302)

B-88
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>LENT, S.</td>
<td>An analysis of acoustic tone sources upstream of a fan</td>
<td>p0274</td>
</tr>
<tr>
<td>LETLAND, W.</td>
<td>Modeling the human operator: Applications to system cost effectiveness</td>
<td>p0256</td>
</tr>
<tr>
<td>LI, D. F. K.</td>
<td>Dynamic analysis of complex multi-level flexible rotor systems</td>
<td>p0088</td>
</tr>
<tr>
<td>LI, J. C. N.</td>
<td>Impression fatigue</td>
<td>p0016</td>
</tr>
<tr>
<td>LIANG, D. F.</td>
<td>Development of aiding GPS/stripmap inertial navigation system</td>
<td>p0112</td>
</tr>
<tr>
<td>LAY, N. W.</td>
<td>New materials and helicopter certification</td>
<td>p0379</td>
</tr>
<tr>
<td>LIEBER, V. E.</td>
<td>Generalized approach to aircraft gas turbine engine equivalent test regime determination</td>
<td>p0564</td>
</tr>
<tr>
<td>LIBBERT, S. M.</td>
<td>Design of a turbojet engine controller via eigenvalue/eigenvector assignment - A new</td>
<td>p0164</td>
</tr>
<tr>
<td>LIBADB, J.</td>
<td>Experience in extending the life of gas turbine blades</td>
<td>p0465</td>
</tr>
<tr>
<td>LIOCB, A.</td>
<td>Spline curves and their application to the design of turbomachine blade profiles</td>
<td>p0512</td>
</tr>
<tr>
<td>LISBG, S.</td>
<td>Geometrical design of double-circular arc blades</td>
<td>p0512</td>
</tr>
<tr>
<td>LIIDBB, C. O.</td>
<td>V/STOL land avionics flight-test data on a UH-18 helicopter</td>
<td>p0225</td>
</tr>
<tr>
<td>LIEBER, R.</td>
<td>Effect of refining variables on the properties and composition of JP-5</td>
<td>p0567</td>
</tr>
<tr>
<td>LIEBER, P.</td>
<td>Data reduction and analysis of graphite fiber release experiments</td>
<td>p0234</td>
</tr>
<tr>
<td>LIEBER, C. M.</td>
<td>Significance of thermal contact resistance in two-layer, thermal-barrier-coated turbine</td>
<td>p0651</td>
</tr>
<tr>
<td>LIID, A. F.</td>
<td>Effects of a ceramic coating on metal temperatures of an air-cooled turbine vane</td>
<td>p0185</td>
</tr>
<tr>
<td>LIBOROTZ, H.</td>
<td>Research on helicopter rotor noise</td>
<td>p0187</td>
</tr>
<tr>
<td>LIBRAR, H. P.</td>
<td>Advanced missile technology: A review of technology improvement areas for cruise missiles</td>
<td>p0006</td>
</tr>
<tr>
<td>LIGUS, Y. T.</td>
<td>Aerodynamics and dynamics of turbojet aircraft</td>
<td>p0050</td>
</tr>
<tr>
<td>LILLET, D. G.</td>
<td>Prospects for computer modeling in ramjet combustors</td>
<td>p0040</td>
</tr>
<tr>
<td>LINDENAUER, H.</td>
<td>A simulation program for the determination of system reliability of complex avionic systems</td>
<td>p0250</td>
</tr>
<tr>
<td>LIIMING, R. A.</td>
<td>Mathematics for computer graphics</td>
<td>p0050</td>
</tr>
<tr>
<td>LIH, Y. T.</td>
<td>Calculations of lightning return stroke electric and magnetic fields above ground</td>
<td>p0312</td>
</tr>
<tr>
<td>LING, W. W.</td>
<td>Full scale visualization of the wing tip vortices generated by a typical agricultural aircraft</td>
<td>p0220</td>
</tr>
<tr>
<td>LINCOLN, J. R.</td>
<td>Application of fracture mechanics to USAF aircraft structural integrity requirements</td>
<td>p0378</td>
</tr>
<tr>
<td>LIND, J. M.</td>
<td>A Laser Doppler Velocimeter system to investigate unsteady flow separation</td>
<td>p0014</td>
</tr>
<tr>
<td>LYNDE, C. O.</td>
<td>Solid state power controller verification studies</td>
<td>p0249</td>
</tr>
<tr>
<td>LINDSAY, W. R.</td>
<td>P-t Phantom aircrew survival equipment evaluation</td>
<td>p0289</td>
</tr>
<tr>
<td>LEFTON, P. R.</td>
<td>Predicting field of view requirements for VSTOL aircraft approach and landing</td>
<td>p0257</td>
</tr>
<tr>
<td>LIPATOY, Y. B.</td>
<td>Experimental investigation of helicopter aerodynamics /nd revised and enlarged edition/</td>
<td>p0467</td>
</tr>
<tr>
<td>LYON, R. K.</td>
<td>A single-step method of optimizing statically indeterminate minimum-volume systems</td>
<td>p0202</td>
</tr>
<tr>
<td>LIPS, R. E.</td>
<td>Experimental investigation of a solid fuel ramjet</td>
<td>p0084</td>
</tr>
<tr>
<td>LIESSMAN, P. B. E.</td>
<td>Wings for human-powered flight</td>
<td>p0275</td>
</tr>
<tr>
<td>LITEAB, H.</td>
<td>Low NOx/ heavy fuel combustor program</td>
<td>p0459</td>
</tr>
<tr>
<td>LITTLE, W.</td>
<td>Lightning protection for aircraft</td>
<td>p0202</td>
</tr>
<tr>
<td>LITTLE, P. F.</td>
<td>Models for assessing hazards due to lightning</td>
<td>p0609</td>
</tr>
<tr>
<td>LITTLE, R. R. J. E.</td>
<td>A fiber-optic link for high-speed, DoS-to-computer data transmission</td>
<td>p0014</td>
</tr>
<tr>
<td>LITTLEPAGE, R. S.</td>
<td>Dipole broadside glide slope array</td>
<td>p0168</td>
</tr>
<tr>
<td>LITTOPOV, V. I.</td>
<td>Characteristics and operational conditions of aircraft turbojet engines</td>
<td>p0049</td>
</tr>
<tr>
<td>LIT, A. F.</td>
<td>Effect of multi axial loading on crack growth.</td>
<td>p0044</td>
</tr>
<tr>
<td>LIV, C. N.</td>
<td>Applications of diffraction theory to aerodynamics</td>
<td>p0125</td>
</tr>
<tr>
<td>LIV, C. T.</td>
<td>Fatigue life prediction of a bonded splice joint</td>
<td>p0096</td>
</tr>
<tr>
<td>LIV, R. D.</td>
<td>Transonic kernel function for unsteady flow calculations using a unified linear pressure</td>
<td>p0355</td>
</tr>
<tr>
<td>LIVIHO, G. H.</td>
<td>Gasdynamic analysis of gas-turbine combustion chambers with graduated air admission</td>
<td>p0322</td>
</tr>
<tr>
<td>LIVINGTON, W. W.</td>
<td>Full scale visualization of the wing tip vortices generated by a typical agricultural aircraft</td>
<td>p0220</td>
</tr>
</tbody>
</table>

**B-89**
LOE, T. K.
Guidance system position update by multiple
sensor correlation p0087 880-17518

LOBALIMOYK, T. I.
Aerodynamic characteristics of configurations
consisting of half-covers and flat delta wings
with supersonic leading edges p0525 880-06853

LOBAS, L. G.
Conditions for exciting normal vibrations in a
tricycle rolling along a straight line p0449 880-04127

LOBB, R. E.
Advanced technology impact on future Navy aircraft
[AIAA PAPER 80-1865] p0471 880-43311

LONG, C.
Dynamic environments and test simulation for
qualification of aircraft equipment and external
stores p0240 880-19092

LOBERG, G.
Calculations of inviscid supercritical subsonic
flow past a lifting profile of arbitrary thickness p0048 880-13656
Stability and control aspects of the CCF-PI046
[SSD-076-1447 (U)] p0122 880-19141

LOFPER, L. J.
QCSRE OTW engine powered-lift acoustic performance
[AIAA PAPER 80-1065] p0394 880-36561
QCSRE OTW engine powered-lift acoustic performance
[NASA-TR-81504] p0420 880-28315

LOORENAL, S. H.
Evaluation of a high performance fixed-ratio
traction drive [NASA-TR-81425] p0230 880-18604

LOFTY, R. G.

LOPE, E. Y.
Airline economic benefit through engine development
[AIAA PAPER 80-1581] p0470 880-43299

LOTTB, L. C., JR.
Subsonic aircraft: Evolution and the matching of

LOGAN, R. J.
Wake characteristics of buildings in disturbed
boundary layers p0472 880-29460

LOGUNOV, S. S.
Aircraft instruments and automatic systems /3rd
revised and enlarged edition/ p0193 880-26350

LOHRB, D.
How effective can sound barriers be p0067 880-11382
Fan noise reduction by single- and double-wall
barriers p0389 880-37809

LOHBEW, R. P.
Advanced technology duct burner for variable cycle
engines [AIAA PAPER 80-1201] p0400 880-38966
Experimental evaluation of a low emissions high
performance duct burner for Variable Cycle
Engines (VCE) [NASA-CR-159624] p0180 880-17078
The broadened-specification fuels combustion
technology program at Pratt and Whitney Aircraft
p0549 880-29315

LOISBA, R.
Measurement and prediction of the aerodynamic
damping of compressor blades [COPEN. TP 60. 1980-99]
p0622 880-53289
Unsteady aerodynamic forces on a subsonic
rectilinear cascade of blades [PHE-90007] p0360 880-23266
Investigation into compressor aeroelastic
instabilities in a wind tunnel for a rectilinear
cascade of blades [PHE-90011] p0368 880-23337

LOKAI, V. I.
Selection of optimal parameters of heat-pipe heat
exchanger for a gas turbine engine p0094 880-10613

Study of heat-pipe heat exchanger in the small gas
turbine engine system p0017 880-10022
Selection of optimal parameters of heat-pipe heat
exchanger for a gas turbine engine p0020 880-10668

LOKAI, V. I.
Computer calculation of stationary temperature
fields in air-cooled turbine rotor blades
p0003 880-10612
Computer calculation of stationary temperature
fields in cooled turbine discs
p0004 880-10613
Solution of the steady-state heat conduction
problem by a probability method
p0565 880-47418
On determining the temperatures at given points of
cooling turbine blades made from multilayer
perforated materials p0516 880-51889

LORP, E. R.
Construction of a nonsymmetrical nonlinear
propeller theory p0015 880-12911
Construction of a nonsymmetrical nonlinear theory
of helicopter rotors p0328 880-38711

LORR, A. C.
Moisture absorption of polyester-R glass composites
p0361 880-37171

LORP, E. R.
Workshop on Thrust Augmenting Ejectors
[AIAA CP-2093] p0022 880-10107

LORP, E.
Night/Adverse Weather A-10 at the cross-roads
p0509 880-45499

LORR, D. E.
Noise-reduction measurements of integrally
stiffened fuselage panels
[AIAA PAPER 80-1033] p0394 880-38664

LORD, J. A.
Aerodynamic and acoustic investigations of axial
flow fan and compressor blade rows, including
three-dimensional effects
[AD-A077712] p0243 880-19116

LORE, S. A.
JEFF(A) mixed-flow model fan performance
optimization
[AD-A076571] p0173 880-16234

LORENZ, W.
The cryogenic wind tunnel: another option for the
European Transonic Facility p0246 880-19140

LORENO, C. Y.
Single-stage electrostrictive actuator system for
actuating on airflow valve with frequencies up to
500 hertz [NASA TP-1678] p0554 880-29369

LORSM, D. J.
Enhanced departure/spin recovery of fighter
aircraft through control of the forebody vortex
orientation [AIAA PAPER 80-0173] p0096 880-18352
Effects of forebody, wing and wing-body-LX
flowfields on high angle of attack aerodynamics
[AIAA PAPER 79-082] p0194 880-26638
Forebody vortex blowing: A novel control concept
to enhance departure/spin recovery
characteristics of fighter and trainer aircraft
p0143 880-15172
Flow visualization study of the BIRAT RBPV
Flow visualization study of the F-14 fighter
aircraft configuration [NASA-CR-163096] p0664 880-33350

LOTTE, T.
An optimization method for the determination of
the important flutter modes [AIAA PAPER 80-0790] p0334 880-35074
Active controls for flutter suppression and gust
allivation in supersonic aircraft
[AIAA PAPER 79-0792] p0443 880-40766

LOTTE, A.
Effects of nonlinearities on wing-store flutter
p059 880-31328

LOTTEH, J. B.
The impact of propulsion performance parameters on
[V/STOL design and sizing
[AIAA PAPER 80-1075] p0472 880-43318
LUDVIGSON, R. T. Built-in-test in HII-SPD-1553 systems
[AD-A0777773] p0222 B80-18017

LUDWIG, G. R. Transient wind tunnel studies
[AD-A0777701] p0068 B80-12069

LUDWIG, G. R. Tests of an improved rotating stall control system on a J-85 turbojet engine
[AD-00205-017] p0546 A80-42155

LUDWIG, G. R. Tests of an improved rotating stall control system on a J-85 turbojet engine
[AD-A0777704] p0242 B80-19109

LUDWIG, G. R. Basic studies of rotating stall in axial flow compressors
[AD-A0776910] p0242 B80-19116

LUDWIG, L. P. Aerodynamic and acoustic investigations of axial flow fan and compressor blade rows, including three-dimensional effects
[AD-A0777712] p0242 B80-19116

LYE, J. D. An automated conflict-alert function for an air traffic control system
[AD-A0787704] p0242 B80-19109

LYE, J. D. Liquid metal slip ring
[AD-A0787704] p0242 B80-19109

LYE, J. D. Liquid metal slip ring
[AD-A0787704] p0242 B80-19109
PERSONAL AUTHOR INDEX

HABA, L. J.
Near wake structure and unsteady pressures at trailing edges of airfoils
p0161 A80-20-23900

HAELIs, V. A.
Acrobatic efficiency of gas turbine intake duct
p0020 B80-10077

HAGEH, J. P.
A hingeless rotor XV-15 design integration feasibility study. Volume 1: Engineering design studies
[AIAA-CONF-152310] p0223 B80-18030

HAGGE, T. R.
Statistical techniques for automating the detection of anomalous performance in rotating machinery
[CONF-790435-2] p0084 B80-13481

HAGLEIR, D. J.
Some unique characteristics of supersonic cruise vehicles and their effect on airport community noise
[AIAA PAPER 80-00859] p0319 A80-32861

HAGLINOSS, E.
Acoustic pressures on a prop-fan aircraft fuselage intake face
[AIAA PAPER 80-10002] p0330 A80-35965

Advanced turbo-prop airplane interior noise reduction-source definition
[AIAA-CONF-159668] p0065 B80-13882

V/STOL rotary propulsor noise prediction model update and evaluation
[AD-A0826416] p0429 B80-25106

HAGNACCA, R. A.
Flight verification of direct digital drive for an advanced flight control actuation system (APCAS) in the T-2C aircraft
[AD-A1081922] p0422 B80-24327

HAGG, R.
Acrobatic study of a combustion chamber with a view to its semi-empirical modelling
p0496 B80-27395

HABAL, A.
Two-dimensional wind-tunnel tests of a NASA supercritical airfoil with various high-lift systems. Volume 1: Data analysis
[AIAA-CONF-2215] p0067 B80-12054

Two-dimensional wind-tunnel tests of a NASA supercritical airfoil with various high-lift systems. Volume 2: Test data
[AIAA-CONF-2215] p0067 B80-12055

HABEDN, J. K.
Active flutter suppression using Linear Quadratic Gaussian theory
[AIAA 80-1758] p0510 A80-45546

HABENDOBI, B. G.
A fiber-optic link for high-speed, DDAS-to-computer data transmission
p0014 A80-12637

HADDOX, H.
Electro-magnetic compatibility
p0597 B80-31339

Checking of communications and radio navigation systems
p0597 B80-31340

HAKAPA, G. I.
Influence of the angle of attack on the thermal flux at the stagnation point at supersonic speeds
p0093 A80-27138

HALMER, C.
Boundary layer control by means of suction
[AIAA-TN-75052] p0219 B80-176987

HALLYC, R. J.
Hemispherical coverage of four-faced aircraft arrays
[AD-A0802370] p0046 B80-11309

HAIER, R.
Determination of an oblique wing aircraft's aerodynamic characteristics
[AIAA 80-1630] p0520 A80-45918

HAIER, R. L.
Estimation of the accuracy of dynamic flight-determined coefficients
[AIAA PAPER 80-01711] p0089 A80-17000

HALKIN, A. L.
Propagation of acoustic waves in a nonuniformly heated medium
p0326 A80-34338

HANEI, R. D.
NASA/Airway IV-15 tilt rotor research aircraft wind-tunnel test program plan
p0256 A80-30808

[HASA-781562] p0129 B80-15067

Wind-tunnel tests of the XV-15 tilt rotor aircraft
[HASA-78-01177] p0417 B80-26294

HAYT, M.
Acoustic characteristics of the external upper surface blowing propulsive-lift configuration
[AIAA PAPER 80-1053] p0361 A80-36001

Development of the external upper surface blowing propulsive-lift device
[AIAA PAPER 80-12044] p0041 A80-38986

HAYX, V.
Organic Rankine-cycle turbine power plant utilizing low temperature heat sources
[AIAA PAPER 80-G7-153] A80-42265

HAYZER, W. N.
Shipboard antenna tests for GPS
p0190 B80-25144

HAXBO, V. Y.
Airport radio navigation systems
p0270 A80-30028

HAKIN, B. L.
Simulator for air-to-air combat motion system investigation
p0032 B80-10237

HAKOB, S. I.
Modeling of water-fuel emulsions under laboratory conditions
p0568 A80-47947

HAKAN, V. G.
Density and viscosity of jet fuels
p0568 A80-47949

HAKOB, R. J.
High-resolution intensified vidicon for low light level applications
p0508 A80-46630

HAKOJ, C.
Propeller light aircraft noise at discrete frequencies
[AIAA PAPER 80-0997] p0338 A80-35960

Propeller driven light aircraft noise
p0315 B80-22237

HAKOB, L. A.
Calculation of aircraft wing reliability from sudden failures
p0564 A80-47403

HAKL, C. N.
Unsteady aerodynamics of conventional and supercritical airfoils
[AIAA 80-0734] p0331 A80-35038

HAKL, D. N.
Experimental unsteady aerodynamics of conventional and supercritical airfoils
[AIAA-78-01221] p0641 B80-33345

HAKL, D. W.
Design and simulation of a helicopter target hand-off computer
p0014 A80-12645

HAKLE, H.
Thermal spraying of aircraft- and engine components
p0061 A80-16671

Applications of sprayed coatings
p0438 B80-25507

HAIK, N. H.
Comparison of methods for prediction of transition by stability analysis
[AIAA PAPER 80-1375] p0452 A80-41508

HAIK, R. A.
Analytic representation of turbine characteristics in form convenient for computer calculation of GTE parameters
p0017 B80-10020

HAIK, E.
The HUD optoelectronic projection indicator systems. I
p0466 A80-42798

The HUD optoelectronic projection indicator systems. II
p0569 A80-40812

HALK, L.
On some realistic applications of identification methods
p0553 A80-16859

HALBER, W. B.
Bench scale dynamic evaluation apparatus for integral fuel tank sealants
[AIAA 79-0810] p0619 A80-52647

D-93
Aeroacoustic characterization of free jets.

Mather, D. N.
Structural optimization with static and
eaerelastic constraints

Mather, J. E., Jr.
Summary of aircraft results for 1978 southeastern
Virginia urban plume measurement study of ozone,
nitrogen oxides, and methane

[NASA-TP-80-80164]
p0174 A80-16575

MATSUKA, H. M.
Optimal GTE regulation program design

MATSUKA, H. N.
Development of the external upper surface blowing
propulsive-lift device

[NASA-TP-80-1249]
p0401 A80-38986

MATTASITS, G. H.
Comparison of wind tunnel and flight test
measurements of static aerodynamic loading of a
captive store

[AD-A087237]
p0587 A80-30281

MATTENBERG, C.
Developing, mechanizing and testing of a digital
active flow suppression system for a modified
B-52 wind-tunnel model

[NASA-CR-159155]
p0252 A80-19566

MATTISSON, C.
Civil applications of NAVSTAR GPS

MATTINGLY, B. E.
Recent developments in aerothermodynamic test
techniques at the ARDC von Karman gas dynamics
facility

p0263 A80-29477

MATTISSON, P.
Simulation defines alternatives for Copenhagen
terrestrial expansion

p0204 A80-27221

MATTYH, J. L.
Numerical investigation of instabilities of a
supersonic jet with a plane barrier

p0277 A80-31362

MATTYH, T. V.
Study of heat-pipe heat exchanger in the small gas
turbine engine system

p0017 A80-10022

MATTYH, N. D.
Inlet flow distortion in turbomachinery. I -
Comparison of theory and experiment in a
transonic fan stage. II - A parameter study

[AIAPPAPER 80-1076]
p0396 A80-38895

MATTYH, R. L.
Selecting the geometric parameters and location of
a nose flap on the root profile of a swept wing
using tunnel test data, part 2

p0018 A80-10044

Selection of geometric parameters and location of
nose flap on swept wing root profile from tunnel
test data, 1

p0034 A80-11009

MOCHIN, B.
High bypass turbofan component development. Phase
2: Detailed design

[AD-A082753]
p0435 A80-25341

High bypass turbofan component development.
Amendment 1: Small fan redesign

[AD-A086967]
p0648 A80-33413

MOCHIN, R. D.
Scaling wake-particle interactions for aircraft
applications research

[AIAPPAPER 80-1073]
p0472 A80-43316

MOCHIN, S. C.
Inertial navigation and guidance. Citations from the
International aeronautical abstracts data base

[ITIS/PS-79/0825/4]
p0038 A80-11064

Clear air turbulence. Citations from the
International aeronautical abstracts data base

[ITIS/PS-79/0858/5]
p0045 A80-11746

Remotely piloted vehicles. Citations from the
International aerospace abstracts data base

[ITIS/PS-79/0875/9]
p0080 A80-13040

RAIL, J.
Aeroacoustic characterization of free jets

p0066 A80-12025

RAIL, J. R.
Aircraft simulation data management - A prototype
system

p0578 A80-49832

BAURICH, P.
How to get more out of your 747 - Pan Am and
Qantas take different routes

p0620 A80-52699

BARGO, P. G.
Interference and noise in and adjacent to the
LOHAC-C spectrum at airports

[AD-A085603]
p0554 A80-29281

BARGOULDE, W. C.
Hemispherical coverage of four-faced aircraft arrays

[AD-A073079]
p0044 A80-11309

BAXELL, B. L.
Test system requirements for 767 aircraft
electrical components

p0271 A80-30032

Advanced high speed commercial aircraft - 2000

[AIAPPAPER 80-0937]
p0320 A80-32898

BAT, R. S.
Correction procedures for aircraft noise data.
Volume 4: Tone perception

p0560 A80-30157

BAT, R. H.
Microbial deterioration of hydrocarbon fuels from
oil shale, coal, and petroleum. 1: Exploratory
experiments

[AD-A073761]
p0123 A80-14259

BAT, B. S., Jr.
Build 2 of an accelerated mission test of a TF-41
with block 76 hardware

[AD-A073436]
p0081 A80-13050

BAYDIN, E. C.
Aerodynamic design of an extended-range guided bomb

[LOG-C3719]
p0078 A80-13023

BAYLIS, R. J.
A survey of lighter-than-air technology
development and applications in the United States

p0033 A80-39290

BATES, W. H.
Aircraft noise-induced building vibrations

p0396 A80-37607

BATTEN, P.
Mechanical fasteners dominating aerospace

p0159 A80-23335

BATES, S. B.
Ames to begin V/STOL model tests

[AIAPPAPER 80-1076]
p0396 A80-38895

BATES, W. B.
Design of a turboshaft engine controller via
eigenvalue/eigenvector assignment - A new
sensitivity formulation

p0164 A80-24244

BATO, R. M.
Description of an experimental (hydrogen peroxide)
rocket system and its use in measuring aileron
and rudder effectiveness of a light airplane

[NASA-TP-1647]
p0354 A80-22358

BATO, W. T., Jr.
Optical advances in laser transit anemometry

p0342 A80-36139

BAXOR, R. I.
Overall aerodynamic characteristics of caret and
delta wings at supersonic speeds

p0038 A80-11022

MCALLISTER, E. W.
Dynamic stall on advanced airfoil sections

[AD-A085809]
p0541 A80-29252

MCARDLE, J. G.
Static test-stand performance of the YF-102
turbofan engine with several exhaust
conclusions for the Quiet Short-Haul Research
Aircraft (QSHA)

[NASA-TP-1556]
p0119 A80-14129

Static and transient performance of the YF-102 engine
with up to 14 percent core airbleed for the
Quiet Short-Haul Research Aircraft

[NASA-TP-1692]
p0435 A80-25339

MCASH, K. V.
Non-destructive evaluation of fibre composite
structures by thermal field techniques

[AD-A076541]
p0185 A80-17495

MCASH, K. V., Jr.
Aerostructure nondestructive evaluation by thermal
field techniques

p0277 A80-31780

MCASH, K. V., Jr.
Non-destructive examination of fibre composite
structures by thermal field techniques

[AD-A076541]
p0185 A80-17495
HALL, B. E.
Regression modeling of turbine engine performance
[AD-808898] p0688 880-3411

HALL, W. D.
Computational fluid mechanics of internal flow
p0029 880-10211

HARRA, J.
Experimental full-authority digital engine control on Concords
p0481 880-26308

HARRA, J. E.
Future requirements for environmental control systems in naval aircraft
[ASME PAPER 79-WNAS-9] p0055 880-15234

Environmental control systems concept study for a Navy V/STOL aircraft
[ASME PAPER 80-WNAS-47] p0468 880-43221

HARRA, J. A., JR.
A study to develop optimization algorithms for aircraft wing structures
[AD-6726868] p0027 880-10196

SOLYT, P.
Methodology for target discrimination
p0207 880-27347

CONWAY, D. H.
Aerodynamic characteristics of moving trailing-edge controls at subsonic and transonic speeds
p0142 880-15169

Aerodynamic characteristics of moving trailing-edge controls at subsonic and transonic speeds
[RAS-TM-STRUCT-947] p0387 880-22281

SCREED, G. J.
AERONAUTICS: Projections for civil aviation, 1995-2000
[NASA-CS-159035] p0039 880-11079

SCREED, D.
Practical optical flight control system design for helicopter aircraft. Volume 1: Technical Report
[NASA-CS-3275] p0367 880-23328

ERICH, H. A.
Synthesis of rotor test data for real-time simulation
[NASA-CS-152311] p0222 880-18029

ERICH, E. E.
A polymorphic reconfigurable engine for parallel simulation
[NASA-CS-61305] p0428 880-25010

REDA, L. N.
Composites in future transports. I - Non-metals
p0374 880-36547

READONS, J. B.
Verification of digital autopilot microprocessor hardware and software via hardware-in-the-loop simulation
p0107 880-20901

REHIAS, G.
Reverse pseudo-unsteady aerodynamic calculation methods
p0652 880-33616

RENVYREW, R. N.
Determination of the stress intensity factor of composite structural members
p0090 880-17958

Determining stress intensity factors in composite structural elements
p0382 880-37289

RERFORD, L. A.
Design and test of a prototype scale ejector wing
p0024 880-10131

RELLIC, C. H.
Investigation of performance deterioration of the CF-6/JT9D, high-bypass ratio turbofan engines

Performance deterioration of commercial high-bypass ratio turbofan engines
[NASA-TN-81552-B77] p0635 880-32390

RELLIC, G. J.
Application of a microprocessor for aircraft electrical generator control and protection
p0571 880-48218

RELLIC, G. J.
The USN stability and control digital datacom. Volume 3: Plot module
[AD-806559] p0592 880-30317

RELLIC, G.
Single-stage electrohydraulic servomechanism for actuating on airflow valve with frequencies to 50 hertz

B-99
Analysis of transonic swept wings using asymptotic and other numerical methods [NASA-TP-80762] p0051 A80-29255

HENGEL, V. G. Non-synchronous whirling due to fluid-dynamic forces in axial turbo-machinery rotors p0055 A80-29271

HENGES, N. The study of an ERF dipole antenna type simulator p0046 A80-39411

HENSENKOVA, V. L. Influence of nonequilibrum on the aerodynamic characteristics of nose wing profiles p0025 A80-46855

HETTE, J. L. An evaluation of the ADINA finite element program for application to aircraft overpressure vulnerability [AD-A074261] p0169 A80-16056

HENGIE, M. Remote sensing of turbine engine gases [AD-A084584] p0034 A80-28355

HENGIE, E. Open loop gust alleviation [BBFT-FD-W-79-10] p0055 A80-29373

HETCE, N. Simulation of a surveillance and control system of surface traffic in an airport p0116 A80-14073

HETCE, G. Transonic aerodynamic characteristics of a supersonic aircraft research model with the engines suspended above the wing [NASA-TP-80185] p0076 A80-12997

HETCE, A. E. A computer code to model swept wings in an adaptive wall transsonic wind tunnel [AIAA PAPER 80-0156] p0100 A80-19287

HETCE, J. E. The importance of timely finite element modelling in jet engine design [AIAA PAPER 80-1156] p0399 A80-38942

HETCE, A. On some realistic applications of identification methods p0053 A80-14859

HETCE, A. Avionic system architecture investigation (AVSAR II) [AD-A071793] p0040 A80-11080

HETCLOV, A. P. Study of combined operation of self-evacuating vortex tube with diffuser p0021 A80-10085

HETE, U. Evaluation of the effect of asynchronous interference on a monopulse radar in a network of secondary sensors p0395 A80-38031

HETE evaluation methods of a secondary radar network p0115 A80-14068

HETE, D. Preliminary evaluation of coal-fired fluid bed combustion-augmented compressed air energy storage power plants [AIAA PAPER 80-07-160] p0063 A80-42270

HETE, B. V/STOL/A Nd avionic system flight-test data on a DH-10 helicopter [NASA-TP-78991] p0172 A80-18047

HETE, K. Results of a simulator investigation of control system and display variations for an attack helicopter mission [AD-A085812] p0054 A80-29370

HETE, G. Identification and dual adaptive control of a turbojet engine p0001 A80-10503

HETE, P. Summary of aerodynamic vibration effects on ALL hover p0859 A80-25607

HETE, A. Transonic flow over airfoils with tangential injection p0391 A80-38263

HETE, A. Pilot performance during simulated approaches and landings made with various computer-generated visual glidepath indicators [AD-A066220] p0026 A80-10151

HETE, D. Statistical correlation models of SSB monopulse responses received during aircraft illumination p0036 A80-38857

HETKELE, E. A. A rotary inverter system for a multiple-electrode HBO generator p0190 A80-25093

HETKELE, A. F. Analysis of two-dimensional interactions between shock waves and boundary layers p0148 A80-21232

HETKELE, A. G. Application of ceramic nozzles to 10 kW engine [AD-A081184J p0365 A80-23320

HETKE, P. J. Presentation of the STBDA trajectory system/landing trajectory system p0057 A80-15631

HETKE, F. B. Programs and trends in propeller/prop-fan noise technology [AIAA PAPER 80-0556] p0377 A80-35907

HETKE, D. Acoustic test and analyses of three advanced turboprop models [NASA-CP-159667] p0164 A80-23311

HETKELE, A. Influence of noise reduction on weight and cost of general aviation propellers p0467 A80-27366

HETKELE, A. Deficiencies in flight safety p0584 A80-50991

HETKELE, J. L. Dynamic identification of light aircraft structures and their flutter certification p0139 A80-15145

HETKE, D. An assessment of terminal air traffic control system performance with and without basic metering and spacing automation [AD-A073548] p0037 A80-11057

HETKE, G. Total aircraft flight-control system - Balanced open- and closed-loop control with dynamic trim maps p0283 A80-32440

HETKE, J. F. Flight tests of the total automatic flight control system (Tafcoos) concept on a DHC-6 Twin Otter aircraft [NASA-TP-1513] p0180 A80-17081

HETKE, J. F. Application of the concept of dynamic trim control to automatic landing of carrier aircraft [NASA-TP-1512] p0204 A80-19126

HETKE, J. F. Performance evaluation of the SFT computer p0390 A80-38043

HETKE, L. J. A cooled laminated radible turbine technology demonstration [AIAA PAPER 80-0300] p0156 A80-22748

HETKE, R. L. Design and verification of an automatic Batch number control system p0264 A80-29500

HETKE, T. G. Low cycle fatigue life model for gas turbine engine disks p0164 A80-29140


HETKE, J. E. Noise suppression in jet inlets [AD-A085403] p0551 A80-29334

HETKE, R. A. Aircraft traffic control system measures and data p0389 A80-37706

HETKE, J. A. The transfer of carbon fibers through a commercial aircraft water separator and air cleaner [NASA-CP-159183] p0124 A80-14359

HETKE, P. The vulnerability of commercial aircraft avionics to carbon fibers [NASA-CP-159213] p0295 A80-20317

HETKE, C. Vocabulary specification for automatic speech
HILL, R. G.

microprocessor technology [AD-8021157] p0649 B80-33317

HILL, R. G.
Preliminary computer sizing estimates for automated en route ATC (AREA) [AD-802628] p0646 B80-24288

HILL, R. A.
Vibration and control data utilization [AD-806962] p0608 B80-31687

HILL, R. D.
Some effects of cruise speed and engine matching of supersonic inlet design [AIAA PAPER 80-1807] p0512 B80-45734

HILL, R. V.
Inertially augmented approach couplers [AD-8080488] p0290 B80-20248

HILL, R. D.
Measuring technological change in jet fighter aircraft [AD-8077393] p0339 B80-19084

HILL, R. A.
Thermal barrier coatings for aircraft gas turbines [AIAA PAPER 80-0302] p0094 B80-18303

HILL, R. J.
Failure accommodation in gas turbine engines with application to fan turbine inlet temperature reconstruction p0164 B80-24247

HILL, R. L.
Toward more effective evaluation and control of airport noise p0387 B80-37609

HILL, R. W.
Vacuum arc switched inverter tests at 2.5 kVA p0389 B80-37852

HILLEG, R. D.
Evaluation of the Aviation Weather and NOTAM System (AVANS) [AD-8086167] p0556 B80-29568

HILLS, P.
Structural design loads for future airplanes [AIAA 80-0873] p0335 A80-35096

HILLOST, N.
Stochastic response secondary surveillance radar [PAPER 80-13212] p0047 A80-13212

SINTAC-C TMA: Application of SINTAC-C in the terminal area, during landing and ground taxiing p0493 B80-27338

KIAHALO, A. W.
Calculation of the supersonic flow field with vortices behind a slender rectangular wing p0151 B80-21320

Fuselage modeling of supersonic flow near a thin delta wing with discontinuous edge p0203 B80-27147

Similarity of the aerodynamic characteristics of delta wings at supersonic speeds p0203 B80-27168

Calculation of the supersonic flow past a slender delta wing at angles of attack and sideslip p0524 B80-96026

KINDL, W.
Computer simulation of canopy-pilot response to birdstrike [AD-800122] p0304 B80-21296

KINDREW, W.
Efficient sheet metal forming methods in the aircraft industry p0280 A80-32408

KINNE, R. A.
Development of mainshaft high-speed cylindrical roller bearings for gas turbine engines [AD-8073394] p0084 B80-13475

KINNE, R. F., JH.
Effects of thermally induced porosity on an an-SIP powder metallurgy superalloy p0269 A80-29990

Application of superalloy powder metallurgy for aircraft engines p0507 A80-44240

Miller, E. G.

Application of superalloy powder metallurgy for aircraft engines [NASA TM-81466] p0310 B80-21488

Effects of fine porosity on the fatigue behavior of a powedered superalloy [NASA TM-81480] p0310 B80-21493

KINNISCH, R.
Aitronic system architecture investigation (AVSAN II) [AD-8071433] p0040 B80-11080

KIOSGA, G.
Concept of a research aircraft for remote sensing, using an integrated sensor/data system [UGLR PAPER 80-051] p0523 A80-46300

KNOBOH, R. A.
Minimum-weight in the presence of lift constraints p0203 B80-27335

KNOBOH, R. I.
Effect of flow swirling on heat transfer in the lower half of the pre-nozzle volume of a model chamber p0203 B80-10196

KROPEVRURO, A. V.
Construction of cyclic and ruled surfaces by the method of generalized inversion p0527 B80-47187

KINSEL, W. M.
Quiet Clean Short-haul Experimental Engine (QCSEE) main reduction gear test program [NASA CR-136691] p0133 B80-15103

KINSAH, R.
Aerodynamic performance of a centrifugal compressor with vaned diffusers p0210 B80-27735

KITCHELL, D. G.
Effects of the aerodynamic cross-coupling and internal acceleration derivatives on airplane dynamic characteristics [AIAA PAPER 80-0770] p0089 B80-17699

KITCHELL, C. A.
Summary of advanced methods for predicting high speed propeller performance [AIAA PAPER 80-0225] p0108 B80-20966

High speed turboprops for executive aircraft, potential and recent test results [NASA TM-81482] p0302 B80-21285

KITCHELL, R.
Aerodynamic modeling in military aircraft weapon system design p0301 B80-21272

KITCHELL, C. A.
Non-axiymmetric blade row interaction in axial turbomachines [ASME PAPER 80-07-133] p0461 A80-62246

KITCHELL, R.
Navigation and meteorological error equations for some aerodynamic parameters [NASA TM-80008] p0026 B80-10150

KITCHELL, R. C.
Living with the ageing structure p0502 B80-50581

KITCHELL, S. C.
Quiet Clean Short-haul Experimental Engine (QCSEE) composite fan blade design report [NASA CR-135278] p0134 B80-15110

KITTSHE, D. I.
On axial turbine shell rotor blade twist with tangential tilt of the stator vanes p0004 A80-10630

KITYANY, L. M.
Investigation of the thermal state of longitudinally cooled rotor blades p0475 A80-43784

KITSON, J. S.
Noise transmission and control for a light, twin-engine aircraft [AIAA PAPER 80-1036] p0340 A80-35984

KITAGAKI, Y.
Inlet rotor performance measurements for six-ary EPSK systems in satellite/aircraft communications p0192 B80-25945

KITZKOC, C.
Hypoxia-induced fatal aircraft accident revealed by voice analysis p0854 A80-41889

KODI, R.
Navy program for development of an Analog Test Program generation system p0270 A80-30016

B-102
ROBBIE, G. The interior design of wide bodied aircraft 0063 A80-17332
HOK, A. J. A. Environmental testing of coatings for gas turbines 0060 B80-31404
HOBERTY, A. B. Aviation fuels outlook 00547 B80-29304
HOBHEV, E. M. Analytic formulae for wing profile aerodynamic characteristics in incompressible flow 00034 B80-11010
HODGKIN, K. L. Digital load control applied to full-scale airborne fatigue tests 00881 B80-13054
HODNE, C. D. Man-in-the-loop simulation system 00578 A80-49829
HODSON, D. S. High temperature radial turbine demonstration [AEIA PAPER 80-0301] 00156 A80-22749
HODSD, N. J. High temperature radial turbine demonstration [AD-904120] 00497 B80-27370
HODTS, W. J. Effect of conventional and square stores on the longitudinal aerodynamic characteristics of a fighter aircraft model at supersonic speeds [NASAG-TN-01791] 00413 B80-24266
HONIGBAK, P. J. Noise reduction 00298 B80-10208
As improved prediction method for the noise generated in flight by circular jets [NASAG-TN-01470] 00314 B80-22048
HONIOL, C. C. System for use in conducting wake investigation for a wing in flight [NASAC-AGE-PMK-1024-1] 00529 B80-28300
HONIOL, K. J. Application of a ground-based minicomputer system for real time, closed loop control of remotely piloted aircraft models used in stall/spin research 00276 A80-31018
HONIOL, D. A. The role of a flight management system in terminal airspace [SAA PAPER 800748] 00576 A80-49657
HONIOL, G. S. Static test-stand performance of the YF-102 turbofan engine with several exhaust configurations for the Quiet Short-Haul Research Aircraft (QSHRA) [NASAG-TN-1556] 00119 B80-14121
HONIOL, G. A. Static and transient performance of YF-102 engine with up to 14 percent core airflow for the quiet short-haul research aircraft [NASAG-TN-1692] 00435 B80-25339
HONIOL, G. L. Electronic flight instrument system for B767/757 aircraft 00203 A80-32444
HONIOL, J. W. Peripherial jet air cushion landing system spanloader aircraft, volume 1 [AD-8085203] 00533 B80-28344
HONIOL, J. W. Peripherial jet air cushion landing system spanloader aircraft, volume 2 [AD-8085177] 00533 B80-28345
HONIOL, M. T. Core noise investigation of the CF6-50 turbofan engine [NASAG-TN-159749] 00170 B80-16062
HONIOL, R. D. Experimental study of low aspect ratio compressor blading [NASAG-PAPER 80-07-6] 00456 A80-42147
HONIOL, R. D. Vertical Takeoff and Landing (VTOL) propulsion technology 00229 B80-10218
HONIOL, J. W. Experimental study of low aspect ratio compressor blading [NASAG-TN-79280] 00305 B80-11037
Performance of single-stage axial-flow transonic compressor with rotor and stator aspect ratios of 1.19 and 1.26 respectively, and with design pressure ratio of 2.05.  
[NASA TP-1659] p0306 A80-21325

HOE, B. E.
Tradeoff between picture element dimensions and noncoherent averaging in side-looking airborne radar  
[p0053 A80-14949

HOE, W. A.
Enhanced departure/spin recovery of fighter aircraft through control of the forebody vortex orientation  
[AIAA PAPER 80-0173] p0096 A80-183352

Effects of forebody, wing and wing-body-LEX flowfields on high angle of attack aerodynamics  
[SAP PAPER 791082] p0194 A80-26638

HOE, W. A.
Forebody vortex blowing: A novel control concept to enhance departure/spin recovery.  
characteristics of fighter and trainer aircraft  
[p0143 A80-15172

HOEHOUSE, D. J.
Flying qualities design requirements for sidestick controllers  
[AD-A085085] p0537 A80-28375

HOEHOUSE, D. J.
Flying qualities design criteria  
[AD-A086829] p0647 A80-33002

HOBAN, P. J.
Flight test of navigation and guidance sensor 
ears measured on STOL approaches  
[NASA TN-81154] p0080 A80-13041

HOBAN, P. J.
Design of a wind shear detection radar for airports  
[p0152 A80-21829

HOBARK, J.
The influence of losses on the evaluation of the 'rotating stall'  
[p0261 A80-29131

HOB, R.
Far field monitor for instrument landing systems, 
phases 1 and 2  
[p0544 A80-29275

HOBDELL, J. P.
Large-scale wind-tunnel tests of inverting flaps 
on a STOL utility aircraft model  
[NASA TP-1696] p0432 A80-25318

HOBHUS, E. C.
Measurement of external forces and torques on 
a large pointing system  
[p0400 A80-25610

HOBITT, G. W.
ATARS/ATC simulation tests with site adaptation logic is the Philadelphia terminal area  
[AD-A083718] p0469 A80-27308

HOBG, L. P.
Advanced avionic architectures for the 1980's - A software view  
[p0280 A80-32420

HOBG, L.
Air traffic control/full bacco collision avoidance system, Knoxville simulation  
[AD-A079663] p0544 A80-29275

HOBGSBERG, E.
An evaluation of aircraft separation assurance 
concepts using airline flight simulators.  
Volume 1: Study report  
[AD-A080386] p0489 A80-27310

An evaluation of aircraft separation assurance 
concepts using airline flight simulators.  
Volume 2: Appendices  
[AD-A080387] p0489 A80-27311

HOBX, A. A.
On centrifugal compressor output regulation by 
iris diaphragms  
[p0617 A80-51905

HOBX, P.
Blade-to-blade flow of ideal fluid with wall injection  
[p0315 A80-22228

HOBXRA, E.
Error rate performance of M-ary DPSK systems in 
satellite/aircraft communications  
[p0192 A80-25945

HOBX, L.
Steady, Oscillatory, and Unsteady Subsonic and Supersonic Aerodynamics, production version 1.1.  
Volume 1: Theoretical manual  
[NASA CR-159130] p0077 A80-26269

Steady, oscillatory, and unsteady subsonic and supersonic aerodynamics, production version 1.1.  
[NASA CR-159131] p0541 A80-29253

HOBSEHSTBBH, B.
Turbonaca - The 'Makila' is in production  
Composites in aircraft manufacturing - An  
impressive rise  
[p0153 A80-21923

HOBST, B. I.
A new procedure for linear optimal flight control  
[p0052 A80-14023

HOBVIBRA, B. I.
Parametric method of aircraft engine status 
diagnostics based on limited information  
p0017 A80-10003

HOBLEO, J.
A direction-conine position coordinate system for 
air navigation  
[p0621 A80-52933

HOBLY, R. A.
The practical aircraft hydraulic test stand  
[p0194 A80-26636

HODKIN, V. L.
Plane stabilization by imposing jets in  
high-speed flow  
[p0566 A80-47837

HODRE, K. Y.
Lidar visibility measurements  
[p0573 A80-49159

HODERIAIN, A.
Remote sensing of turbine engine gases  
[AD-A084849] p0538 A80-28355

HOBIS, A. J.
A computer based system for structural design, 
analysis and optimization  
[p0300 A80-21265

HOBISS, B. A.
DK approach to aircraft dynamic response on 
damaged and repaired runways  
[p0434 A80-25327

HOB, S. E. K., JR.
A flight investigation of performance and loads 
for a helicopter with 10-64C main rotor blade 
sections  
[NASA TN-81871] p0641 A80-33348

HOBIS, C. E. K., JR.
A flight investigation of performance and loads 
for a helicopter with MNR-17 main rotor blade 
sections  
[NASA TN-80165] p0025 A80-10136

A flight investigation of blade section 
aerodynamics for a helicopter main rotor having 
MNR-17 airfoil sections  
[NASA TN-80166] p0232 A80-19033

HOBIS, B. L.
The viscoelastic behavior of a composite is a 
thermal environment  
[NASA CR-163167] p0423 A80-24369

HOBIS, B. K.
Data and analysis procedures for improved aerial 
applications mission performance  
[ASA Paper 79-001] p0055 A80-15220

HOBIS, G. J.
Investigation of Air Force MIR-I-5606 hydraulic 
system malfunctions induced by chlorinated 
 solvent contamination  
[ASLE Preprint 80-AM-5C-2] p0468 A80-83178

HOBIS, M. A.
Application of parametric weight and cost 
estimating relationships to future transport 
aircraft  
[SAE Paper 1292] p0105 A80-20637

HOBIS, P. J.
A model for broadband jet noise amplification  
[AIAA Paper 80-1006] p0392 A80-38635

HOBIS, P. N.
Experimental aerodynamic and acoustic model 
testing of the Variable Cycle Engine (VCE) 
tested coaxial exhaust nozzle system  
[NASA CR-159710] p0660 A80-26300

Experimental aerodynamic and acoustic model 
testing of the Variable Cycle Engine (VCE) 
tested coaxial exhaust nozzle system: 
Comprehensive data report  
[NASA CR-159711] p0480 A80-26301

B-104
HUBBARD, P.
Studies of the acoustic transmission characteristics of coaxial nozzles with inverted velocity profiles, volume 1
NACA-CR-159104
p0045 880-11870
A study of the prediction of cruise noise and laminar flow control noise criteria for subsonic air transport
NACA-CR-159104
p0075 880-12818
HUBER, A. G.
Local ground noise generated by supersonic transport planes
p0192 880-26206
Noise characteristics of supersonic passenger planes
p0326 880-34387
HUBER, D. A.
A cavity-type broadband antennas with a steerable payload
p0485 880-26585
HUBER, H. N.
The minimum induced drag of aerfoils
p0126 880-15038
The aerodynamic forces on airship hulls
p0126 880-15039
Elements of the wing section theory and of the wing theory
NACA-191
p0126 880-15040
HUBICK, R.
A method for monitoring maintenance - The audit
p0407 880-39582
HUBNO, D. N.
Experimental verification of propeller noise prediction
NACA-PAPER 80-0994
p0337 880-39597
HUBSON, C. D.
An analysis of the future requirements for materials handling equipment in the military airlift command
NACA-1007094
p0600 880-31370
HUBZ, H.
Theoretical investigation of the aerodynamics of double membrane sailwing airfoil sections
p0322 880-33276
HUGHKAM, Y.
Three-dimensional velocity distribution between overlapping wings
p0001 880-10011
HUBERALDAREH, B.
Closed loop models for analyzing engineering requirements for simulators
p0235 880-19063
HUBATOYASHI, S. H.
Influence of optimizing the design of an aircraft wing on the mode shapes and frequencies of the normal modes
p0526 880-46877
HURBY, R.
The XFY-12A Thrust-Augmented Wing (TAW) prototype aircraft
p0024 880-10133
HURBY, R. C.
Analysis and identification of subcritical flutter in a high-pressure parallel flow centrifugal compressor
p0557 880-29710
HURREN, I.
Research on the stability of air cushion systems
UTIAS-238
p0219 880-17985
HURREY, P.
Recent and future engineering developments in flight training simulators
p0005 880-10776
HURREY, S. C.
The USAF stability and control database
Volume 3: Plot module
AIAA-CR-159660
p0592 880-30317
HURREN, L. J.
Composite center fuselage - Phase I
p0278 880-32068
HURREY, P. R.
Some recent trends in aircraft flutter research
p0083 880-13307
HURREY, S. M.
Project SQUID
AIAA-191
p0408 880-8006
HUSATON, H. F.
Influence of upper and lower overlap on efficiency of partial-admission axial air microturbine
p0636 880-32401
PERSONAL AUTHOR INDEX

BUSHNELL, D.
- Composite rotor blades for large wind energy installations [NASA-TR-756822] p0611 N80-31881
- The Eccentorator - A new concept in actuation [AIAA 08-0016] p0335 A80-35095
- Composite wing/engulf integral concept [AIAA 08-0744] p0331 A80-35094
- Direct effects of lightning on an aircraft during intentional penetrations of thunderstorms p0313 N80-21947

BURGOE, R. G.
- Calibration of a low cost strapdown inertial guidance system p0019 A80-12642

BUSHMAN, K. A.
- Burn/Blunt tests of miscellaneous graphite composite parts [NASA-CR-163310] p0424 N80-24371
- Electronic equipment vulnerability to fire released carbon fibers [NASA-TR-80219] p0651 N80-33491

BUSHYANSKY, A.
- Vibrations of a compressor blade with slit at the root p0183 N80-17263

BUSKISKI, P.
- Electronic instrumentation in civil aviation p0008 A80-11352

BUSTI, E.
- Estimation of noise source strengths in a gas turbine combustor [AIAA PAPER 80-0039] p0992 A80-18285

AUTO, F. T.
- ATC separation standards p0570 A80-38140

BUZAN, R.
- Propeller proplet optimization based upon analytical and experimental methods [AIAA PAPER 80-1241] p0505 A80-44109

BYERS, B.

BYERS, H. L.
- Research on diamantane and other high density hydrocarbon fuels [AD-A080789] p0369 N80-23474

BYERS, R. V.
- UHF coplanar-slot antenna for aircraft-to-satellite data communications p0015 A80-13064

BYRES, S. H.
- Repair of advanced composite structures [AIAA 08-0776] p0333 A80-35066

N

BADLICK, C.
- Effect of oxidizing fuels on aircraft fuel system elastomers and sealants [AD-0807267] p0607 N80-31554

BAGEL, D.
- Effect of fuel molecular structure on soot formation in gas turbine combustion p0549 N80-29322

BAGGIOLO, S.
- ATC separation standards p0570 A80-38140

BAGH, V. T.
- Optimization of aircraft undercarriages [AIAA PAPER 79-087-09] p0057 A80-15737

BAGH, K. S.
- Recent developments in ejector technology in the Air Force: An overview p0022 N80-10108

BAGEL, J.
- Computer graphics, related design and manufacturing processes at Boeing p0299 N80-21251

BAGEL, E. G.

BAGEL, J. J.
- The Shock and Vibration Digest, volume 12, no. 7 [AD-A087855] p0607 N80-31662
- Design criteria for dry lubricated flight control bearings p0031 N80-10228

BAGNER, E. S.
- Head-up display in the non-precision approach [NASA-TR-81167] p0479 N80-26296
- An experimental evaluation of head-up display formats [NASA-TP-1550] p0533 N80-20349

BAGNER, F. M.
- Noise due to tip vortex formation on lifting rotors [AIAA PAPER 80-1010] p0393 A80-38536

BAGNER, J. B.
- Fluid contamination of aircraft-cabin air and breathing oxygen [AD-A080816] p0543 N80-29268
- Midcourse guidance for fire and forget missile - Modification of present existing missile p0324 A80-34180

BAGNER, L.
- On the noisiness of steady state and intermittent noises p0620 A80-52820
- Rotational noise of helicopter rotors p0089 A80-17718

BAGNER, S.
- On the noisiness of steady state and intermittent noises p0620 A80-52820

BAGNER, T.
- Error rate performance of n-ary DPSK systems in satellite/aerospace communications p0192 A80-25945

BAGNICE, J. M.
- Atmospheric electricity and military operations [AD-A079876] p0253 N80-19693
- Analysis of electrical transients created by lightning [NASA-CR-159308] p0593 N80-30645
- Static charging effects on avionic systems p0610 N80-31755
- Technique for separation effects of static charging on avionics p0610 N80-31756

BAPES, J. C.
- Application of ceramic nozzles to 10 KS engine [AD-A081184] p0655 N80-23320
- Development of ceramic nozzle section for small radial gas turbine p0553 N80-29354

BAPES, A.
- Damping effects in joints and experimental tests on riveted specimens p0253 N80-19584

BARESKY, J. J.
- A new approach to maintainability prediction p0251 N80-19537

BARKER, E. C.
- Airfoil design and analysis using an information system approach [AIAA PAPER 80-1444] p0453 A80-44125

BASH, J. R.
- Applications of LSI to digital systems - An overview of expectations and reality p0280 A80-32422

BASH, A. R.
- Design of damping systems and their application p0059 A80-16722

BASH, A. D.
- Damping of an engine exhaust stack p0184 N80-17265

BASTIAN, G. D.
- Measurements of cabin and ambient ozone on B747 airplanes p0217 A80-28853
- Simultaneous cabin and ambient ozone measurements on two Boeing 747 airplanes, volume 1 [NASA-TM-79166] p0128 N80-15059
Personal Author Index

Heat transfer at a breaking point of the leading edge of a plate in hypersonic flight

Nelson, D. F.
Experimental aerodynamic and acoustic model testing of the Variable Cycle Engine (VCE) tested coaxial exhaust nozzle system

International Journal of Heat and Mass Transfer

Nelson, J. F.
Airport noise, location rent, and the market for residential amenities

Ann Arbor Science Books

Nelson, N. D.
Helicopter crash position indicator flight trials

Nelson, W. R. Jr.
Flapless control: The versatile surface for fighter aircraft

Neff, J. P.
Tests of an improved rotating stall control system on a J-85 turbojet engine

Neff, D. R.
Estimation of noise source strengths in a gas turbine combustor

Neff, D. H.
Radar and sonar

Neff, D. F.
Investigation of the influence of contaminated fuel on turbine blade surface deposition

Neff, T.
Survey of forced and precautionary landing costs

Neff, J.
Experimental study of flapping wing lift and propulsion

Neff, E. A.
Microbial deterioration of hydrocarbon fuels from oil shale, coal, and petroleum

Neff, T.
Influence of an entropy layer on boundary layer separation in hypersonic flow

B-108
Determination of turning angle of a jet impinging
on a bucket with visor

Onset of combustion in a variable-combustor model
for combustion within solid fuel rocket motors

Atmospheric dispersion of high velocity jets

Computer program for estimating civil aircraft
economics [NASA-TP-80196] 
p0231 800-18988

JTIDS: An integrated communications navigation
and identification system, and its potential for
air traffic management

Analysis of fuel-conservative curved decelerating
approach trajectories for powered-lift and CTOL
jet aircraft [NASA-TP-1650] 
p0231 800-19022

Evaluation of a Central Data Entry System (CDES)
for transport aircraft [DPLR-PR-79-23] 
p0304 800-21298

An analytical and experimental study of a short
S-shaped subsonic diffuser of a supersonic inlet
[AIAA PAPER 80-0386] 
p0108 800-20970

An analytical and experimental study of a short
S-shaped subsonic diffuser of a supersonic inlet
[AIAA PAPER 80-1806] 
p0137 800-15134

A jet engine integrated generator

A carbon fiber exposure test facility and
instrumentation [NASA-TR-80220] 
p0607 800-31842

Airport capacity and delays

Far field model for instrument landing systems,
phases 1 and 2 [AD-A079663] 
p0544 800-29275

The physical and chemical characterization of ten
military turbine engine lubricants [AD-A074073] 
p0144 800-15265

Strain-stiffness factors for two symmetric corner
cracks

Fracture analysis of ductile materials

Interaction of a two-dimensional strip boundary
layer with a three-dimensional transonic
swep-wing code

Carburetor ice: A review

Carburetor ice: A review [TR-79-9] 
p0361 800-23279

Carburetor ice: A review [TR-77-19] 
p0361 800-23280

Flight test results of the use of Ethylene Glycol
Nonmethyl Ether (EGME) as an anti-carburetor
icing fuel additive [AD-A084960] 
p0539 800-28539

X-3A navigational computer system real-time
environmental simulator

Reduced bleed air extraction for DC-10 cabin air
conditioning [AIAA PAPER 80-1197] 
p0484 800-41194

Engine bleed air reduction in DC-10
[AIAA PAPER 80-15906] 
p0633 800-32378

A direct method for synthesizing low-order optimal
feedback control laws with application to
flutter suppression

Application of two design methods for active
flutter suppression and wind-tunnel test results
[AIAA-TP-1653] 
p0357 800-22737

Full-scale wind-tunnel investigation of the
effects of wing leading-edge modifications on
the high angle-of-attack aerodynamic characteristics
of a low-wing general aviation airplane
[AIAA PAPER 80-1884] 
p0470 800-18302

Full-scale wind tunnel-investigation of the
Advanced Technology Light Twin-Engine airplane
[AIAA-TP-1591] 
p0305 800-22266

The future of civil turbo-fan engines
[AIAA PAPER 80-0893] 
p0319 800-32076

Comparative performance measurements on a Savonius
rotor with前三曲面 surfaces

Control system techniques for improved
departure/spin resistance for fighter aircraft
[SAA AIRCRAFT 7901003] 
p0594 800-26439

Application of high-alpha control system concepts
to variable-sweep fighter airplane
[AIAA PAPER 80-1582] 
p0579 800-50098

Simulator study of stall/post-stall
characteristics of a fighter airplane with
relaxed longitudinal static stability
[AIAA-TP-1538] 
p0121 800-14136

Control considerations for CCT fighters at high
angles of attack

Control system techniques for improved
departure/spin resistance for fighter aircraft
[AIAA-TP-1669] 
p0540 800-29204

Differential games of interception and aerial
combat: Solution by differential dynamic
programming

A flutter-speed formula for wings of high aspect
ratio

Evaluation of existing flammability test methods
by comparison of the flammability characteristics of interior materials
[AD-A083137] 
p0437 800-25393

Rotor-bearing dynamics technology design guide.
Part 5: Dynamic analysis of incompressible
fluid bearings [AD-A085106] 
p0539 800-28725

Analysis and identification of sub synchronous
vibration for a high pressure parallel flow
centrifugal compressor

Impact damage on titanium leading edges from small
hard objects

The friction classification of runways
[SAA-AIRCRAFT 7604-79] 
p0223 800-24339

Advanced circulation control wing system for Navy
STOL aircraft
[AIAA PAPER 80-1825] 
p0569 800-43292

Development of high lift devices for application
to advanced Navy aircraft
[AD-A086226] 
p0633 800-32382

Low NOx/ heavy fuel combustor program
[ARPE PAPER 80-06-79] 
p0539 800-42149

Multicolor electrochromic dot-matrix display
investigation
[AD-A085453] 
p0555 800-29465
BIDTIB, A. I.

BXGODIOK, T. E.

BIKZFOBOK, P. B.

BXESS, 0. B.

SIBHIHS, J. B.

BIBOZBIBCKI, B. B.

BIBDSULBK, B.

IICOSI1, 6.

•IBSSBB, F. B.

BIBBI, I.

HIBBBIEB, B. H.

BIE1SEI, 3. B.

BIBDIIB6, L. 6.

BICOllS, J.

BXCKBBSOB, T. J.

HIBHOLLBB, D. 1.

BICKBBSOB, T. J.

Energy and civil aviation

A simplified ground vibration test procedure for sailplanes and light aircraft

The F-15 wing development program

Experimental investigation of the characteristics of pneumatic transfer lines

Low NOx/ heavy fuel combustor program

Ruler solutions for wing and wing-body combination at supersonic speeds with leading-edge separation

Nonlinear aerodynamics of all-movable controls

The development of rapid predictive methods for three-dimensional transonic flow fields about fighter bomber aircraft, part 1

Basic studies of wing-body interference at high angles of attack and supersonic speeds

Airworthiness and flight characteristics evaluation, OH-58C Interim Scout helicopter

Artificial icing test CH-47C helicopter with fiberglass rotor blades

An evaluation of the bird/aircraft strike hazard at selected United Kingdom bases: RAP, Rillennell, RAF Alconbury, RAF Upper Heyford, RAF Bentwaters, RAF Fairford, RAF Lakenheath, and RAF Woodbridge

A link between science and applications of automatic control; Proceedings of the Seventh Triennial World Congress, Helsinki, Finland, June 12-16, 1978. Volumes 1, 2, 3 & 4

Military adoption of a commercial VOR/ILS airborne radio with a reliability improvement warranty

Pilot assessment of two computer-generated display formats for helicopter instrument approach

Navigation, guidance, and control for helicopter automatic landings

Cooperative resistance of Beta-Si3N4 solid solutions to molten silicon attack

Investigation of flows in Laval nozzles at small Reynolds numbers

An adaptive controller synthesis with an observer

Design of an electronic model of a microwave aircraft landing system

Delta wing of optimal configuration in supersonic flow

Design approaches for GPS receivers/processors

On the NWS application research in Japan

Aerodynamic performance of a centrifugal compressor with vane diffusers

Fuel minimal take-off path of jet lift VTOL aircraft, log no. C3558

Measurement of shock waves around a delta-wing semicone

An optimization method for the determination of the important flutter modes

Active controls for flutter suppression and gust alleviation in supersonic aircraft

On the equation of motion about the mass centre of the jet aircraft considered an variable mass system

Direct computation of transonic solution for Nieuwland aerfoils

Aircrash system architecture investigation (1VSAB II)

Aircraft Energy Efficiency (1CEE) status report

Preparing aircraft propulsion for a new era in energy and the environment

Synthesis of an adaptive flight control system with an observer

Investigation of internal control laws for wing/rotor flutter suppression

Aerodynamic characteristics of three helicopter rotor airfoil sections at Reynolds numbers model scale to full scale at Mach numbers from 0.35 to 0.90

Preparing aircraft propulsion for a new era in energy and the environment

Air System Efficiency (ACBE) status report

Toilborne hydrodynamic performance of Jetfoil

Aircrash CCGT program

Aircrash CCGT engine performance and emissions tests

Airflow effects on rising measurements by a wing tip-mounted ice detector on the OH-58C research airplanes

PERSONAL AUTHOR INDEX
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROBINS, P. J.</td>
<td>Fastener hole quality, volume 1</td>
<td>p0252 H80-19567</td>
</tr>
<tr>
<td>NORTH, P.</td>
<td>Performance of conical diffusers up to the choking condition</td>
<td>p0261 A80-29130</td>
</tr>
<tr>
<td>NORTH, D.</td>
<td>Parachute recovery systems, I - Parachute materials, applications and design. II - The recovery system as an integral part of vehicle design</td>
<td>p0266 A80-29657</td>
</tr>
<tr>
<td>NOTCHK, C. E.</td>
<td>Applications of diffraction theory to aeroacoustics</td>
<td>p0125 H80-14870</td>
</tr>
<tr>
<td>NOSTIE, V. N.</td>
<td>Determination of aircraft take-off weight in the preliminary design stage</td>
<td>p0527 A80-47186</td>
</tr>
<tr>
<td>NOSEL, E.</td>
<td>Pressure fields generated by instability waves and coherent structures in an impinging jet [ASME Paper 80-0980]</td>
<td>p0392 A80-38632</td>
</tr>
<tr>
<td>NOVACH, C. J.</td>
<td>Determination of jet fuel thermal deposit rate using a modified JPTOT</td>
<td>p0053 A80-14947</td>
</tr>
<tr>
<td>NOVAY, L. C.</td>
<td>Calculation of the coefficient of secondary losses in an axial compressor stage</td>
<td>p0151 A80-21332</td>
</tr>
<tr>
<td>NOVATOV, G. T.</td>
<td>Unification of oils for aircraft gas-turbine engines</td>
<td>p0106 A80-20690</td>
</tr>
<tr>
<td>NOVCHRSTO, P. N.</td>
<td>Experimental investigation of helicopter aerodynamics /2nd revised and enlarged edition/</td>
<td>p0467 A80-42937</td>
</tr>
<tr>
<td>NOVACK, C. J.</td>
<td>Determination of jet fuel thermal deposit rate using a modified JPTOT</td>
<td>p0053 A80-29133</td>
</tr>
<tr>
<td>NOVSOLOV, J. E.</td>
<td>Pressure losses in the inlet and outlet channels of high-pressure single- and two-stage axial-flow fans</td>
<td>p0281 A80-18218</td>
</tr>
<tr>
<td>NOVCE, C.</td>
<td>TIES - An integrated CHI system in hardware feasibility demonstration</td>
<td>p0283 A80-324051</td>
</tr>
<tr>
<td>NOCCI, G.</td>
<td>Location of aircraft and individualization of flight parameters for the requirements of air traffic control - Systems currently in use and desirable evolutions</td>
<td>p0395 A80-388804</td>
</tr>
<tr>
<td>NOCHAY, E.</td>
<td>Method of calculating the velocity at the surface of an arbitrary wing in an ideal fluid</td>
<td>p0262 A80-29208</td>
</tr>
<tr>
<td>NOCHAY, E.</td>
<td>Method for calculating surface velocity of arbitrary wing in ideal fluid</td>
<td>p0581 A80-50463</td>
</tr>
<tr>
<td>NOCHAY, E.</td>
<td>Influence of fuel-air mixture phase inhomogeneity on combustion efficiency in straight-flow channel</td>
<td>p0565 A80-471417</td>
</tr>
<tr>
<td>NOCHAY, E.</td>
<td>A nonlinear problem of static aeroelasticity</td>
<td>p0149 A80-21264</td>
</tr>
<tr>
<td>NOCHAY, E.</td>
<td>Features study: A study of RF external transmissions [AD-A080664]</td>
<td>p0311 H80-21627</td>
</tr>
</tbody>
</table>

**NTERBERG, S.-E.**

The simulation and modeling of jet plumes in wind tunnel facilities [AIAA 80-0430] p0199 H80-26941

Experimental investigation of the interference-free flow field around a lifting wing-body model to establish cross-flow characteristics for ventilated wind tunnel walls at low supersonic Mach numbers [AIAA 80-0448] p0200 A80-26948

**NYTAP, L. J.**


**NYBUERG, S. G.**

Investigation of the boundary condition at a wind tunnel test section wall for a lifting wing-body model at low supersonic speed [AD-A072098] p0252 H80-10143
OCONOR, S., The effect of viewing time, time to encounter, and practice on perception of aircraft separation on a cockpit display of traffic information [NASA-TP-81173] p0224 880-18038

OCONOR, S. E., Perception of aircraft separation with pilot-preferred symbology on a cockpit display of traffic information [NASA-TP-81172] p0604 880-31397

ODGERHS, J., Elementary considerations for ramjet modelling [AIAA PAPER 80-1108] p0399 880-38961

Combustion modelling within gas turbine engines, some applications and limitations p0498 880-27394

ODINEHEKU, W. A., Development of a program for controlling the angle of bank of an orbital aircraft during entry into the atmosphere p0150 880-21279

ODGARE, P., Visual displays for air traffic control data p0116 880-14077

ODGARE, A. E., Review and evaluation of national airspace system models [AD-A078050] p0176 880-17047

ODGARE, J., Experimental methodology and application of fracture mechanics concepts to safety [AIAA PAPER 80-79-35] p0379 880-36869

OESTHELHETT, G., Interactive aided design system for aircraft dynamic control problems p0301 880-21278

Interactive design system for aircraft dynamic control problems [ABO-PE-3252/95/08/11] p0403 880-26329

OET, K. T., Leading edge flutter of supercavitating hydrofoils [AD-A073882] p0273 880-12236

OFFERINGS, R. P., Methods for strap-down attitude estimation and navigation with accelerometers p0112 880-14038

OFFS, D. L., Wind shear detection with Doppler radar p0389 880-37707

Test and evaluation of the Airport Surveillance Radar (ASR)-6 wind shear detection system, phase 2 [AD-A0860645] p0544 880-29280


Control-system techniques for improved departure/spin resistance for fighter aircraft [NASA-TP-1689] p0540 880-29240

OGHOROBB, H. E., Exploratory piloted simulator study of the effects of winglets on handling qualities of a representative agricultural airplane [NASA-TP-81617] p0536 880-28370

OGDEN, J. S., Comparative resistance of Beta-Si3N4 solid solutions to molten silicon attack p0091 880-18062

OHALA, H., Fluid forces on rotating centrifugal impeller with whirling motion p0558 880-29728

OHAYON, R., Symmetric variational formulation of harmonic vibrations problems by coupling prismatic and dual principles. Application to fluid-structure coupled systems p0316 880-22245

OHOKA, F., Reliability improvement on aircraft engine bearing by discriminant analysis p0271 880-30299

OHTA, H., Preliminary analysis of minimum time and minimum noise landing approach trajectories [AIAA 80-1596] p0517 880-45891

OKABATA, A., Low-aspect-ratio limit of the toroidal reactor - The spheronak p0090 880-17876

OKADA, T., Design of perfect model following systems by geometric approach p0267 880-29688


OKIISHI, T. H., Aerodynamics of advanced axial-flow turbomachinery [AD-A079617] p0293 880-20277

OLDAMEWOSI, Z., High bypass turbofan component development. Phase 2: Detailed design p0475 880-25341

High bypass turbofan component development. Amendment 1: Small fan redesign [AD-A089067] p0648 880-33413


Boundary layer studies on highly loaded cascades using heated thin films and a traversing probe [NASA PAPER 80-07-137] p0462 880-42250

OLMAZY, C. A., Wind tunnel measurement of lateral aerodynamic derivatives using a new oscillatory rig, with results and comparisons for the Gnat aircraft [ASC-88/1-3647] p0600 880-31366

OLMENDEKES, C., Guidance subsystems with position measurement for gliding airdrop systems [AD-A080730] p0418 880-24274

OLMSEKES, K. V., Effect of the surface state of gas turbine blading on the blade's aerodynamic characteristics when operating on products of combustion of high-sulphur oil p0048 880-13369

OLMSEKEKU, G. X., Radio and optical flight support systems and communications in civil aviation p0049 880-14050


OLIPHANT, W. J., Aircraft engine combustor casing life simulation evaluation [AIAA PAPER 80-1157] p0399 880-38983

OLKFE, G., Recent and future engineering developments in flight training simulators p0005 880-10776

OLKFE, R. G., Development of a new contouring device p0380 880-37708

Design of an improved weather contouring device [AD-A082750] p0426 880-29495

OLIVER, T. L., Evaluation of fuel character effects on the F101 engine combustion system [AD-A078440] p0243 880-19119

Evaluation of fuel character effects on the F101 engine combustion system [AD-A077860] p0448 880-41182

OLLEN, J. J., Flutter analysis of a NASA 64A006 airfoil in small disturbance transonic flow p0207 880-28851

Unsteady pressure measurements on oscillating models in European wind tunnels [AD-A083268] p0478 880-26277

OLLEN, W., Effect of temperature on surface noise p0216 880-28019

OLSON, B. A., Durability testing at 5 atmospheres of advanced catalysts and catalyst supports for gas turbine engine combustors p0380 880-37708

B-112


Ovay, D. A pre-design code for predicting engine acquisition costs [AIAA PAPER 80-0055] p0099 N80-19269

An extension of engine weight estimation techniques to compute engine production cost [AD-A074954] p0137 N80-15135

Ozbek, N. Flexible formats - The controller controls the computer p0388 N80-37697

Oyo, K. Fracture and fatigue properties of 1cr-mo-v bulletin turbine rotor steels [SPTR-PP-1023] p0043 N80-11201

Ozar, F. M. Design of air-cooled jet engine testing facilities [AIAA PAPERS 79-G/1SE-5] p0856 N80-42057

Obar, D. J. Burning and upgrading of synfuels from coal and oil shales by advanced catalytic processes [FP-2315-63] p0425 N80-24482

Refining and upgrading of synfuels from coal and oil shales by advanced catalytic processes [FP-2315-48] p0607 N80-31629

O'Reilly, W. J. The impact of digital avionics on equipment maintenance p0282 A80-32441

Oland, V. A. Surveillance performance measurements of the SSR mode of the discrete address beacon system p0694 N80-27346

Discrete Address Beacon System (DABS) Description Practical [AD-A005169] p0531 N80-28336

O'Leary, J. Cost-effectiveness of flight simulators for military training p0255 N80-19830

Oloff, L. L. High-resolution LDA measurements of Reynolds stress in boundary layers and wakes [AIAA 80-0436] p0202 A80-26967

Effect of tip planform on blade loading characteristics for a two-bladed rotor in hover [NASA-TM-78-7615] p0113 N80-14049

Olow, A. V. Controlling the technical servicing at an air technical base p0564 A80-47389

Ozawa, J. C. Capacity payoffs at large hub airports from ATC initiatives p0215 A80-28380

Ozernos, R. UK approach to aircraft dynamic response on damaged and repaired runways p0436 N80-25327


Ohsue, A. L. Scaling wake-particle interactions for aerial applications research [AIAA PAPER 80-1873] p0472 A80-03316

Obee, R. Rotating stall in axial flow compressors p0073 N80-12337

Osbogo, R. J. The effect of local parameters on gas turbine emissions [AIAA PAPER 80-1290] p0401 A80-39006


Otte, P. Avionics installation (AVISTALL) cost model for user equipment of NAVSTAR global positioning system [AD-A073681] p0118 N80-14106

Ozias, F. Future trends in subsonic transport energy efficient turboloan engines [AIAA PAPER 80-GT-177] p0464 A80-42283

Oeschger, J. A. Prediction and measurement of turbulent aerodynamic trailing edge flows [AIAA PAPER 80-1395] p0452 A80-41599

Osadchyn, V. I. On centrifugal compressor output regulation by iris diaphragms p0617 N80-51905

Oskar, R. Wind tunnel design and performance for rough wall turbulent boundary layer p0154 A80-21980

Ossborn, A. G. Thermodynamics of organic compounds [AD-A080072] p0296 N80-20410

Osgood, T. Durability testing at 5 atmospheres of advanced catalysts and catalyst supports for gas turbine engine combustors [NASA-CR-159839] p0427 N80-24748

Osgood, G. Low cost simulation of piloting tasks p0483 N80-26332

Ospialk-Chiehlin, X. A system for measuring and recording wind-tunnel balance data p0191 A80-25221

Oskar, R. Boundary layer measurements on a two-dimensional wing with flap and a comparison with calculations p0501 N80-27665

Oskar, J. Life and utilization criteria in design for balanced life and performance [AIAA PAPER 80-1062] p0447 A80-41177

Osoeghie, V. O. Laminar boundary layer calculation from experimental pressure distribution p018 N80-10085

On a smooth approximation method and its application to mathematical description of wing aerodynamic characteristics p0034 N80-11011

Osterbeck, P. C. The innovative application of boost engine technology to the design of a variety of tactical and strategic aircraft [AIAA PAPER 80-0799] p0156 N80-22790

Ostgaard, J. C. A simulation support system, the development tool for avionic systems and subsystems p0256 N80-19800


Active control technology p0307 N80-21338
Prediction of noise constrained optimum takeoff
Computation of aircraft mounted antenna radiation
CF6-6D engine short-term performance deterioration
A study of stall deterrent systems for general aviation aircraft
On approximating the aerodynamic characteristics of a wing with a two-element trailing flap
Control of forebody three-dimensional flow separations
HF aircraft aerials - Some predicted and measured results
An investigation of ingress for a simple shrouded rotating disc system with a radial outflow of coolant
A study of stall deterrent systems for general aviation aircraft
Feasibility study of applying laminar flow control to an LTA vehicle
Personal Author Index

[AD-0077531] p0244 N80-19122
PAGL, V. E.
An experimental investigation of two large annular diffusers with swirling and distorted inflow
[HASA-TP-1628] p0219 N80-17984
PAGL, T. O.
Note on the yawing moment due to side slip for swept-back wings
P0322 N80-33280
PALEJ, G.
An assessment of terminal air traffic control system performance with and without basic metering and spacing automation
[AD-0103548] p0037 N80-11057
PAHLER, G.
Exploratory study of a laminar-turbulent transition process close to laminar boundary layer separation
P0316 N80-22246
PAKHEI, V. N.
Transverse bending of elastically rim-stiffened three-layer cantilever plates of variable layer thickness
Transverse bending of cantilevered three-layer plates with layers of variable thickness stiffened along the contours by elastic diaphragms
P0262 N80-29212
PAINT, J. H.
A navigation algorithm for single channel low-cost GPS receiver
P0284 N80-32457
PALATUCCI, C.
TIPS - An integrated CHI system in hardware feasibility demonstration
P0283 N80-32451
PALCHEN, H. L.
Operation of airborne equipment and flight safety
P0011 N80-11875
PALEO, R. L.
Design and verification of an automatic Mach number control system
P0264 N80-29500
PALEUTI, L. J.
Integrated circuit characteristics at 260 C for aircraft engine-control applications
P0103 N80-20112
PALCHE, R. E.
Perception of aircraft separation with pilot-preferred symbology on a cockpit display of traffic information
P0604 N80-31397
PALCHE, R. E.
The effect of viewing time, time to encounter, and practice on perception of aircraft separation on a cockpit display of traffic information
[HASA-TR-81172] p0224 N80-18038
PALCHE, R. E.
Investigation of transient induced aerodynamics in a moving deck environment
P0629 N80-32350
PANAD, B. E.
A note on the yawing moment due to side slip for swept-back wings
P0322 N80-33280
PAN, C. H. T.
Rotor dynamics
P0624 N80-53668
Botor-bearing dynamics technology development guide.
Part 5: Dynamic analysis of incompressible fluid bearings
[AD-0085106] p0539 N80-28725
Botor-bearing dynamics technology design guide.
Part 1: Flexible rotor dynamics
[AD-0087806] p0611 N80-31082
PARAGAS, R.
Use of computers in the aerodynamic design of the HiMAT fighter
P0300 N80-21262
PARASAS, A. G.
Separation pressure of a turbulent boundary layer in transonic interactions
P0390 N80-38035
PANAHER, R. A.
Approximate determination of helicopter vertical rate of climb
P0564 N80-47404
PARDOL, R.
Three-dimensional incompressible rotational
flows Numerical results and comparison with analytical solutions  p0211 A80-27765

PAPIBCHIY, V. B. Calculation of working process in "slow-compression" piston-type aerodynamic tube p0003 A80-10607

PAPY, T. Propagation of acoustic waves in a nonuniformly heated medium p0326 A80-34388


PAOLINI, E. Experimental procedure to determine limits of ESR interference affecting navigational T/L equipment p0212 A80-27760

PAHABSS, B. J. Development and analysis of the Learjet 54/55 fuselage FASTRAVE model using substructure techniques p0653 H80-33794

PARDIN, S. A survey of the stochastic filtering techniques for data processing in air-traffic control and surveillance systems p1016 A80-20867

Survey of radar data-processing techniques in air-traffic-control and surveillance systems p0835 H80-37500

Tracking algorithms for mono and multiradar p0116 H80-14074

A study for development of methods for air traffic management p0491 H80-27327

PARDOE, B. E. Aircraft fuel system simulator tests with antilisting kerosene (Jet A fuel with FM-9 additive) [AD-A073327] p0123 H80-14256

PARRIS, R. A. Study of optical techniques for indirect generation of runway approach lights [AD-A080438] p0499 H80-27398

PARRIS, T. Air to air helicopter fire control equations and software generation [AD-A086115] p0496 H80-27359

PARK, G. R. Investigation can prevent aircraft accidents p0268 A80-29773


PARK, J. A. Release-rate calorimetry of multilayered materials for aircraft seats p0325 A80-34223

Release-rate calorimetry of multilayered materials for aircraft seats [AIAA 80-0759] p0332 A80-35052

PARKER, R. D. Criteria for aircraft high power [AD-A087427] p0608 H80-31734

PARKER, R. L., Jr. Experiments for the reduction of wind tunnel wall interference by adaptive-wall technology [AD-A076555] p0181 H80-17088

PARKHOBO, R. B. Determination of requirements placed on airplane components from a dimensional analysis of the standard design relations p0563 A80-47187

Influence of fitting jobs on the quality and prime-cost of aircraft assembly p0563 A80-47388

PARKSOV, A. L. Theory of by-pass ducted-fan engines p0193 A80-26389

PARKES, A. Demonstration of a unified approach to the balancing of flexible rotors [ASME PAPER 80-GT-87] p0660 A80-42213


PARKS, R. K. Aircraft motion analysis using limited flight and radar data p0206 A80-27241


PARRIS, B. L. The effects of motion and g-seat cues on pilot simulator performance of three piloting tasks [NASA-TP-1601] p0129 H80-15069


PARRIS, R. W. Experiments in sensing transient rotational acceleration cues on a flight simulator [NASA-TP-1537] p0107 H80-10193

Application of modified profile analysis to function testing of simulated CTOL transport touchdown-performance data [NASA-TP-1541] p0038 H80-11069

Application of modified profile analysis to function testing of the motion/no-motion issue in an aircraft ground-handling simulation [NASA-TP-1540] p0076 H80-13024

Preliminary investigation of motion requirements for the simulation of helicopter hover tasks: [NASA-TR-81001] p0347 H80-22304

PATTERSON, B. A navigation algorithm for single channel low-cost GPS receiver p0284 A80-32457

PARES, C. L. The role of satellite altimetry in climate studies [NASA-TP-1570] p0174 H80-16676

PARES, A. Airborne integrated data systems p0504 A80-50957

PARES, S. V. Exhust system performance improvement for a long-duct nacelle installation for the DC-10 [AIAA PAPER 80-1195] p0850 A80-41513

PARES, B. Aircraft of the future [SAR PAPER 00043] p0575 A80-49693

PARTHARATHY, S. P. Excess noise from supersonic underexpanded jets in flight. I. p0162 A80-23923

Transmission of high frequency sound waves through a slug flow jet [AIAA PAPER 80-0969] p0337 A80-35944

PARTHIBAN, L. Assessment of the flammability of aircraft hydraulic fluids [AD-A076512] p0103 H80-17227

Integral aircraft fuel tank leak classification [AD-A086168] p0634 H80-32388

PASS, R. A. Analysis of the effects of higher order control systems on aircraft approach and landing longitudinal handling qualities [AD-A080519] p0354 H80-22362

PASQUALE, J. D. An analysis of the evolution of the reliability and maintainability disciplines p0250 H80-19520


PASTICEK, H. L. Hardware-in-the-loop simulation of a digital autopilot p0578 A80-49830

PATCHING, C. A. Fatigue testing of vampire wings p0525 A80-46851
PAUL V. L.
Theoretical-experimental synthesis of a multiscriterial ergonomic control system.

PAVLOV, R. Y.
Influence of the camber on the effective thrust of jet engine exhaust nozzles.

PAVLOV, V. A.
Application of geometrical programming to problems of optimal design.

PAVLOV, V. V.
Theoretical-experimental synthesis of a multiscriterial ergonomic control system.

PATTERSON, R. W.
Noise of a model helicopter rotor due to ingestion of turbulence.

PATTI, P. H.
Radiation by sources on perfectly conducting convex cylinders with an impedance surface patch.

PAUL, R. D.
On approximating the aerodynamic characteristics of a wing with two-element trailing flap.

PAUL, R. N.
Model development for automatic guidance of a VTOL aircraft to a small aviation ship.

PAUL, J.
Experimental and theoretical determination of the transfer function of a compressor.

PAUL, J., W., Jr.
Analysis of thrust-induced effects on the longitudinal aerodynamics of STOL fighter configurations.

PAUL, J. A.
Application of W x Y Z optical communications technology for satellite to link.

PAUL, J. P.
Using the computer to produce electric schemas.

PAVLACEK, V. R.
The economics and technology of LTA.

PAVLOV, V. V.
Theoretical-experimental synthesis of a multiscriterial ergonomic control system.

PAVLOV, R. Y.
Influence of the camber on the effective thrust of jet engine exhaust nozzles.

PAVLOV, V. A.
Application of geometrical programming to problems of optimal design.

PAVLOV, V. V.
Theoretical-experimental synthesis of a multiscriterial ergonomic control system.

Three-dimensional self-similar laminar boundary layer with longitudinal and transverse pressure gradient.

On modeling sensitivity of a linear system to reduction of its order by the infinitesimal transformation method in the yaw motion control problem.

On a smooth approximation method and its application to mathematical description of wing aerodynamic characteristics.

PAVLOV, V. V.
Theoretical-experimental synthesis of a multiscriterial ergonomic control system.

PAUL, C. H., Jr.
Model development for automatic guidance of a VTOL aircraft to a small aviation ship.

PAUL, J.
Experimental and theoretical determination of the transfer function of a compressor.

PAUL, J., W., Jr.
Analysis of thrust-induced effects on the longitudinal aerodynamics of STOL fighter configurations.

PAUL, J. A.
Application of W x Y Z optical communications technology for satellite to link.

PAUL, J. P.
Using the computer to produce electric schemas.

PAVELEK, J.
Validation of a wing leading edge stall prediction technique.

PAVELEK, J.
Reliability management of the avionic system of a military strike aircraft.

PAVELEK, V. R.
The economics and technology of LTA.

PAVELEK, V. R.
The economics and technology of LTA.

PAVELEK, V. R.
The economics and technology of LTA.
PEACOCK, R. E.  
Compressor response to spatially repetitive and non-repetitive transients  
[AIAA PAPER 79-GT/129-14]  p0455 A80-42054  
Compressor rotating stall in uniform and non-uniform flow  
[AIAA PAPER 79-GT/129-18]  p0456 A80-42055  
Temperature distortion  
 p0739  B80-12332  
Unsteady pressure distortion  
 p0739  B80-12333  
PEAKE, D.  
Diagnosis of separated flow regions on wind-tunnel models using an infrared camera  
 p264 A80-29499  
Control of forebody three-dimensional flow separations  
 p0141  B80-15164  
Three-dimensional interactions and vortical flows with emphasis on high speeds  
 [NASA-TR-81169]  p0302  B80-21286  
PEARSE, D. S.  
Gas turbine carcasse and accessory vibration—Problems of measurement and analysis  
 p0090  A80-17730  
PEARSE, J. A.  
Object and matching techniques for terminal guidance using Fourier phase information  
 p0097  B80-17557  
PEARSE, L. M.  
The SEM description of interaction of a transient electromagnetic wave with an object  
 p0313  B80-21941  
PEASLEY, R. A.  
System redesign for compatibility with C-141 fuselage stretch  
 [AIAA PAPER 80-1892]  p0473  B80-43327  
PENCERSEKEL, R. A.  
The operation of airports: Maintenance and upkeep [Handbook]  
 p1159  B80-23086  
PECK, W. C.  
Accelerating reliability growth of electronic propulsion controls in the 1980's  
 [AIAA PAPER 80-1148]  p0488  A80-41168  
PETERS, J. L.  
Multivariable synthesis with inverses  
 p0164  A80-29246  
PENN, E. H.  
Air traffic in NATO Europe: Its characteristics and its needs  
 p0491  B80-27325  
PENNIES, R. M.  
Materials for advanced turbine engines. Volume 1: Power metallurgy Rene 95 rotating turbine engine parts  
PEGG, R. J.  
Aerodynamic wind-tunnel tests of a light twin-boom general-aviation airplane with free or shrouded-push propellers  
 [NASA-TP-80203]  p0232  B80-19023  
PEDIG, S. W.  
Laminar boundary layer on swept wings of infinite span at an angle of attack  
 p0467  B80-42964  
PENG, J.  
Prediction of dynamic properties of a rotor supported by hydrodynamic bearings using the finite element method  
 [CETIM-1-84-29-0]  p0185  B80-17682  
PENGEBHEIM, H.  
Automatic recovery after sensor failure onboard  
 p1111  B80-14024  
PENGEBHEIM, E. P.  
Method of studying the working-medium temperature of aircraft gas-turbine engines for transient nodes  
 p0563  A80-47370  
PELLEGRINI, D.  
An air traffic channel simulation by means of ray-tracing techniques  
 p0117  B80-14088  
L-band measurements in the air traffic channel to characterize secondary radar system  
 p0117  B80-14092  
PENN, A.  
Non-contacting electro-optical contouring of helicopter rotor blades  
 [AD-A078086]  p0118  B80-14111  
Non-contacting electro-optical contouring of helicopter rotor blades  
 [AD-A085820]  p0546  B80-29293  
PENGEB, W.  
Experimental survey of the statistical properties of dynamic clutter in ATC primary radars  
 p0396  A80-38844  
PENGEBERT, R. P.  
F-16 flutter suppression system investigation  
 [AIAA 80-0768]  p0333  B80-15060  
PENGEB, B. S.  
Aircraft instruments and automatic systems /3rd revised and enlarged edition/  
 p0193  B80-26350  
PENGEB, N. L.  
Near-field pattern analysis of airborne antennas  
 p0402  A80-39169  
PENGEBRAPY, A. C.,  
Unsteady and non-repetitive transients  
 [AIAA PAPER 79-GT/132-14]  p0456  B80-42054  
Diagnosis of separated flow regions on wind-tunnel models using an infrared camera  
 [AIAA PAPER 79-GT/129-14]  p0455  A80-42054  
Temperature distortion  
 p0739  B80-12332  
PENGEB, J. J.  
Study of the influence of hole quality on composite materials  
PENGEB, J. A.  
Aerodynamic characteristics of a hypersonic research airplane concept having a 70 deg swept double-delta wing at Mach numbers from 0.80 to 1.20, with summary of data from 0.20 to 6.0  
 [NASA-TP-1552]  p0608  B80-12064  
PENN, J. E.  
Potential environmental effects of aircraft emissions  
 [ODCRL-52861]  p0427  B80-24887  
PENN, A. H.  
Mixer nozzle noise characteristics  
 [AIAA PAPER 80-0166]  p0162  B80-23936  
PENN, B.  
Onboard collision avoidance system: Environmental influence on the tracking algorithms requirements  
 p0117  B80-16105  
PENN, J. H.  
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 p0376  A80-36796  
PENNIS, K. J.  
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 p0386  A80-37601  
PENH, R. A.  
Induced effects of lightning on an all composite aircraft  
 p0212  B80-27783  
State-of-the-art methods for computing the electromagnetic interaction of lightning with aircraft  
 p0313  B80-21948  
PENHRAVITV, P. J.  
Roll control of an attitude-controlled aerodynamic vehicle which has strong roll-yaw coupling  
 [SAND-79-1940]  p0422  B80-24330  
PENHRAVITV, P. J.  
An operating and support cost model for avionics automatic test equipment  
 [NA-AV75586]  p0292  B80-20269  
PENHRAVITV, R. K.  
Study of the nature of the working process of a gas turbine engine exhauster with staged heat rejection  
 p0565  A80-47431  
Optimal GTE regulation program design  
 p0616  A80-51899  
PENHRAVITV, L. V.  
On axial turbine stage rotor blade twist with tangential tilt of the stator vanes  
 p0004  B80-10630  
PENH, J.  
Flight evaluation of a radar cursor technique  
 [AD-A083027]  p0338  B80-25519  
Flight evaluation of a radar cursor technique as an aid to airborne radar approaches  
 [AD-A084015]  p0531  B80-28331  
PENGEBERT, R. S.  
Computational models for the viscous/inviscid analysis of jet aircraft exhaust plumes
OPPORTUNITIC MAINTENANCE ENGINE SIMULATION MODEL: Application to various airports. Roll and Bolyry-on-France p0560 H80-28952

PERKIN, J.
The avionics computer program: Practical experiences with a methodology p0112 H80-14037

PERKIN, J.
Experimental measurement of fields excited inside the fuselage of an aircraft p0207 H80-27306

PERKIN, J.
Features study: A study of RF external transmissions [AD-A080664] p0311 H80-21627

PERKINS, D.
DBAS - A flexible data handling system for P-15 software performance evaluation p0264 H80-32454

PERKINS, J. R.
Power system control study. Phase 1: Integrated control techniques [AD-A078629] p0244 H80-19125

PERKINS, J. R.
Measurements of cabin and ambient ozone on 747 airplanes Simultaneous cabin and ambient ozone measurements on two Boeing 747 airplanes, volume 1 p0128 H80-15059

PERKINS, J. R.

PERKINS, J. R.

PERRY, D. C.
Navy V/STOL - A continuing initiative [SANE PAPER 1525] p0106 H80-20655

PERRY, D. C.
An assessment of Sea Based Air Master Study [AIAA PAPER 80-1820] p0513 H80-45739

PERRY, M. J.
Low cost process for manufacturing of Oxide Dispersion Strengthened (ODS) turbine nozzle components p0636 H80-32399

PERRY, S. C., Jr.
Prediction of lateral aerodynamic loads on fighter aircraft at high angles of attack [AD-A071893] p0039 H80-11073

PERKINS, P.
The digital control system as part of an integrated accessory fit for future engines p0483 H80-26325

PERRY, G. E.
The use of the computer in the design of aerodynamic configurations p0299 H80-21258

PERKINS, P. A.
The Russian satellite navigation system p0109 H80-20982

PERKINS, P. A.
Opportunistic Maintenance Engine Simulation model: On the basis of the revised model [AD-A0252156] p0040 H80-11088

PERSON, L. H., Jr.
Early flight test experience with Cockpit Displayed Traffic Information (CDTI) [NASA-TP-80221] p0224 H80-18037

PERSON, L. H., Jr.
Flight investigation of cockpit-displayed traffic information utilizing coded symbology in an advanced operational environment [NASA-TP-1684] p0046 H80-27360

PERSSSON, B.
Swedish EBP research p0212 A80-27766

PETERS, D.
Aeroscopic characterization of free jets p0066 H80-12025

Peters, D.
Numerical computation of neighboring optimum feedback control schemes in real-time p0006 A80-10919

PETERS, D.
Development of high temperature resistant ceramic parts for gas turbines [NMT-PB-T-79-09] p0366 H80-23324

PETERS, D.
Production of synthetic hydrocarbon fuel, environmental aspects and comparison to hydrogen production from water p0382 A80-37332

PETERS, D.
Comment on 'Calculation of rotor impedance for articulated-rotor helicopters in forward flight' p0527 A80-47325

PETERS, G. H.
A Fourier-Stokes scheme for the calculation of three-dimensional impinging jet flows p0573 H80-49298

PETERS, G. H.
Viscous flows induced by two- and three-dimensional lift jets in ground effect [AD-A0708782] p0229 H80-18343

PETERS, J. H.
Size distribution and surface area measurements of gas turbine combustor smoke p0060 H80-16949

PETERS, L.
A comparison of jet temperature effects on afterbody drag with those from jet molecular weight and nozzle area ratio variations [AIAA PAPER 80-1161] p0048 H80-41191

PETERS, R. J.
Vocabulary specification for automatic speech recognition in aircraft cockpits p0123 H80-14303

PETERSON, J. B., Jr.
Wind-tunnel/flight correlation study of aerodynamic characteristics of a large flexible supersonic cruise airplane (BN-701). 2: Extrapolation of wind-tunnel data to full-scale conditions [NASA-TP-1515] p0167 H80-16032

PETERSON, J. B., Jr.
Wind-tunnel/flight correlation study of aerodynamic characteristics of a large flexible supersonic cruise airplane (BN-701). 3: A comparison between characteristics predicted from wind-tunnel measurements and those measured in flight [NASA-TP-1516] p0219 H80-17986

PETERSON, J. C.
A general statistical approach for using auxiliary information in the development of an impact acceleration injury prediction model [AD-A0807810] p0601 H80-31374

PETERSON, J. E.
Large-scale and small-scale flammability tests for airplane cabin materials p0328 H80-34707

PETERS, V. C.
Consolidation of titanium powder to near net shapes [AD-A0780391] p0247 H80-19239

PETITAN, C.
Mech definition by the conversational topological method and optimization in finite element structural calculations [AAPF PAPER 79-30] p0379 H80-35864

PHILIP, A.
Finite elements and the optimization of aeronautical structures p0301 H80-21268

PFEIT, G.
Impact of modern materials on the development of rotorcraft [AAFP PAPER 79-63] p0360 H80-36875

PFEIT, G.
Impact of modern materials on the development of helicopters [SNIAST-792-210-123] p0533 H80-28347

PFEIT, J. E.
Investigation of advanced thrust vectoring exhaust systems for high speed propulsive lift [AIAA PAPER 80-1159] p0446 H80-41190

PFEIT, J. P.
Flight testing of several control laws of a fly-by-wire system p0309 H80-21353

PETOT, D.
A phenomenological model of the dynamic stall of a helicopter blade profile [OWRA, TP NO. 1979-149] p0102 A80-20066
Preparing aircraft propulsion for a new era in energy and the environment

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Follow-up and final-value control of a special non-linear process - A study on optical aircraft guidance during the final landing phase

Filtering of synthetic radar data

A study for development of methods for air traffic management

Optimal design of shells and plates with discrete stiffeners

Study of size distribution of oil drops formed in GTG oil system lines

Selection of parameters of axial power-driven centrifugal breathers for gas turbine engine oil systems

Study of size distribution of oil drops formed in GTG oil

Nonstationarity of heat transfer in axial turbine blading during engine startup

Use of the method of variable directions for numerical study of the temperature states of a turbine disk with blades

Nonstationarity of heat transfer in axial turbine blading during engine startup

Proceedings of the 7th Ann. Tri-Service Meeting for Aircraft Engine Monitoring and Diagnostics [AD- A075126]

Theoretical performance for non-static ejector thrust augmenters [AD-4083246]

Fiber structures on the Mirage 2000 and Mirage 4000 [AIAA PAPER 95-79-44]

The use of computer aided design methods in airborne systems evaluation


An investigation of ingress for a simple shrouded rotating disc system with a radial outflow of coolant [AIAA PAPER 95-40-GT-9]

Integrated test - A quest for reliability achievement

Reliability growth through environmental simulation

Analytical methodology for determination of helicopter IFR precision approach requirements [NASA-CR-152367]

Application of a laminar lighting device to smoke visualization of flows in a wind tunnel

Helicopter environmental control - Commercial and military solutions

Optimization of flight-vehicle control on the basis of equations of motion of a variable-component body

Development trends of airport surface traffic control radar

New methods for ground tests of aeronautical structures

Dynamic identification of light aircraft structures and their flutter certification

Helicopter canopy internal reflection investigation

Turbo engines in the '80s

Current problems and the future is advanced supersonic transport noise

The Kirsten rotor as a wind turbine

Detection and assessment of secondary sonic booms in New England [AD-1088160]

Investigation of lubricant concepts applicable to future Navy aircraft propulsion systems [AD-1079410]

Advanced combustion systems for stationary gas turbine engines. Volume 1: Review and preliminary evaluation [AF80-175598]

Advanced combustion systems for stationary gas turbine engines. Volume 2: Bench scale evaluation

Design concept for fuel fire facility scale-down [AD-1084624]
PIESEL, A. G.

PIESEL, A. G.
Evaluation of Aero Commander sidewall vibration and interior acoustic data: Static and dynamic [NASA-CR-159290] p0645 N80-33392

PIETT, K. W.
Statistical techniques for automating the detection of anomalous performance in rotating [CONF-790935-2] p0084 N80-13381

PILLSBURY, P. W.

PIERSE, V.
Determination of the profile losses on the turbine blades p0261 A80-29136

PIERL, S. I.
Operating characteristics of high-speed, jet-lubricated 35-millimeter-bore ball bearing with a single-outer-land-guided cage [NASA-TP-1657] p0312 N80-21753

Effect of cage design on characteristics of high-speed-jet-lubricated 35-millimeter-bore ball bearing [NASA-TP-1732] p0653 N80-33709

PIERSEH, W. J. G.
The flying qualities of aircraft with augmented longitudinal and directional stability p0308 N80-21343

PIESE, L. J.
Design and simulation of a helicopter target hand-off computer p0914 A80-12645

PIETERSON, R. N.
Investigation of some features of film cooling of fixed and moving blades p0508 A80-94776

PIETERS, N.
Automatic recovery after sensor failure onboard p1111 N80-14024

PIETERS, F.
Concepts, construction, and maintenance of airports p0408 A80-39594

PIEBI, F.
Experimental survey of the statistical properties of dynamic clutter in ATC primary radars p0396 A80-38044

PIEBOV, U. G.
Investigation of flows in Laval nozzles at small Reynolds numbers p0467 A80-42969

PIEBO, J.
Establishment of engineering design data for hybrid steel/ceramic ball bearings [AD-1070934] p0250 N80-19509

PIEBBEKO, G. S.
Investigation of structural strength of ceramics used for circulating section components of gas turbine engines p0382 A80-37107

PIEBOV, P. P.
Fuel conservation benefits and critical technologies of recuperative and advanced conventional cycle turbo shaft engines [AIAA PAPER 80-0224] p100 N80-19301

PIEBOV, Y. A.
An engine fuel chemistry solution to the problem of jet fuel supplies p0002 A80-10199

PIETIAW, J. L.
Application of supersonic linear theory and hypersonic impact methods to three nonnuclear hypersonic airplane concepts at Mach numbers from 1.10 to 2.06 [NASA-TP-1539] p0068 N80-12065

PIETIAW, S. N.

PIETS, C.
Effect of winglets on performance and handling qualities of general aviation aircraft [AIAA PAPER 80-1870] p0472 A80-43114

PIETS, F. L.
Storm hazards '79: F-1068 operations summary
Advanced risk assessment of the effects of graphite fibers on electronic and electric equipment [NASA-CR-159210] p0484 A80-26393

PODBYGI, V. V. The interaction of three shock waves p0151 A80-21313

PODZ, G. L. Flow of a compressible fluid over an isolated airfoil and through a cascade p0151 A80-21302

POGIOI, E. Estimating the time required to transition aircraft fleets to new scheduled maintenance intervals [AD-A078606] p0232 A80-19027

POHLBAS, L. D. Development of simulator instructional feature design guides [AD-A084628] p0537 A80-28379

POJNST, H. Airborne radar—Evolution and diversification p0165 A80-25382

POLTBE, A. I. Determination of the loading capacity of wave transmissions with a slide generator p0563 A80-47362

POLTBEKE, K. P. Influence of the thermal expansion of the gas on the rate of propagation of the flame front in a pulsating-type combustion chamber p0563 A80-47369

POLLH, A. W. A multiple transfer function model for air traffic control systems p0153 A80-21887

POLOK, L. M. Nonstationarity of heat transfer in axial turbine blading during engine startup p0004 A80-10633

POLISCHUK, V. G. Investigation of the thermal state of longitudinally cooled rotor blades p0475 A80-93784

POLL, D. I. A. Transition in the infinite swept attachment line boundary layer p0046 A80-13573

POLLL, F. C. Temperature and pressure measurement techniques for advanced turbine test facility p0340 A80-36157

POLLOCK, E. P. Programs for the transonic wind tunnel data processing installation. Part 7: Extended focusing [AD-A073418] p0226 A80-18054

A proposal for aerodynamically actuated self streamlining subsonic wind tunnel walls [AFRL/AE00-WTE-392] p0555 A80-29376

POLLOI, F. Microprocessors and small digital computers for avionics navigation systems p0396 A80-38841

POLOYOK, A. E. Use of the method of variable directions for numerical study of the temperature states of a turbine disk with blades p0017 A80-10028

Nonstationarity of heat transfer in axial turbine blading during engine startup p0021 A80-10089

POLD, C. R. Selected wind tunnel testing developments at the Boeing Aerodynamics Laboratory [AIAA 80-0458] p0201 A80-26958

POHMATE, E. W. PIce control for air-to-air gunnery in high performance fighter aircraft p0256 A80-19841

POHOZ, A. H. Dynamics of the braking system of transport aircraft p0563 A80-47368

POHAB, L. I. Antennas/Current status and problems p0011 A80-11690


POULB, B. A. Some examples of procedures used in U.K. for acceptance testing of aircraft produced by the aircraft industry under government contract [P0596 A80-31322

Evaluation of longitudinal characteristics including stability handling and CG range p0097 A80-31335

Evaluation of lateral and directional characteristics and spinning behaviour p0097 A80-31336

POULE, W. The role of aluminum segregation in the wear of aluminum/bronze-steel interfaces under conditions of boundary lubrication [EASEL PREPRINT 79-AR-56-1] p0011 A80-12110

POOBRA, S. Handling qualities of large flexible aircraft [NASA-CR-163593] p0637 A80-32402

POOBRA, B. M. F-104 low-gravity calibration tests for materials processing in space precursory experiments [NASA-TR-78276] p0436 A80-25355

POPOE, A. N. Lasin boundary layer calculation from experimental pressure distribution p0018 A80-10045

POPOE, B. G. Electrical charging of fabric and film materials p0019 A80-10048

POPOE, V. A. Selecting the geometric parameters and position of a nose flap on the root profile of a swept wing using tunnel test data, part 2 p0018 A80-10044

Selection of geometric parameters and location of nose flap on swept wing root profile from tunnel test data, part 1 p0034 A80-11009

POPEE, N. C., JR. Locan-based buoy position auditing systems: Analytical evaluation [AD-A088266] p0631 A80-32369


POPEE, B. Azimuth observability enhancer during IFS In-flight alignment [TAP-362] p0630 A80-32360

POREGO, A. J. Investigation of lubricant concepts applicable to future Navy aircraft propulsion systems [AD-A079410] p0353 A80-32351

POREE, S. B. Air traffic control in a digital world p0285 A80-32467

POREE, J. L. Multivariable digital control systems [AD-A071662] p0030 A80-10226

POREE, B. Augmenting ejector endwall effects p0023 A80-10121

POREEF, J. D. Design assessment of advanced technology lightweight, low-cost mission-configured gondola modules [AD-A073554] p0078 A80-13029

POREEL, W. System for measurement of Category II ILS p0374 A80-36764

POREY, D. L. Static pressure orifice system testing method and apparatus [NASA-CASE-LAB-12269-1] p0229 A80-18358

POPPF, I. I. Study of the relaxation of the tightening force of
bolts and joint connection problems


POBBLS, A. N. Practical design considerations for a flightworthy higher harmonic control system [AIAA 80-0668] p0335 A80-35100

POBBLL, B. M. The rational design of an airflow for a high performance jet trainer [AIAA PAPER 80-0328] p0095 A80-18317

PRAD0, B. Soot formation and burnout in flames [AIAA 1979-29320] p0549 A80-29320

PB_ID0L, L. Applications of modern hydrodynamics to aeronautics: Part 1: Fundamental concepts and the most important theorems. Part 2: Applications [NACA-116] p0126 A80-15034

PBATT, B. R. Circumferential measurements of ozone, particles, and carbon monoxide from a commercial airliner [AIAA 80-21460] p0152 A80-21460

PBATT, B. R. Spectrum resource assessment in the 2.7-2.9 GHz band: Phase 2: Radar signal processing [PB80-129323] p0425 A80-22457


PBATT, S. G. Pressure rise of axial flow fans with whirling outflow [AIAA 1979-29320] p0260 A80-29096


PBATT, S. G. On some realistic applications of identification methods [AIAA 1979-29320] p053 A80-14859

PBATT, S. G. A plan for developing and validating a gas turbine design trade-off methodology [AIAA 1979-29320] p0590 A80-30304

PBATT, S. G. The annular jet technique for nozzle/afterbody throttle dependent drag testing. [AIAA PAPER 80-1571] p0399 A80-39894

PBATT, S. G. An investigation of F-16 nozzle/afterbody forces at transonic Mach numbers with emphasis on transonic Mach number interference [AIAA 80-1571] p0225 A80-18046


Carbon fiber counting
[AD-80-1477] p0538 N80-20446
Electronic equipment vulnerability to fire released carbon fibers
[AD-80-2049] p0651 N80-33491
PETERS, R. C.
Introduction on LORADS and ASDE
p0493 N80-27340
PETERS, J. L.
Integrated circuit characteristics at 260 C for aircraft engine-control applications
p0103 A80-20112
PETERS, S. W.
Experimental investigation of a circulation control alleron
[AD-8078825] p0233 N80-19046
PETERS, A.
The automation of the detection of collision risks for French air traffic control
p0325 A80-38226
PETERS, H.
The automated detection of collision risk for the control of air traffic in France
p0570 A80-48139
PRITCHARD, H. C.
Reduction of nitric oxide emissions from a combustor
PFEYFER, R.
Computer simulation of canopy-pilot response to bird-strike
[AD-8001212] p0304 N80-21296
PRODAN, J.
The T-28 thunder/hailstorm penetration aircraft
p0325 N80-19460
Direct effects of lightning on an aircraft during intentional penetrations of thunderstorms
p0313 N80-21947
PROFITI, C. V.
Safety considerations in the design of airport improvements
[SAREPAPER 800752] p0576 A80-49700
PROK, G. M.
Initial characterization of an Experimental Referee Broadened-Specification (EBBS) aviation turbine fuel
PRESCH, R. J.
Supercritical wing design studies for transport aircraft. Volume 1: Wing design and wind tunnel measurements
[BMPT-FW-V-79-06-VOL-1] p0346 N80-22275
PROGEO, V. R.
Allyl derivatives of resorcinol used as antioxidants in jet fuels
p0336 A80-35801
Mannich base used as an antioxidant in jet fuels
p0336 A80-35802
PROKUPKOV, G. V.
On the influence of short shroud platforms on turbine stage operation
p0004 A80-10627
PROKUPKOV, G. V.
On the influence of short shroud platforms on turbine stage operation
p0020 N80-10083
PROSHE, W. J.
Plane unsteady flow of inviscid and incompressible fluid around a system of profiles
p0391 A80-38273
PROVENC, G. Y.
Design and verification of an automatic Mach number control system
p0264 A80-29500
PROKHER, L. F.
Applications of the spread-spectrum signals from the NOVA satellites
p0190 A80-25189
PRUTTY, J.
Composite material application to the KR-12A BY midbody substructure
[AD-8076405] p0183 N80-17152
PSBEICHN, G. L.
Methods of computer-aided aircraft design
p0158 A80-23068
PUCCI, G. L.
Dynamic stall on advanced airfoil sections
[AD-8085809] p0581 N80-29252
PUCHI, M.
Fatigue at high temperatures: Examination of the behavior of gasket material during transient elevated temperature and strain cycles
[BMT-FP-T-79-26] p0588 N80-23444
POCHE, P.
The effect of blade-diffusers on the performance of short dump-diffuser type combustor inlet
[AD-8046811] p0406 A80-31415
POCHE, P. G.
An investigation of the quality of the flow generated by three types of wind tunnel (Ludwig tube, Evans clean tunnel and injector driven tunnel)
[AD-8069138] p0246 A80-19138
The cryogenic wind tunnel: another option for the European Transonic Facility
p0246 A80-19140
PUHEL, V. A.
A study of the stream-strain state of shaped hollow blades for radial superchargers
p0326 A80-34351
PUHEL, E.
A flight investigation of system accuracies and operational capabilities of a general aviation/air transport area navigation system
[AD-8076666] p0362 N80-23288
PUHEL, E. F.
The reliability and control characteristics of the aerocraft hybrid heavy lift vehicle
p0403 A80-39229
PUHEL, E. W.
Landing approach airframe noise measurements and analysis
[NASA-TP-8002] p0125 N80-15028
PUHEL, E. B.
Study of homogeneous combustion chamber temperature field nonuniformity with primary Zone parameter variation
p0020 N80-10085
RABINOVICH, R. L.
B-123

RABINOVICH, R. L.
Magnetic position and orientation tracking system
p0553 A80-14950
RABINDRA, W. A.
Models for freight access to air terminals
p0106 A80-20869
RABINOVICH, R. L.
Improvement of control system dynamics of means of additional hydraulic load feedback
p0109 A80-21260
RABINOVICH, R. L.
A pulsed radiography technique for studying the internal structure of fuel injection jets

R-123
An overview of NASA's propeller and rotor noise research [AAIA PAPER 80-0992] p0373 A80-36325
Noise reduction [BATHBB, D. P.] p0029 B80-10208
Predicted airframe noise levels [NASA-TR-81849] p0655 B80-34218
BANG, R. H.
Digital flight control software validation study [AD-1076021] p0180 B80-17062
BAYH, D. C.
Chilled recirculation ECS for aircraft [ASAE PAPER 79-EHAS-5] p0055 A80-15230
BAYH, A. H.
Systems analysis for planning of air fleets and maintenance facilities p0153 A80-21935
BAYH, B. H.
Prediction of aerodynamic characteristics of fighter wings at high lift [AD-1072630] p0025 B80-10140
BAYH, D. H.
Investigation of leading-edge devices for drag reduction of a 60-deg. delta wing at high angles of attack [AAIA PAPER 80-0310] p0094 A80-18209
Time-dependent measurement of base pressure in a blowdown tunnel with varying unit Reynolds number p0017 A80-52016
Leading edge vortex-flap experiments on a 74 deg delta wing [NASA-CR-159161] p0036 B80-11038
BAYH, P. S.
The 'Hartello' 3D radar antenna p0058 A80-15615
BAYNELL, J.
Aircraft icing during low-level flights [AD-1078043] p0236 A80-19052
Military weather calculations for the NATO theater: Weather and Warplanes 0 [AAIA PAPER 80-1000] p0654 B80-34033
BAYNE, E. H.
Maritime Patrol Airship Study /NAS/ [AAIA PAPER 80-0088] p0373 A80-36320
BAYNE, D.
Recent developments in flight simulation techniques p0107 A80-20907
BASS, M. D.
Experimental investigation of the two-dimensional asymmetrical turbulent wake behind a blade p0322 A80-33202
BASS, A. E.
Method for increasing the accuracy of an airborne geodetic radio rangefinder p0054 A80-15176
BASS, A. A.
The use of holographic speckle interferometry to study the stream-strain state of a gas turbine engine disk near a scarf joint with a blade p0049 A80-39916
Approximate determination of helicopter vertical rate of climb p0564 A80-47804
BATCLIFFE, R. Y.
Stalk-shear encounters during visual approaches at night: A piloted simulator study [AAIA-TR-79126] p0417 B80-24291
BATCLIFFE, S.
Transponders in civil aviation p0374 A80-36747
Precision navigation for air traffic management [SORRE-ENNO-3220] p0047 B80-24292
Precision navigation for air traffic management p0093 B80-27392
BATE, D. A.
Digital computer solution of aircraft longitudinal and lateral directional dynamic characteristics [AD-1076872] p0236 B80-19068
BAYH, C. A., JR.
Fracture and fatigue properties of 1Cr-8%V bainitic turbine rotor steels [JFRP-JP-1023] p0043 B80-11201
BAUMANN, W.
Influence of the profile geometry on the eigenfrequency and normal modes of high-pressure-turbine blades with allowance for conditions characteristic of aircraft gas-turbines p0566 A80-47605
BEALEY, J.
The logic of the electric flight control system experiment on the Concord. p0612 B80-32137
BEARE, R.
Matching of turbo-components described by the example of impeller and diffuser in a centrifugal compressor. I - Aerothermodynamic coupling of impeller and diffuser. II - Optimized stage efficiency of a centrifugal compressor [ASAE PAPER 79-CT/ISNR-5] p0586 A80-42058
BAYH, R.
Quiet Clean Short-haul Experimental Engine (QCSEE) under-the-wing engine composite fan blade design report [NASA-CR-135046] p0134 B80-15108
BAOY, S.
Aircraft maintenance effectiveness Simulation (AMES) model p0595 B80-31325
BEDZI, R.
EO22: A FORTRAN program for two-dimensional chemically reacting, hyperthermal, internal flows. Volume 1: Method of analysis [AD-10655225] p0537 B80-28308
BAZAR, R. A.
An investigation of vanel-island diffusers at high swirl [ASAE PAPER 80-CT-148] p0463 A80-42260
BAYNELL, E. P.
Developing an aircraft configuration using a microcomputer p0008 A80-11393
Advanced strategic aircraft concepts [AAIA PAPER 80-0188] p0162 A80-23940
BAZAR, J.
Data and analysis procedures for improved aerial applications mission performance [ASAE PAPER AA 79-001] p0055 A80-15220
BR, R. J.
Effect of several airframe/nozzle modifications on the drag of a variable-sweep bomber configuration [NASA-TP-80129] p0022 A80-10106
BARDEN, D. C.
An inflatable troop seat p0268 A80-29774
BRAD, E. R.
The effect of shaft angle on performance of a circulation control high-speed rotor at an advance ratio of 0.7 [AD-10B0953] p0349 B80-22314
BRAD, B. J.
Ruffling and upgrading of syngas from coal and oil shales by advanced catalytic processes [AD-2315-40] p0539 B80-28550
BRADDELL, L.
Loading tests of a wing structure for a hypersonic aircraft [NASA-TP-1596] p0129 B80-15066
BEAVEL, F.
New turnoffs for 'optimum runway occupancy times' p0055 A80-04111
BEEBE, J.
Large-amplitude fluctuations of velocity and incidence of an oscillating airfoil p0009 A80-11432
Airfoil at high angle of attack actuated by plunging motion [AAIP-TP-80-9] p0377 A80-36400
Transient effects on a stalled airfoil in a pulsed flow: Comparison with results from a similar airfoil undergoing horizontal shaking [AAIP-ST-79-13] p0221 B80-18003
Prediction of the interior noise levels of high-speed propeller-driven aircraft

Noise control prediction for high-speed, propeller-driven aircraft

Interior noise control prediction study for high-speed propeller-driven aircraft

Development of noisecheck technology for measuring characteristics of lightly loaded fan rotor blade

Development in ultrasonic welding for aircraft

Interior noise control prediction study for high-speed propeller-driven aircraft

The anatomy of an avionics system development and integration laboratory

A multi-grid code for 3-D transonic potential flow - about axisymmetric inlets at angle of attack

Characteristics of lightly loaded fan rotor blade elements

Peripheral jet air cushion landing system - an exploratory aircraft, volume 1

Peripheral jet air cushion landing system - an exploratory aircraft, volume 2

A Combined Environments Reliability Test (CERT) facility for testing of airborne equipment

Flight simulation techniques - The quest for realism

Low speed test of the aft inlet designed for a tandem fan VTOL nacelle

Design for continuing structural integrity

Graphite-epoxy panel compression strength reduction due to local impact

A navigation algorithm for single channel low-cost GPS receiver

A simulation model for aircraft sequencing in the near terminal area

Trends in automated the sequencing of aircrafts in terminal areas

Flight simulation techniques - The quest for realism

Modern RF communications for low flying aircraft

Comparison of inlet suppressor data with approximate theory based on cutoff ratio

Far-field radiation of APT turbofan noise

Noise reduction

Experimental evaluation of a spinning-mode acoustic-treatment design concept for aircraft inlets

Naval Mine Countermeasures

Navigation and meteorological error equations for some aerodynamic parameters

Flight certification of the Cessna TU206G amphibious floatplane

A comprehensive investigation into the supersonic viscous flow about a slender cone at high angle of attack: Experimental and theoretical results

Sixteen years of Bach 3 flight

The integration of area navigation and the microwave landing system

On some realistic applications of identification methods

Helicopter vibrations

Continuing structural airworthiness of civil transport aircraft

Simulation for whole life development

Active beacon collision avoidance system tests conducted for 1978 Los Angeles flights

An assessment of the risk arising from electrical effects associated with carbon fibers released from commercial aircraft fires

The integration of area navigation and the
overview of NASA battery technology program

Flight software requirements and design support

38 approach to the investigation, analysis, and

JT9D-7A (SP) jet engine performance deterioration

Part 1: Simulation requirements and simulator

Particular consideration of boattail drag

Irrigation of the boundary condition at a wind

tunnel test section wall for a lifting wing-body

PART 1. SIMULATION REQUIREMENTS AND SIMULATOR

PARTICULAR CONSIDERATION OF BOATTAIL DRAG

INVESTIGATION OF THE BOUNDARY CONDITION AT A WIND

TUNNEL TEST SECTION WALL FOR A LIFTING WING-BODY

B-128
Rollo, J. J.
The redundancy of scheduled and unscheduled maintenance
(AD-A076962) p0298 N80-21242

Rohr, C. L.
Boring target detector data utilization investigation
(AD-A086962) p0608 N80-31687

Rohrs, E.
Structural optimization with static and aeroelastic constraints
p0300 N80-21266

Rohrs, K. E.
Two-dimensional finite-element analyses of simulated rotor-fragment impacts against rings and beams compared with experiments
(NASA-CR-159645) p0350 N80-22323

Rohrs, M. F.
Aeroelastic stability analysis
(AD-A072797) p0042 N80-11101

Rode, E.
System EMC - Tendencies of a worldwide standardization and cooperation
p0212 A80-27784

Rode, C. W.
Community noise; Proceedings of the Symposium, Kansas City, Mo., May 24-26, 1978
p0386 A80-37601

Rodriguez, T. M.
The redundancy of scheduled and unscheduled maintenance
(AD-A076962) p0298 N80-21242

Rogers, E.
An acceptable role for computers in the aircraft design process
p0298 N80-21246

Rogers, R.
Recent and future engineering developments in flight training simulators
p0005 A80-10776

Rogers, R.
Off-design correlation for losses due to part-span dampers on transonic rotors
(NASA-TP-1693) p0534 N80-28352

Rogers, W.
Fluid and analysis of the ASALM-PTV insulated combustion chamber
(ASME PAPER 79-ENAS-21) p0055 A80-15245

Rogers, J. M.
Shock wave thermomechanical processing of aircraft gas turbine disk alloys
(AD-A082808) p0000 N80-24319

Rogers, S. H.
Aircraft survival design guide. Volume 5: Aircraft postcrash survival
(AD-A082513) p0432 N80-25308

Rohr, G.
Technical guidance for certification
p0407 A80-39579

Rohrs, A. J.
Mini-BRV research
p0266 A80-29660

Rohrs, A. W.
Supersonic wings with significant leading-edge thrust at cruise
(NASA-TP-1632) p0302 N80-21279

Robinson, C. R.
Evaluation of an ejection powered engine simulator at transonic Mach numbers
(AD-A071607) p0041 N80-11094

Robinson, P.
The Engine Usage Monitoring System (EUMS): An heuristic approach to cost effective flight data monitoring and analysis
p0430 N80-25280

Robinson, J. B.
Development of mainshaft high-speed cylindrical roller bearings for gas turbine engines
(AD-A073381) p0004 N80-13475

Robinson, D.
Short haul transport for the 1990s
p0154 A80-22046

Robles, R.
Aeropost de Paris and aircraft noise - Trajectory control and least nuisance procedures
p0274 A80-30816

Rock, S. R.
Optimal output feedback for systems having direct feedthrough of control
p0165 A80-24266

Variable cycle engine multivariable control synthesis: Control structure definition
(AD-A078670) p0243 N80-19117

Rockwell International

Rocchi, M. J.
Two-dimensional finite-element analyses of simulated rotor-fragment impacts against rings and beams compared with experiments
(NASA-CR-159645) p0350 N80-22323

Rode, M. F.
Aeroelastic stability analysis
(AD-A072797) p0042 N80-11101

Rode, E.
System EMC - Tendencies of a worldwide standardization and cooperation
p0212 A80-27784

Rode, C. W.
Community noise; Proceedings of the Symposium, Kansas City, Mo., May 24-26, 1978
p0386 A80-37601

Rodriguez, T. M.
The redundancy of scheduled and unscheduled maintenance
(AD-A076962) p0298 N80-21242

Rohrs, E.
An acceptable role for computers in the aircraft design process
p0298 N80-21246

Rogers, E.
Recent and future engineering developments in flight training simulators
p0005 A80-10776

Rogers, R.
Off-design correlation for losses due to part-span dampers on transonic rotors
(NASA-TP-1693) p0534 N80-28352

Rogers, W.
Fluid and analysis of the ASALM-PTV insulated combustion chamber
(ASME PAPER 79-ENAS-21) p0055 A80-15245

Rogers, J. M.
Shock wave thermomechanical processing of aircraft gas turbine disk alloys
(AD-A082808) p0000 N80-24319

Rogers, S. H.
Aircraft survival design guide. Volume 5: Aircraft postcrash survival
(AD-A082513) p0432 N80-25308

Rohr, G.
Technical guidance for certification
p0407 A80-39579

Rohrs, A. J.
Mini-BRV research
p0266 A80-29660

Rohrs, A. W.
Supersonic wings with significant leading-edge thrust at cruise
(NASA-TP-1632) p0302 N80-21279

Robinson, C. R.
Evaluation of an ejection powered engine simulator at transonic Mach numbers
(AD-A071607) p0041 N80-11094

Robinson, P.
The Engine Usage Monitoring System (EUMS): An heuristic approach to cost effective flight data monitoring and analysis
p0430 N80-25280

Robinson, J. B.
Development of mainshaft high-speed cylindrical roller bearings for gas turbine engines
(AD-A073381) p0004 N80-13475

Robinson, D.
Short haul transport for the 1990s
p0154 A80-22046

Robles, R.
Aeropost de Paris and aircraft noise - Trajectory control and least nuisance procedures
p0274 A80-30816

Rock, S. R.
Optimal output feedback for systems having direct feedthrough of control
p0165 A80-24266

Variable cycle engine multivariable control synthesis: Control structure definition
(AD-A078670) p0243 N80-19117
Adaptive allocation of decision-making responsibility between human and computer in multitask situations

Experimental and analytical transonic flutter characteristics of a geared-elevator configuration

L-band measurements in the air traffic channel to characterize secondary radar systems

New requirements, test techniques, and development methods for high fidelity flight simulation of commercial transports

Teoretical feasibility of digital communication over ocean areas by high frequency radio

Measurement, test techniques, and development methods for high fidelity flight simulation of commercial transports

Theoretical feasibility of digital communication over ocean areas by high frequency radio

System research and development service report of number 83 for multi-form hangars

Development of improved-durability plasma sprayed ceramic coatings for gas turbine engines

Hypothesis of rectangular wing between parallel walls

A comparison of underwater helicopter-escape lights

Dehydration of aircraft fuels and lubricants

Comparison of underwater helicopter-escape lights

Characterization of a geared-elevator configuration

Identification of flexible aircraft from flight data

The hovercraft comes of age

Identification of flexible aircraft from flight data

Comparison of underwater helicopter-escape lights

Dehydration of aircraft fuels and lubricants

Identification of flexible aircraft from flight data

Comparison of underwater helicopter-escape lights

Dehydration of aircraft fuels and lubricants

Identification of flexible aircraft from flight data

Comparison of underwater helicopter-escape lights

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Identification of flexible aircraft from flight data

Comparison of underwater helicopter-escape lights

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Identification of flexible aircraft from flight data

Comparison of underwater helicopter-escape lights

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Comparison of underwater helicopter-escape lights

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Identification of flexible aircraft from flight data

Comparison of underwater helicopter-escape lights

Dehydration of aircraft fuels and lubricants

Identification of flexible aircraft from flight data

Comparison of underwater helicopter-escape lights

Dehydration of aircraft fuels and lubricants

Identification of flexible aircraft from flight data

Comparison of underwater helicopter-escape lights

Dehydration of aircraft fuels and lubricants

Identification of flexible aircraft from flight data

Comparison of underwater helicopter-escape lights
SAIDSHABK, B.

SAHDEBS, B.

SAHDEBS, B. B.

SAIDSHABK, B.

SAHDEBS, B. B.

SAHDEBS, B. I.

SAHDEBS, B.

SAHDEBS, B.

SAHDEBSOB, K. C.

SAHDEBSOB, B.

SAHDEBSOB, B.

SAVIDSHABK, B.

SABDEBSOB, K.

SABDEBSOB, V. A.

SABDEBSOB, B.

SABDEBSOB, B.

SABDEBSOB, B.

SABDEBSOB, B.

SABDEBSOB, B.

SABDEBSOB, K.

SABDEBSOB, K.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

SABDEBSOB, B.

SABDEBSOB, B.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

SABDEBSOB, V. A.

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SABDEBSOB, V. A.

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SABDEBSOB, V. A.
SANSOREN, J. A.

V/STOL propulsion-induced aerodynamics hover calculation method
[AD-A082688] p0419 A80-24306

SANTSU, S. B.

Critical interfaces between environment and organism in class A insects: A retrospective analysis
[AD-A087341] p0600 A80-31371

SANTHE, D. M.

Some effects of cruise speed and engine matching of supersonic inlet design
[IAIA PAPER 80-1807] p0512 A80-05734

SANTO, J. C.

FATEC - An Air Force approach to ATE calibration model
p0270 A80-30016

SANTHE, R. G.

Experimental and theoretical investigation of the lifting properties of a wing of deformable profile
p0564 A80-47393

SAPONOV, I. E.

Systematization of simple detail parts of regulatable nozzle of gas turbine engine
p0609 A80-10616

Systematization of simple detail parts of regulatable nozzle of gas turbine engine
p0920 A80-10071

SAPOPO, J.

Propagation characteristics of flapping wings
p0050 A80-14415

SARGA, T. E.

Radar cross sections of conducting bodies over a lossy half space
p0384 A80-37409

SAROS, C. P.

Post-crash fuel fire hazard measurements in a wide-body aircraft cabin
p0259 A80-29025

The thermal impact of external pool fires on aircraft fuselages
p0509 A80-45496

Post-crash fuel fire hazard measurements in a wide-body aircraft cabin
[AD-A079546] p0415 A80-24280

SARL, P.

The nonlinear impedance of perforated walls in the case of two-tone excitation
p0274 A80-30810

SARONA, V. V. S.

System analysis for planning of air fleets and maintenance facilities
p0153 A80-21935

SARDHA, V.

Exceed noise from supersonic underexpanded jets in flight. I
[AD-A082692] p0162 A80-23923

Influence of antiaging polymer on aviation fuel breakup
[IAIA PAPER 80-1207] p0451 A80-45123

SARRALNE, S. R.

The strength of occupant restraint system in light aircraft: An experimental evaluation
[AD-SRSC-KEPT-375] p0542 A80-29263

SARRAPATHO, A.

Developments in ultrasonic welding for aircraft
p0326 A80-34797

SASAKI, H.

Study and experimental tests of fibrous acoustic treatment for reduction of fan noise from F-13-1 turbofan engine
[IAIA PAPER 80-0986] p0337 A80-35953

SASSO, A.

Radar data utilization in acousting the sequencing of aircrafts in terminal areas
p0116 A80-18671

SATHIN, V. A.

Selection of assembly clearances for gas-turbine engine seals
p0563 A80-47137

SATHE, D. B.

Full-scale wind-tunnel investigation of the effects of wing leading-edge modifications on the high angle-of-attack aerodynamic characteristics of a low-wing general aviation airplane
[IAIA PAPER 80-1804] p0470 A80-93302

SATA, A.

Secondary flow and losses in straight turbine cascades

SAZHELE, G. T.

The rational design of an airfoil for a high performance jet trainer
[IAIA PAPER 80-0328] p0095 A80-18317

SAYHEH, N.

Vocabulary specification for automatic speech recognition in aircraft cockpits
[AD-A073703] p0123 A80-18303

SAUER, R.

Investigations on vortex frequencies in wakes of cambered blades
p0261 A80-29139

SCHERB, O. T.

Effects of idealizing three-dimensional geometry with two-dimensional models in temperature and stress analysis of engine components
p0165 A80-24310

SAUWE, A. Y.

Far-field radiation of AFT turbofan noise
p0408 A80-39638

SCHUBERGH, A. A.

Fuel conservation through active control of rotor speed
[IAIA PAPER 80-1087] p0450 A80-41506

SCHUNES, A. A., JR.

Method and apparatus for rapid thrust increases in a turboprop engine
[NASA-CAS-LW-12971-1] p0226 A80-18039

SCHURDS, W. T.

Advanced component technologies for energy-efficient turbofan engines
[IAIA PAPER 80-1086] p0397 A80-39902

Airframe Energy Efficiency (ACE) status report
p0028 A80-10206

Advanced component technologies for energy-efficient turbofan engines
[NASA-TN-81507] p0420 A80-24316

The energy efficient engine project
[NASA-TN-81566] p0635 A80-32395

SAZHE, V. S.

Calculation of the interaction between an exhaust jet and a high-lift wing
p0525 A80-46862

SCHFEZBO, V. A.

Perturbing influence of the probe on the characteristics of a subsonic wake behind a two-dimensional model
p0475 A80-43787

SAWAJA, H.

An experiment of lift interference on 2-dimensional wings in a wind tunnel with perforated walls
p0268 A80-29889

SAYTHE, R. M.

Measurement of interference-to-navigation/communication avionics from cable television (CATV) systems
[AD-A081430] p0370 A80-23530

SAYER, R. V.

Electrical servo actuator bracket
[NASA-CAS-PFC-11044-1] p0306 A80-21327

SAYER, R. C.

Wind-tunnel/flight correlation study of aerodynamic characteristics of a large flexible supersonic cruise airplane (TR-271): Extrapolation of wind-tunnel data to full-scale conditions
[NASA-TP-1515] p0167 A80-16032

SCALEH, T. S.

West Coast LOHAN-C flight test
[AD-A086039] p0488 A80-27307

SCHEFFER, B.

Windtunnel tests of a tubular supersonic inlet for projectile engines
[DPLU-PB-79-26] p0436 A80-25367

SCHEFTER, D. B.

Digital Flight Control System (DFCS)/multi-mode development
p0285 A80-32469

SCHEFFER, J. W.

The energy efficient engine project
[NASA-TN-81566] p0635 A80-32395

SCHEFFER, G.

Force equilibrium and performance balance of aircraft longitudinal motion graphically presented in the formernumi diagram
p0444 A80-40982

B-134


SCHAEIB, T. T. FSSTC operating system design requirements specification. [NASA-CR-161396] p0257 A80-19861


SCHRIEB, L. Emergency landings on a carpet of foam. p0322 A80-33292

SCHIREDHICH, J. P. Positional error analysis, A-10 aircraft on three-axis ground mount. [AD-A073600] p0083 A80-13336


SCHILLERBACH, B. M. ATE system acquisition for B-3A aerody /AVACS/ p0271 A80-30033

SCHIREDKH, R. T. Development of a vortex-lift-design method and application to a slender maneuver-wing configuration. [AIAA PAPER 80-0327] p0094 A80-18316

SCHIREDH, E. D. Evaluation of a Central Data Entry System (CDES) for transport aircraft. [NPL-FD-79-23] p0304 A80-21298

SCHIREDH, R. Determination in ground facilities of aerodynamic stability parameters of aircraft. [AGASS-AS-242] p0072 A80-12102


SHREIB, E. Significance of the factors in a method for calculating the direct operating costs for commercial aircraft. p0568 A80-47786

SCHREIB, J. A. Analysis of firing and combustion in a scramjet combustor with a co-axial fuel jet. [AIAA PAPER 80-1256] p0049 A80-41207

SCHREIB, P. V. Evaluation of a Central Data Entry System (CDES) for transport aircraft. [DPFLR-FD-79-23] p0304 A80-21298

SCHREIB, R. I. Design of air-cooled jet engine testing facilities. [ASME PAPER 79-GT/ISR-5] p0456 A80-42057

SCHREIB, R. A pulse compression, precision DMR system. [SEE PAPER 79 1203] p0259 A80-29041

SCHILLING, R. H. Optimization of the relaxation drag of slender profile arrangements in steady subsonic flow. I - Single profile. p0444 A80-40895

SCHILLER, J. Basic issues of reliability in aviation. p0280 A80-32227

SCHIRI, L. The relationship between reliability and airworthiness. p0511 A80-45694

SCHIRL, E. An LSI digital signal processor for airborne applications. p0281 A80-32424

SCHILDEBURH. H. C. Carbon/graphite fiber risk analysis and assessment. p0168 A80-18107
A 94/183 GHz multichannel radiometer for Convair flights

SCHULTZ, D.
Current developments in aircraft fatigue evaluation procedures

SCHULTZ, T. J.
Inertially augmented approach couplers

SCHULZ, P. T.
Operational characteristics of high-speed, jet-lubricated 35-millimeter-bore ball bearing with a single-outer-land-guided cage

SCHULTZ, J. B. H. M.
On the ground field generated by a fan in a hard-walled baffled duct with uniform flow

SCHULTZ, P. H.
Atmospheric effects on Martian ejecta emplacement

SCHULTZ, E. J.
Community annoyance with transportation noise

SCHULTZ, R.
Numerical solution of the steady flow in turbine machine blades and ducts of arbitrary shape

SCHULZ, C. O.
The Fault Tolerant Multiprocessor engineering model /A report/

SCHULZ, E. H., JR.
A hybrid simulator for the DMR-30C missile simulation RVF

SCHWARTZ, J. B.
Interfacer design and data handling in a high-vibration environment. II - Data handling

SCHWACH, H. C.
Identification of aeroelastic parameters using a recursive sequential least squares method
Catastrophic failure mechanics under engine spectra
[AD-A088939]
p0536 N80-28365

SCHWARZKOPF, E. G.
Development and testing of an automatic lap belt
retraction and release system
[AD-A088950]
p0415 N80-24282

SCHWARZKOPF, E. G.
The design and combustion performance of practical
swirlers for integral rocket engines
[AD-PAPER 80-1119]
p0398 A80-38923

SCOTT, J. B.
A rotor supported without contact - Theory and
application
p0163 A80-29980

SCOTT, J. C.
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[AD-PAPER 80-1108]
p0627 N80-32225

SCHWARZKOPF, E. G.
Consolidation of titanium powder to near net shapes
[AD-PAPER 80-1311]
p0247 N80-19239

SCOTT, D. W.
The influence of ballistic damage on the
aerodynamic characteristics of lifting surfaces
[AD-A0825216]
p0433 N80-25322

SCOTT, C. W.
Thermodynamics of organic compounds
[AD-A088072]
p0296 N80-20410

SCOTT, C. W.
F-5F Shark nose radome lightning test
p0313 N80-21950

SCOTT, J.
An evaluation of the bird/aircraft strike hazard at
selected United Kingdom bases: RAE Mildenhall, RAF
Alconbury, RAF Upper Heyford, RAF Bentwaters, RAF
Fairford, RAF Lakenheath, and RAF Woodbridge
[AD-A073062]
p0069 N80-12077

SCHICHER, A. J.
Behavior of lightly confined high explosives in a
jet-fuel fire
[SCHAR-52659]
p0043 N80-11207

SCHRADER, B. M., JR.
An analytical investigation of the effect of
varying rotor tip speed to reduce helicopter
acoustic detection
[AD-A076691]
p0305 N80-21319

SCHROEDER, C. L.
A comparison of computer architectures for the
NASA demonstration advanced avionics system
p0281 A80-32427

SEARS, W. R.
Fly-wing airplanes - The XB-35/TB-49 program
[AD-A80-3036]
p0275 A80-31005

SEARS, J. C.
Digital flight control research using
microprocessor technology
[AD-A088147]
p0649 N80-33417

SEBACHER, D. R.
Summary of aircraft results for 1978 southeasters
Virginia urban plane measurement study of ozone,
nitrogen oxides, and methane
[AD-PAPER 80-08146]
p0174 N80-16575

SEBACH, B. T.
An investigation of several factors involved in a
finite difference procedure for analyzing the
transonic flow about harmonically oscillating
airfoils and wings
[NASA-CR-159143]
p0118 N80-14056

SEBACH, B. T.
Further investigation of a finite difference
procedure for analyzing the transonic flow about
harmonically oscillating airfoils and wings
[NASA-CR-3115]
p0109 N80-24271

SEBACH, B. T.
A new fuel supply control system for small
turbomachines
p0481 N80-26311

SEBACH, B. T.
Brittle materials design, high temperature gas
turbine
[AD-A0777150]
p0040 N80-11090

SEBACH, B. T.
Some experience in the design and evaluation of
ceramic combustion chambers
p0554 N80-29357

SEBACH, B. T.
An analog editing system for inlet dynamic flow
distortion, DYMARC - Past, present and future
[AD-PAPER 80-1108]
p0437 A80-41181

SEBACH, B. T.
Transonic flow past oscillating airfoils
p0148 A80-21233

SEBACH, B. T.
Shock-free wing design
[AD-PAPER 79-1557]
p0615 A80-51416

SEBACH, B. T.
Asymmetric trailing-edge flows at high Reynolds
numbers
[AD-PAPER 80-1396]
p0506 A80-49151

SEBACH, B. T.
Simulator for air-to-air combat motion system
investigation
[AD-A0772612]
p0032 N80-10237

SEBACH, B. T.
Friction characteristic of steel skids equipped
with tires on a lakebed surface
[AD-PAPER 80-18347]
p0078 N80-13027

SEBACH, B. T.
High bypass turbofan component development.
Assessment 1: Small fan redesign
[AD-A089067]
p0648 A80-33413

SEBACH, B. T.
Boundary layer and wake modifications to
compressor design systems: The effect of
blade-to-blade flow variations on the mean flow
field of a transonic rotor
[AD-A07620N]
p0180 N80-17075

SEBECK, R.
Structure and service life verification for the
Tornado
p0508 A80-44520

SEBECK, R.
Structural integration as a means of cost reduction
[BBE-PEL-S-PDB-30]
p0579 A80-49850

SEBECK, R.
Inlet flow distortion in turbomachinery. I -
Comparison of theory and experiment in a
transonic fan stage. II - A parameter study
[AD-PAPER 80-1076]
p0396 A80-38095

SEBECK, R.
Prospects for advanced tactical RPS's
p0265 A80-29653

SEBECK, R.
System, airspace, and capacity requirements for
future ATC-systems
p0491 N80-27328

SEBECK, R.
An investigation of corner separation within a
thrust augmenting having Coanda jets
[NASC-76153-50]
p0023 N80-10122

SEBECK, R.
Location and propagation of shock associated noise
from supersonic jets
[AD-PAPER 80-0583]
p0470 A80-43599

SHRANIAN, A. P.
The relationship between the critical reversal and
divergence speeds for a straight wing
p0151 A80-21310
SEHERCIOGLU, I.

Minimum-weight wing in the presence of lift constraints
p0203 A80-27136

The weight-minimization problem for a forward-swept wing with constraints on the rate of wing divergence
p0525 A80-06670

SEHERCIOGLU, I.

Comparative resistance of Beta-Si3B4 solid solutions to solute silicon attack
p0091 A80-18062

SELBERG, R. F.

Aerodynamic-structural analysis of dual bladed helicopter systems
[NASA CR-162754]
p0178 A80-17061

SELKHOV, A. F.

Scatter of fatigue-life data for elements of full-scale light-aircraft wings under steady loads
p0525 A80-46869

SELLERS, J. P.

Vertical Takeoff and Landing (VTOL) propulsion technology
p0029 A80-10218

SELLERS, T. H.

The USAF stability and control digital Datacom Volume 3: Flight module
[AD-A0865559]
p0592 A80-30317

SELLERS, W.

Design of a simulator for studying the helicopter - SkySim
p0254 A80-19829

SEKHOU, Y. N.

Influence of optimizing the strength of a structure on the mode shapes and frequencies of the normal modes
p0526 A80-06677

SEKHOU, T. A.

Influence of turbine first stator row cooling on turbine inlet gas temperature
p0616 A80-51086

SEKHOUJAN, H. G.

Pollutant emissions from 'partially' mixed turbulent flames
p0010 A80-11793

SEHIN, A. G.

Airborne semiconductor radiometers
p0049 A80-19196

Aircraft radimeters based on semiconductor devices
p0618 A80-52205

SEIDEBAK, K. L.

Aircraft nickel-cadmium battery chargers and fault warning systems
p0571 A80-04885

SEID, G. T.

Initial characterization of an Experimental Reference Broader-Specification (ERBS) aviation turbine fuel
[NASA TM-01400]
p0228 A80-18205

Fuels characterization studies
p0548 A80-29309

SEIF, V. I.

SCORPION: a computer program for the evaluation of the effects of fatigue-life data for elements of full-scale light-aircraft wings under steady loads
p0525 A80-46869

SEIF, Z.

Controlling adaptive antenna arrays with the sample matrix inversion algorithm
p0159 A80-23283

Adaptive main-beam nulling for narrow-beam antenna arrays
p0521 A80-46136

SENKO, Y.

On the pressure losses due to the tip clearance of centrifugal blowers
[AGNE PAPER 80-07-139]
p0462 A80-42252

SESSHING, O.

Wind tunnel flutter investigations
p0065 A80-12011

Effects of nonlinearities on wing-store flutter
p0596 A80-31328

SEPSKIZIKL, I. A.

Approximate method of determining the wave drag of a profile in the presence of a local supersonic region
p0151 A80-21319

SEPHR, H. F.

Alkyl derivatives of resorcinol used as antioxidants in jet fuels
p0336 A80-38501
interactions
[IAIA PAPER 80-0127] p0157 A80-23013
Computational transonic inverse procedure for wing design with automatic trailing edge closure
[IAIA PAPER 80-1390] p0506 A80-44149
Computational and simplified analytical treatment of transonic wing-fuselage/pylon-store interactions
[AD-A0855619] p0633 N80-32383
SHANMAW, N. R.
Human factors in aircraft accidents
p0154 A80-21970
SHAW, R. W.
Primary Adhesively Bonded Structure Technology (PABST). General material property data
[AD-A0797891] p0246 N80-19268
SHARPE, S. E.
The integrated management of reliability and maintainability in procurement
p0253 N80-19558
SHAPIRO, A. J.
Evaluation of fuel character effects on J79 engine
p0643 A80-27339
SHAPIRO, R. Y.
Application of constant output feedback to flight control system design
p0584 A80-51067
SHAPIRO, B. A.
Further encounters with clear air turbulence in research aircraft
p0002 A80-10196
SHAPIROV, N. M.
Airborne semiconductor radiometers
p0049 A80-14196
Airborne radiometers based on semiconductor devices
p0618 A80-52205
SHARP, J. D.
Soft body impact of cantilever beams
[AD-A0660949] p0552 N80-29339
SHARP, E. M.
Durability of foam insulation for LH2 fuel tanks of future subsonic transports
p0155 N80-22687
SHATIY, V. G.
Analysis of thin-wall beams by the method of segments
p0016 N80-10043
SHATOV, V. B.
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SHAWE, D. S.
Development of a metric half-span model for interference free testing
[IAIA PAPER 80-0460] p0266 A80-29950
SHAWE, J.
Active control of rotor blade pitch for vibration reduction - A wind tunnel demonstration
p0321 A80-31121
SHAWE, R. A.
Distribution analysis for P100(3) engine
[NASA-CR-159754] p0179 N80-17073
SHAWE, R. A.
Computer data base for 767 avionics interface control
p0282 A80-32437
SHAWLER, V.
Development and flight test of a two-place night/ adverse weather A-10 evaluator program (A-10B)
[AD-A0879844] p059a N80-31307
SHAWLER, W.
Night/ adverse weather A-10 evaluator program (A-10B)
[AD-A0880509] p0296 N80-20405
SHAWSON, R. H.
Evaluation of fuel character effects on J79 engine combustion system
[AD-A0778660] p0243 N80-19119
Evaluation of fuel character effects on the P101 engine combustion system
[AD-A0778660] p0296 N80-20405
SCHERR, A. L.
Analysis of the effect of time selection of a signal reflected from a surface on the accuracy with which ground speed can be measured
p0391 A80-38296
SCHERR, R. A.
Influence of surface longitudinal curvature on temperature of turbine blades with film cooling
p0566 A80-47444
SCHERR, R. K.
Effect of flow swirling on heat transfer in the cylindrical part of the pronoizle volume of a model chamber
p0002 A80-10196
Study of heat-pipe heat exchanger in the small gas turbine engine system
p017 N80-10022
SCHERPOLOFF, P. A.
Calculation of the coefficient of secondary losses in an axial compressor stage
p0151 A80-21332
SCHIFFLER, H.
Analysis and correlation with theory of rotor lift-limit test data
SCHITTEL, D. J.
Outlook for Global Positioning System /GPS/ in civil aircraft operations
p0190 A80-25158
SCHELLOW, W. B.
Nondestructive evaluation of graphite composite aircraft structures
p0197 A80-26891
SCLIFEN, G. S.
Flow detection of aircraft components in operation
p0111 N80-11879
SCHLIEFFER, W. A.
Application of the integrating matrix method to solution of boundary-value problems with normal form of the differential equations and isoperimetric edge conditions
p0376 A80-36790
Structural analysis of variable-sweep wings
p0019 N80-10053
SCKULTON, R. M.
Aviation turbine fuels, 1979
[DO/DENC-P76-80/2] p0607 N80-31627
SCHAF, I. C.
Documentation of cascade unsteady pressure difference program
[AD-A083987] p0497 N80-27368
SCHER, J. E.
Experimental and analytical studies of a true airspeed sensor
SCHER, J. Y. C.
Analytic and experimental studies of a true airspeed sensor
p0604 N80-31396
SCHER, S. F.
Non-synchronous whirling due to fluid-dynamic forces in axial turbo-machinery rotors
p0558 N80-29721
SCHER, R. R.
Surface pressure measurements at two tips of a model helicopter rotor in hover
[NASA-CR-3281] p0359 N80-23252
SCHER, V.
Flow measurements in a turbine scroll
p0211 A80-27738
SCHER, P. B.
Heat reclamation from flight simulators
[AD-A081754] p0440 N80-26334
Heat reclamation from flight simulators: Summary
[AD-A087295] p0606 N80-31145
SCHER, M. A.
Noise Abatement Economic Policy Analysis Model 
RAPAN. Volume 2: User's guide
[AD-A081159] p0502 N80-27838
SCHER, M. A.
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RAPAN, volume 1
[AD-A081190] p0502 N80-27839
SCHER, L.
Summary of aerodynamic vibration effects on all turret
p0439 N80-25607

B-139
SHERRER, V. C.
A wind tunnel demonstration of the principle of aeroacoustic tailoring applied to forward swept wings
[AIAA 80-0796] p0334 A80-35078

SHERRER, Z. P.
Airport radio navigation systems
p0209 A80-27716

SHETTY, K. N.
Improving the suction capability of vanes pumps
p0565 A80-47340

SHETTER, L. E.
Harmonic oscillations of annular wing in steady ideal fluid flow
p0034 A80-11019

SHIBANOV, G. P.
Organization of automatic control systems for technological processes in aircraft mechanical engineering
p0001 A80-10123

SHIBBRO, L. T.
Some considerations of the performance of two honeycomb gas path seal material systems
Nasa TP-81398 p0172 880-16143
Development of improved high pressure turbine outer gas path seal components
Nasa CR-159001 p0307 880-21332

SHIPKET, R. A.
Aerodynamic efficiency of gas turbine intake duct
p0020 880-10077

SHIM, C. P.
Inertially augmented approach couplers
AD-A080488 p0290 880-20248

SHIMAM, J. T.
Development of the full scale 963 test for specification 911-L-23699 and 1AS-2354 gas turbine lubricants
AD-A080219 p0424 880-24455

SHION, Y.
Development of an aircraft-derivative gas turbine with high performance and large output
p0005 A80-16023

SHIN, H.-D.
Local laminarization in turbulent diffusion flames
p1019 A80-26419

SHINM, J.
Variable-sweep optimization
p0051 880-14809
An approximate feedback solution of a variable speed non-linear pursuit-evasion game between two airplanes in a horizontal plane
p0517 A80-05890

SHIM, S.
Recent research on V/STOL test limits at the University of Washington aeronautical laboratory
Nasa CR-5237 p0171 880-16068

SHING, J. L.
Comparison of predicted and experimental real-gas pressure distributions on space shuttle orbiter nose for shuttle entry air data system
Nasa TP-1627 p0302 880-21280

SHINGURO, R.
Improved methods for predicting spectrum loading effects, phase 1 report, Volume 1: Results and discussion
AD-A072386 p0039 880-11071

SHKOTY, E. E.
Detailed design and fabrication of a Helicopter Ground Mobility System (HGBS)
AD-8076321 p0181 880-17087

SHIPOV, N. A.
Noise characteristics of supersonic passenger planes
p0326 880-36387
Propagation of acoustic waves in a nonuniformly heated medium
p0326 880-36388
Experimental investigation of sound absorption in a flow-carrying channel with a sound-absorbing lining
p0326 880-36399

SHIPY, D. J.
Thermo-mechanical stress analysis of advanced turbine blade cooling configuration
AD-8074089 p0137 880-15136

SHIBANO, V. Y.
Development of a program for controlling the angle of bank of an orbital aircraft during entry into the atmosphere
p0150 880-21279

SHIERIANN, V. A.
Application of geometrical programming to problems of optimal design
p0203 A80-27137

SHIERI, M. H.
A wind tunnel demonstration of the principle of aeroacoustic tailoring applied to forward swept wings
[AIAA 80-0796] p0334 A80-35078

SHIREY, W. A.
Wind tunnel investigation of active controls technology applied to a DC-10 derivative
AIAA 80-07711 p0333 A80-35062

SHIVASHANKARA, B. M.
Aircraft- Flight prediction program validation
Nasa CR-159333 p0655 A80-34219

SHARDY, L. M.
Experimental check of a direct method for optimizing the aerodynamic shape of bodies in supersonic flows
Nasa TP-15477 Development of a program for controlling the angle of bank of an orbital aircraft during entry into the atmosphere
p0150 A80-21279

SHIV, A. H.
On centrifugal compressor output regulation by iris diaphragms
p0617 A80-51905

SHIVAKUKHO, S. E.
Theory of by-pass ducted-fan engines
p0193 A80-26349

SHMAT, V. A.
Theoretical-experimental synthesis of a multicritical ergatic control system
p0465 A80-42348

SHOAKI, R.
Minimum fuel flight paths for given range
AIAA PAPER 80-1660 p0509 A80-45035

SHOCKETT, D.
The effect of the Western Union Weather Data System on the preflight briefing position at the Chicago Flight Service Station
AD-A080415 p0639 880-33065

SHOHAK, R. W.
Life cycle cost as a tool in the detail design of advanced propulsion systems
AIAA PAPER 80-1252 p0401 A80-38989

SHOJI, M.
Fluid forces on rotating centrifugal impeller with whirling motion
p0550 880-29724

SHORN, D.
Survivable C3
p0322 880-34156

SHORE, V. V.
Application of the method of electroconcentre emission to the quality control of gas-turbine engine components
p0809 880-39917

SHOPE, D. P.
Powers units for mini RPV's
p0266 A80-29662

SHOFT, J. J.
An evaluation of the bird/aircraft strike hazard at Barksdale Air Force Base, Louisiana (SAC)
AIAA 80-07390 p0115 880-14063

SHOYLI, M. N.
Upper surface blowing noise of the NASA-Ames quiet short-blast research aircraft
AIAA PAPER 80-1064 p0341 880-36002

SHOVALER, T. N.
The effects of motion on a-seat cues on pilot simulator performance of three piloting tasks
Nasa TP-1601 p0129 880-15069

SHREY, R. W.
Calibration of a two probe synchronized sampling technique for measuring flows behind rotors
p0263 A80-29981

SHRIBERG, R. I.
Hysteresis of aerodynamic characteristics
p0204 A80-27176

Induced drag and lift-drag ratio of swept wings at supersonic speeds
p0204 A80-27175

SHUBERT, K. A.
Swept frequency scattering measurements of aircraft
AIAA 80-14741 p0032 880-10420
The development and test of a tactical self-contained landing system

Investigation of flows in Laval nozzles at small Reynolds numbers

The nonlinear supersonic potential flow over delta wings

Theoretical-experimental synthesis of a multicriterial organic control system

Characterization of graphite/epoxy laminates for aerelastic tailoring

Unsteady aerodynamics of two-dimensional spoilers at low speeds

The investigation of transient loads in gas turbine combustor chambers

Experiments on the diffraction of weak blast waves for gas turbines

Use of nose cap and fuselage pressure orifices for determination of air data for space shuttle orbiter below supersonic speeds

An overvoltage safety system for direct current power systems

The influence of ballistic damage on the aerelastic characteristics of lifting surfaces

An experimental investigation of two large annular diffusers with swirling and distorted inflow

Aircraft crashworthiness studies: Findings in accidents involving an aerial application aircraft

Code optimization for solving large 3D BPM problems

An experimental investigation of two large annular diffusers with swirling and distorted inflow

Aircraft crashworthiness studies: Findings in accidents involving an aerial application aircraft
SHHOKSTR. B. 6.

SBiHISBH. V. V.

SHITH. B.

SHBTHBBS. B. 6.

SHAHT. K. P. B.

SHUT. A. E.

SBITB. C. A.

SHITH. A. fl.

SHITH. A. I.

SHITH. 6. T.

SHITH. 6. I.

SHITB. 6. 1.

SHITB. C. B.

SHITB. B. 6.

SHITB. D. E.

SHITB. C. I. D.

An overview of the Sperry flight management
system for the Boeing 757/767 airplanes
Investigation of rapidly deployable plastic foam systems, Volume 1: System development
Analytical and experimental evaluations of the effect of broad property fuels on combustors for commercial aircraft gas turbine engines
Common Cause Failures - A dilemma in perspective
Study of an advanced transport airplane design concept known as Atlantic
New approaches to sailing
Nonlinear aerodynamics of all-servoable controls
A study of the canopy design for the advanced attack helicopter by use of computer graphics
Advanced combustion systems for stationary gas turbine engines. Volume 2: Bench scale evaluation
Standard avionics packaging, mounting, and cooling baseline study
A general statistical approach for using auxillary information in the development of an impact acceleration injury prediction model
Behavior of aircraft anti-skid braking systems on dry and wet runway surfaces. A slip-velocity-controlled, pressure-bliss-modulated system
Total aircraft flight-control system - balanced open- and closed-loop control with dynamic trim maps
Application of the concept of dynamic trim control to automatic landing of carrier aircraft
HPF aeronautical and support systems Supporting Technology Programs
Engine environmental effects on composite behavior
Experience in producing software for the ground station of a remotely piloted helicopter system
The outside has to be bigger than the inside
A comment on the origin of endwall interference in wind tunnel tests of serferolls
CPS-6D engine short-term performance deterioration
CPS-6 engine performance deterioration
The duration of false alarms in surveillance radar
Review of five years of flight testing the B-1
Apparatus for dasping operator induced oscillations of a controlled system
Design of a nonlinear adaptive filter for suppression of shuttle pilot-induced oscillation tendencies
Development of a bird/aircraft strike hazard assessment methodology
Advanced combustion systems for stationary gas turbine engines. Volume 2: Bench scale evaluation
Thermodynamics of organic compounds
Discontinuous registration of industrial radiographs using profile analysis and piecewise correlation techniques
Meteorological instrumentation system on the T-28 thunderstorm research aircraft
Aerodynamic investigation of C-141 leading edge modification for cruise drag reduction, volume 1
Aerodynamic investigation of C-141 leading edge modification for cruise drag reduction, volume 2
Analysis of transonic swept wings using asymptotic and other numerical methods
Preliminary airworthiness evaluation, AH-1G with the airborne target acquisition fire control system and the hellfire modular missile system installed
Transonic swept-wing analysis using asymptotic and other numerical methods
Numerical solution of the Navier-Stokes equations
PERSONAL AUTHOR INDEX  

wing-body model to establish cross flow characteristics for ventilated wind tunnel walls at low supersonic Mach numbers  
[SAA 80-00484]  

SOBRESE, J. A.  
Model development for automatic guidance of a VTOL aircraft to a small aviation ship  
[SAA 80-1617]  
p0519 A00-45507  

Concepts for generating optimum vertical flight profiles  
[NASA-CS-159181]  
p0223 A00-18031  

SOBRESE, M. E.  
Aircraft engine noise  
[NASA-CASE-ABC-10977-1]  
p0635 A00-32392  

SOBRESE, P. D.  
Conceptual joint design study of a new CTOL STOL aircraft for 1995 IOC  
[AD-A088351]  
p0646 A00-33600  

SOBER, S.  
Aircraft noise annoyance contours - Importance of overflight frequency and noise level  
[AD-A072098]  
p005 A00-10143  

SOBER, H.  
Investigation of the boundary condition at a wind tunnel test section wall for a lifting wing-body model at low supersonic speed  
[AD-A072098]  
p0025 A00-10143  

SOBER, L.  
Avisio system architecture investigation (AVSAR II)  
[AD-A077143]  
p0040 A00-11070  

SOBER, M. W.  
A computer program to generate two-dimensional grids about airfoils and other shapes by the use of Polson’s equation  
[NASA-TR-81198]  
p0477 A00-26266  

SOSEK, L. I.  
Acoustic characteristics of jets issuing from ring-and-needle nozzles  
[AD-A071515]  
p0327 A00-34804  

SOSEK, R. B., III  
Wind-tunnel/flight correlation study of aerodynamic characteristics of a large flexible supersonic cruise airplane (SB-70): 2) Extrapolation of wind-tunnel data to full-scale conditions  
[AD-A071515]  
p0167 A00-16032  

SOSEK, V.  
Theory of by-pass ducted-fan engines  
[AD-A073249]  
p0193 A00-26349  

SOSEK, U.  
Honeycomb sandwich joints for primary structure  
[AD-A087080]  
p0333 A00-35070  

SOSEK, G.  
Reliability and life of aircraft gas turbine engines  
[AD-A054A0]  
p0054 A00-15090  

SOTTERDAH, J.  
USIGN - Universal language of aviation  
[AD-A054818]  
p0056 A00-41878  

SOTTHAI, H. L.  
Permanent magnet and superconducting generators in airborne, high power systems  
[AD-A074424]  
p0220 A00-18311  

SOTTHAI, H. D.  
Quiet, Clean, Short-Haul, Experimental Engine (QCSEM) Under-The-Wing (OTW) engine acoustic design  
[AD-A074424]  
p0119 A00-14117  

Quiet, Clean, Short-Haul Experimental Engine (QCSEM) Over-The-Wing (OTW) engine acoustic design  
[AD-A074424]  
p0119 A00-14118  

Quiet, Clean Short-Haul Experimental Engine (QCSEM) Core engine noise measurements  
[AD-A074424]  
p0132 A00-15093  

SPACCHI, G.  
The Forward Swept Wing - A unique design challenge  
[SAA PAPER 80-1885]  
p0514 A00-45551  

SPADACCHI, L. J.  
Autoignition characteristics of aircraft-type fuels  
[NASA-CS-159868]  
p0592 A00-30505  

SPADE, R.  
Discrete Address Beacon System (DABS) baseline test and evaluation  
[AD-A085585]  
p0544 A00-29276  

SPALDING, D. B.  
Fundamental modelling of mixing, evaporation and kinetics in gas turbine combustors  
[AD-A085585]  
p0497 A00-27373  

SPANGLER, S. B.  
Prediction of lateral aerodynamic loads on fighter aircraft at high angles of attack  
[AD-A071893]  
p0039 A00-11073  

SPANGLER, G.  
Deformographics: High-resolution projection display development for air traffic control purposes  
[AD-A074023]  
p0177 A00-17051  

SPARKES, G. W., JR.  
A Laser Doppler Velocimeter system to investigate unsteady flow separation  
[AD-A086295]  
p014 A00-12634  

SPARKES, J. C.  
Development and application of a subsonic triangular vortex panel  
[AD-A085595]  
p0541 A00-29256  

SPARKLE, C.  
The nuclear thermal effects on humidity saturated composite materials  
[AD-A071195]  
p0424 A00-28372  

SPARRAH, J. L.  
Effects of wing and tail location on the aerodynamic characteristics of an airplane for Mach numbers from 0.25 to 4.63  
[AD-A071623]  
p0519 A00-45911  

SPARRAH, L. J.  
Minimizing the sequenced delay time for escape from high-speed, low-level flight profiles  
[AD-A075599]  
p0559 A00-30017  

SPAVLER, R. B.  
Reliability prediction techniques for second generation marine and industrial gas turbines  
[SAE PAPER 79-GT/ISR-3]  
p0456 A00-42056  

SPAVLER, S. H.  
Helicopters - A solution to urban commercial transportation needs  
[SAE PAPER 800739]  
p0755 A00-49689  

SPEEK, R.  
Release-rate calorimetry of multilayered materials for aircraft seats  
[AD-A073249]  
p0325 A00-34223  

SPEEKER, A. A.  
Use of sign statistics for sequential signal detection in a pulse radar system  
[AD-A087123]  
p0011 A00-12031  

SPEKES, B. L.  
Propagation of acoustic waves in a nonuniformly excited medium  
[AD-A074424]  
p0326 A00-34308  

SPEKES, D. A.  
[AD-A074424]  
p0077 A00-13017  

The Aircraft Reply and Interference Environment Simulator (ARIES). Volume 3: Principles of operation  
[AD-A074424]  
p0168 A00-16064  

The Aircraft Reply and Interference Environment Simulator (ARIES). Volume 2: Appendices to the principles of operation  
[AD-A074424]  
p0168 A00-16045  

SPEKES, P. A.  
Factors affecting the retirement of commercial transport jet aircraft  
[AD-A075288]  
p0225 A00-10148  

SPEKES, R. H.  
Study of cost/benefit tradeoffs available in helicopter noise technology applications  
[AD-A083955]  
p0495 A00-27354  

SPENGLER, J. D.  
Indoor and outdoor carbon monoxide measurements at an airport  
[AD-A0829942]  
p0268 A00-29942  

SPERLE, W. C.  
Abatement of aircraft noise and related regulatory actions  
[AD-A073249]  
p0307 A00-37611  

SPESIENY, Y. V.  
Experimental facility for studying the thermal effect of supersonic gas jets on targets  
[AD-A085595]  
p0541 A00-29256  

SPERLE, J. L.  
Periodic optimal cruise of a hypersonic vehicle  
[AD-A085595]  
p0511 A00-45555
Simulation development and evaluation of an improved longitudinal velocity vector control wheel steering mode and electronic display format

Stability of nonuniform rotor blades in hover using a mixed formulation

Stability of nonuniform rotor blades in hover using a mixed formulation

A flight investigation of performance and loads for a helicopter with NLR-17 main-rotor blade sections

A flight investigation of blade section aerodynamics for a helicopter main rotor having NLR-17 airfoil sections

A flight investigation of performance and loads for a helicopter with 10-64C main rotor blade sections

Analysis of uncertainties in turbine metal temperature predictions

Acceleration of multicycle fatigue testing on aluminum structural alloys

Selecting the geometric parameters and position of a nose flap on the root profile of a swept wing using tunnel test data, part 2

Selection of geometric parameters and location of nose flap on swept wing root profile from tunnel test data, part 1

Preliminary design of an integrated redundant digital flight control system for the maritime patrol aircraft

Advanced rotorcraft noise

Development and evaluation of processes for deposition of Ni/Cr-AlY (MCrAlY) coatings for gas turbine components

Aircraft of the future

The modular life cycle cost model - An overview

Surface conforming thermal/pressure seal

Static tests at model scale indicating rear-fuselage installation effects on engine exhaust noise

Development and evaluation of processes for deposition of Ni/Cr-AlY (MCrAlY) coatings for gas turbine components
STOUDER, D. J.  
(NASA CR-15075) p0133 N80-15100

STOUDER, D. N.  
Narrow-band spectra analysis techniques for 
processing airplane flyover noise data  
[AIAA PAPER 80-1053] p0394 A80-30647

STOOGH, H. F., III  
Effects of discontinuous dropped wing leading-edge 
innovations on the spanwise characteristics of 
a low-wing general aviation airplane  
[AIAA PAPER 80-1843] p0470 A80-43301

Spielman for safety’s sake  
p0580 A80-50225

STOWELL, H. R.  
The verification of a computer model of internal 
light reflections for helicopter canopy design  
[AD-A0800473] p0358 N80-23142

STRAHLE, G. M.  
Present-day problems of air traffic control in 
ground-to-air communications  
p0192 A80-26221

STRACK, R.  
Air traffic control/full beacon collision 
avoidance system, Knoxville simulation  
[AD-A0765555] p0168 N80-16043

STRACK, S. L.  
Fleet hardxess variation  
[AD-A0764894] p0126 N80-15029

STRACK, W. E.  
New opportunities for future, small, 
general-aviation turbine engines (GATE)  
p0351 N80-22335

STADAS, J. A.  
Havstar field test results  
p0190 A80-25143

STABLE, W. C.  
Evaluation of noise source strengths in a gas 
turbine combustor  
[AIAA PAPER 80-0034] p0092 A80-18245

March 3 hydrogen external/base burning  
[AIAA PAPER 80-2080] p0101 A80-19311

STANGER, J. B.  
The cabin air conditioning and temperature control 
system for the Boeing 767 and 757 airplanes  
[AIAE PAPER 80-ENAS-5] p0468 A80-43182

STARR, R. C.  
Compilation of data covering aircraft servicing 
facilities aboard aviation and amphibious 
aviation ships  
[AD-A0764443] p0175 N80-17022

STRATIGOS, J. A.  
A 941803 CHZ aircraft radiometer system for 
Project Store Pury  
[NASA CR-160000] p0455 N80-26638

A 941803 CHZ multichannel radiometer for Conair 
flights  

STARCH, R. C.  
Preliminary tests of an airborne meteorological 
pulse Doppler radar  
p0361 A80-37139

STRAIZIS, A. J.  
Laser anemometer measurements in a transonic axial 
flow compressor rotor  
p0342 A80-36141

Comparison between optical measurements and a 
numerical solution of the flow field within a 
transonic axial-flow compressor rotor  
[AIAA PAPER 80-1078] p0396 A80-30697

STROBLO, H.  
Investigations of an active vibration isolation 
system for helicopters  
[HERB-LIB-TRAPS-1953] p0305 N80-21315

STROOTF, R. G.  
Reaction control system augmentation for V/STOL 
aircraft  
p0024 N80-10130

STRELKOV, I. V.  
Organizing multistage energy conversion systems  
p0526 A80-47183

STRING, R. I.  
Modeling the human operator: Applications to 
system cost effectiveness  
p0256 N80-19846

STRING, J.  
Cost-effectiveness of flight simulators for 
allvay training  
p0255 N80-19830

STRING, B. A.  
Optimal algorithms and secondary processing devices  
p0573 A80-49635

STEIK, A. G.  
Flute analysis of a NACA 64A006 airfoil in small 
disturbance transonic flow  
p0217 A80-26851

Aerodynamic response analysis of two dimensional, 
single and two degree of freedom airfoils in 
low-frequency, small-disturbance unsteady 
transonic flow  
[AIAA J703379] p0069 N80-12073

STROBEL, H.  
Follow-up and final-value control of a special 
non-linear process - A study on optimal aircraft 
guidance during the final landing phase  
p0052 A80-18426

STROBRIDGE, T. B.  
Titanium combustion in turbine engines  
[AIAA J703567] p0170 N80-16059

STROGOCHF, O. V.  
Comparative analysis of the basic combustion 
characteristics of some heavy hydrocarbon fuels  
in application to aircraft gas turbine engines  
p0565 A80-47424

Dynamics of diesel fuel combustion in turbulent flow  
p0020 N80-10074

STROMBECK, D. J.  
An assessment of gas turbine engine augmentor 
technology and needs for the 80's  
[AIAA PAPER 80-1200] p0009 A80-38965

STROUNIA, A.  
Navigation systems for modern aircraft  
p0153 A80-21965

STROUH, R. V.  
The effect of intermittent aircraft noise on 
sleep. III  
p0057 A80-15632

STROUKH, V. A.  
Calculation of radial-axial turbine wheel thermal 
and stress states  
p0565 A80-47420

Forced vibrations of turbine discs under 
nonuniform gas flow conditions  
p0616 A80-51887

STROUS, R. C.  
Report on the task force on aircraft separation 
assurance, appendices  
[AD-A077113] p0222 N80-18017

STROUS, J. W.  
Pressure ventilation due to wind flow about a 
postcrash aircraft  
[AIAA PAPEB 80-1057] p0070 N80-12084

Design considerations for attaining 200-knot test 
velocities at the aircraft landing loads and 
traction facility  
[NASA-TH-80048] p0172 N80-16071

STOCKAS, K. J.  
The spark-ignition aircraft piston engine of the 
future  
p0351 N80-22337

STOCKENBERG, W.  
An observer system for sensor failure detection 
and isolation in digital flight control systems  
p0111 N80-14023

STOBBOLER, E. D.  
Costs and benefits of requiring new production of 
older aircraft types to meet amended noise 
standards  
[AD-A0800130] p0495 N80-27356

Implications of requiring new production of older 
aircraft types (less than 75,000 pounds) to meet 
 amended noise standards  
[AD-A080577] p0654 N80-33967

STOEBER, R. V.  
Aircraft aerodynamics - Dynamics of longitudinal 
and lateral motion  
p0101 A80-19374

STOEBELL, R. E.  
Helicopter dynamic performance program. Volume 1: 
Engineer's manual  
[AD-A088618] p0634 N80-32836

Helicopter dynamic performance program. Volume 2: 
User's manual  
[AD-A0883318] p0634 N80-32837

B-150
SULLIVAN, J. L.
The role of aluminum segregation in the wear of aluminum/bronze-steel interfaces under conditions of boundary lubrication
[ASLE PREPRINT 79-AM-52-1]

SULLIVAN, H.
Standard avionics packaging, mounting, and cooling baseline study
[AD-A082166]

SULLIVAN, P. A.
Research on the stability of air cushions systems
[SJTAS-238]

SULLIVAN, W. P.
Low-frequency and small perturbation equation for transonic flow past wings
[SJTAS-239]

SULLIVAN, B.
Experimental verification of propeller discrete frequency noise prediction technology with emphasis on two current methods for time domain calculations
[SJTAS-237]

SULLIVAN, B.
A regression model of fatigue crack propagation under flight simulation loading
[AD-A085647]

SULLIVAN, G. J.
Fatigue data on a variety of nonwoven glass composites for helicopter rotor blades
[NASA-CB-159032]

SULLIVAN, H.
The modeling of the noise emitted by a profile in a turbulent flow by means of unsteady aerodynamic theories
[SJTAS-237]

SULLIVAN, H.
Performance variations in high aspect ratio subsonic diffusers due to geometric constraints in supersonic tactical aircraft inlet installations
[AIAA PAPER 80-1106]

SULLIVAN, L.
Propulsion-system integration for tactical aircraft
[SJTAS-237]

SULLIVAN, J. L.
Ground wind vortex sensing system calibration tests
[AD-A082011]

SULLIVAN, J. L.
The role of aluminum segregation in the wear of aluminum/bronze-steel interfaces under conditions of boundary lubrication
[ASLE PREPRINT 79-AM-52-1]

SULLIVAN, H.
Standard avionics packaging, mounting, and cooling baseline study
[AD-A082166]

SULLIVAN, P. A.
Research on the stability of air cushions systems
[SJTAS-238]

SULLIVAN, W. P.
Low-frequency and small perturbation equation for transonic flow past wings
[SJTAS-239]

SULLIVAN, B.
Experimental verification of propeller discrete frequency noise prediction technology with emphasis on two current methods for time domain calculations
[SJTAS-237]

SULLIVAN, B.
A regression model of fatigue crack propagation under flight simulation loading
[AD-A085647]

SULLIVAN, G. J.
Fatigue data on a variety of nonwoven glass composites for helicopter rotor blades
[NASA-CB-159032]

SULLIVAN, H.
The modeling of the noise emitted by a profile in a turbulent flow by means of unsteady aerodynamic theories
[SJTAS-237]

SULLIVAN, H.
Performance variations in high aspect ratio subsonic diffusers due to geometric constraints in supersonic tactical aircraft inlet installations
[AIAA PAPER 80-1106]

SULLIVAN, L.
Propulsion-system integration for tactical aircraft
[SJTAS-237]

SULLIVAN, J. L.
Ground wind vortex sensing system calibration tests
[AD-A082011]
Performance variations in high aspect ratio

Fundamental modelling of mixing, evaporation and

Hoving surface boundary layer control for aircraft

Corrosion fatigue behavior of coated 4310 steel

Can anyone follow the JT8D

A study of the prediction of cruise noise and

Beport on the task force on aircraft separation

Big-fan engines - A new OS generation

Carbon/graphite fiber risk analysis and assessment

Microwave radiometric aircraft observations of the

The next supersonic transport

Reliability and life of aircraft gas turbine engines

Stability and control taught by design of tail

Handling qualities of large flexible control-configured aircraft

Thermal control systems for pod-mounted avionics

Meteorological and air pollution modeling for an

Discrete Address Beacon System (DABS) baseline
test and evaluation

Carbon/graphite fiber risk analysis and assessment study: An assessment of the risk to Douglas commercial transport aircraft

Evaluation of the potential for reduced longitudinal spacing on final approach

The next supersonic transport

A study of the prediction of cruise noise and laminar flow control noise criteria for subsonic air transports

Corrosion fatigue behavior of coated 4340 steel for blade retention bolts of the KH-1 helicopter

Hoving surface boundary layer control for aircraft operation at high incidence

Fundamental modelling of mixing, evaporation and kinetics in gas turbine combustors

Performance variations in high aspect ratio
A dynamic analysis of the motion of a low-wing
Determination of the spin and recovery,
Effects of criteria on flight simulation study 1:
Aerodynamics of hypersonic flows with fluid
Application of a higher order panel sethod to
Selecting rational high-aspect-ratio wing
Investigation of the influence of contaminated,
P-16 European test and evaluation
Selection of a rational structure diagram for a
Bielliptical body
Benarks on the transonic flov past oscillating
Design considerations for the automated
Modern controls and the hybrid computer revisited
The chemical stability of hydro-treated fuels and
The reliability of the mechanical components of
Application of electromagnetic methods and means
Performance, emissions, and physical
Application of viscos analyses to the design of
Three-dimensional interactions and vortical flows
Developing large helicopters
Effectiveness of advanced fuel-conservative
A flight Investigation of performance and loads
A flight investigation of blade section
Acoustic characteristics of jets issuing from
An extension of engine weight estimation
An extension of weight estimation
Parametric study of variation in cargo-airplane
Heat pipe avionic thermal control
Heat pipe avionic thermal control systems
A modeling technique for design and simulation of
Hydrostatic journal bearings
An extension of the mechanical components of
The chemical stability of hydro-treated fuels and
The reliability of the mechanical components of
Application of electromagnetic methods and means
Performance, emissions, and physical
Application of viscos analyses to the design of
Three-dimensional interactions and vortical flows
Developing large helicopters
Effectiveness of advanced fuel-conservative
A flight Investigation of performance and loads
A flight investigation of blade section
Acoustic characteristics of jets issuing from
A flight Investigation of performance and loads
TOBBLE, R. G.
Cost analyses for avionics acquisition

TOBBLE, E.
On the influence of steady state temperature and pressure distortion on the flow characteristics in an installed multi-stage jet engine compressor

TOBBLE, E.
Cost analyses for avionics acquisition

TOBBLE, E.
First experience with telemetry and real-time data reduction at Gates Learjet

TOBBLE, B. J.
Frequency independent sidelobe suppression and lobesharpening using broad beam antennas

TOBBLE, B. J.
Some fundamental aspects of transport aircraft conceptual design optimization

TOBBLE, T.
Acoustic characteristics of the external upper surface blowing propulsive-lift configuration

TOBBLE, T.
Development of the external upper surface blowing propulsive-lift device

TOBBLE, T.
Endurance and failure characteristics of modified Vanco X-2, CBS 600 and AIXI 9310 spur gears

TOBBLE, J. C.
Pressure data for four analytically defined arrow wings in supersonic flow

托怀, H.
Determination of the safety in a North Atlantic organized track system with reduced lateral separation

TRENBURG, K.
Failure mechanisms for advanced composite sandwich construction in hostile environments

TRENBURG, K.
Design and operation of multi-specimen fully reversed fatigue systems for advanced composite materials

TRENBURG, K.
Release-rate calorimetry of multilayered materials for aircraft seats

TRENBURG, K.
Release-rate calorimetry of multilayered materials for aircraft seats

TREMBLAY, B.
The Lear Fan - A significant step toward feel efficient airplanes

TROESCH, A.
L-band measurements in the air traffic channel to characterize secondary radar systems

TROESCH, A.
Radiotherapy calorimetry of multilayered materials

TROESCH, A.
A phenomenological model of the dynamic stall of a helicopter blade profile

TROESCH, A.
Semi-empirical model for the dynamic stall of airfoils in view of the application to the calculation of responses of a helicopter blade in forward flight

TROESCH, A.
Determination of an oblique wing aircraft's aerodynamic characteristics

TROESCH, A.
The acoustic characteristics of the BAE 1.5m wind tunnel

TROESCH, A.
A study of panel loads and centers of pressure of three different cruciform aft-tail control surfaces of a wingless missile from Mach 1.6 to 3.7

TROESCH, A.
The effects of inhomogeneities in atmospheric turbulence on the dynamic response of an aircraft

TROEBEL, R.
New technology for the NASA-system and its reliability

TROEBEL, R.
The acoustic characteristics of the BAE 1.5m wind tunnel

TROEBEL, R.
Exploratory studies on the design of acoustic splitters for wind tunnels

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
An optical technique for the investigation of flow in gas turbine combustors

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
The effects of inhomogeneities in atmospheric turbulence on the dynamic response of an aircraft

TROEBEL, R.
New technology for the NASA-system and its reliability

TROEBEL, R.
The acoustic characteristics of the BAE 1.5m wind tunnel

TROEBEL, R.
Exploratory studies on the design of acoustic splitters for wind tunnels

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
An optical technique for the investigation of flow in gas turbine combustors

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
New technology for the NASA-system and its reliability

TROEBEL, R.
The acoustic characteristics of the BAE 1.5m wind tunnel

TROEBEL, R.
Exploratory studies on the design of acoustic splitters for wind tunnels

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
An optical technique for the investigation of flow in gas turbine combustors

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
New technology for the NASA-system and its reliability

TROEBEL, R.
The acoustic characteristics of the BAE 1.5m wind tunnel

TROEBEL, R.
Exploratory studies on the design of acoustic splitters for wind tunnels

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
An optical technique for the investigation of flow in gas turbine combustors

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
New technology for the NASA-system and its reliability

TROEBEL, R.
The acoustic characteristics of the BAE 1.5m wind tunnel

TROEBEL, R.
Exploratory studies on the design of acoustic splitters for wind tunnels

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
An optical technique for the investigation of flow in gas turbine combustors

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
New technology for the NASA-system and its reliability

TROEBEL, R.
The acoustic characteristics of the BAE 1.5m wind tunnel

TROEBEL, R.
Exploratory studies on the design of acoustic splitters for wind tunnels

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
An optical technique for the investigation of flow in gas turbine combustors

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
New technology for the NASA-system and its reliability

TROEBEL, R.
The acoustic characteristics of the BAE 1.5m wind tunnel

TROEBEL, R.
Exploratory studies on the design of acoustic splitters for wind tunnels

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
An optical technique for the investigation of flow in gas turbine combustors

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
New technology for the NASA-system and its reliability

TROEBEL, R.
The acoustic characteristics of the BAE 1.5m wind tunnel

TROEBEL, R.
Exploratory studies on the design of acoustic splitters for wind tunnels

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
An optical technique for the investigation of flow in gas turbine combustors

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
New technology for the NASA-system and its reliability

TROEBEL, R.
The acoustic characteristics of the BAE 1.5m wind tunnel

TROEBEL, R.
Exploratory studies on the design of acoustic splitters for wind tunnels

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
An optical technique for the investigation of flow in gas turbine combustors

TROEBEL, R.
The influence of prior engine usage data on the selection of structural design criteria

TROEBEL, R.
New technology for the NASA-system and its reliability
Large-scale and snail-scale flammability tests for mathematical formulation of the problem of preliminary study of VTO thrust requirements for a Advanced materials and the Canadair Challenger Bodel-tests demonstrating tinder-wing installation The energy problem - Its effect on aircraft Aircraft simulation data management - A prototype Cryogenic wind tunnels: A selected, annotated bibliography The energy problem - Its effect on aircraft design. IT - The unforecastable future Designing aircraft-engine air ducts Propulsion

U - Ultrasound, E. The analysis of wing-body combinations at moderate angles of attack [AD-A074284] p0036 80-11040

V - Vibration, E. Measurement of stress distribution in sandwich beams under four-point bending p0192 80-25698

W - Wake, V. High-course guidance for 'fire and forget' missile - Modification of present having missile p0324 80-35180

X - X-ray, E. Flaw detection of aircraft components in operation p0011 80-11879

Y - Yaw, C. J. Experience from testing the Viggen electronic systems utilizing existing computer capacity p0206 80-27235

Z - Zebra, B. The Surface Contour Radar, a unique remote sensing instrument p0192 80-26085
Bangalore, India, March 26-30, 1979

VALORZ, B.

Operation of an all-ceramic mainshaft roller bearing in a 3-402 gas-turbine engine
[ASLE PAPER 80-AB-5C-11] p0067 A80-43166

VAN, C. F.

effect of vignettes on performance and handling
qualities of general aviation aircraft
[AIAA PAPER 80-1870] p0047 A80-43314

VAN, C. F. G.

correlation of predicted longitudinal aerodynamic characteristics with full-scale wind tunnel data
on the ATLIT airplane
[AIAA PAPER 80-0366] p0096 A80-18356

VAN DE SCHEE, P. A.

The relevance of service experience data in the fatigue evaluation process of the F-17
p0053 A80-50587

VAN GOOL, H. P. C.

Application of existing roll response criteria to transport aircraft with advanced flight control systems
[AIAA PAPER 80-1572] p0516 A80-45971

VAN KEPPLE, R.

Preliminary design of a very advanced technology light twin for the mid-80's
[AIAA PAPER 80-1662] p0471 A80-43309

VAN VEST, W. D.

electronic fuel injection techniques for hydrogen powered I.C. engines
p0158 A80-23205

VANCE, M. F.

Shield topology in lightning transient control
p0313 880-21900

Analysis of electrical transients created by lightning
[NASA-CR-159308] p0593 880-30465

VANCE, R. E.

An experimental investigation of endwall profiling in a turbine vane cascade
[AIAA PAPER 80-1089] p0397 880-38904

VANCE, R. E.

Results from tests on a high work transonic turbine for an energy efficient engine
[AMSE PAPER 80-GX-196] p0463 A80-42258

VANDENBROEK, B.

Boundary layer measurements on a two-dimensional wing with flap and a comparison with calculations
p0501 880-27665

VANDENBROEK, G. J.

The analytical prediction of the separation behaviour of external stores after release from the carrier aircraft. Part 2: Applications
[CSIR-IAEST-79/103-PR-2] p0479 880-26292

VANDENBERG, W. J.

The aerodynamics of axial flow wind power turbines
[CSIR-NE-1619] p0371 880-23761

The aerodynamics of contra-rotating axial flow wind power turbines
[CSIR-NE-1638] p0654 880-33668

VANDERPLAATS, G. N.

Optimized laser turrets for minimum phase distortion
p0437 880-25600

Numerical optimization of circulation control airfoils
[DYNEMEC-80/060] p0477 880-26271

Numerical optimization of circulation control airfoils
[AD-A008729] p0408 880-27293

VANDERVEEN, H. F.

Alternate waveforms for a low-cost civil global positioning system receiver
[AD-A086345] p0632 880-32371

VANDERVEEN, H. R., Jr.

digital avionics information system (DAIS): mission software
[AD-A085136] p0534 880-28350

VARGA, D.

Design solutions for highly loaded stages of radial compressors
p0053 880-15004

VANGAASBEEK, J. R.

Rotorcraft flight simulation, computer program
CH1. Volume 1: Engineer's manual
[AD-A079631] p0048 880-22312

Rotorcraft flight simulation, computer program
[AD-A079632] p0048 880-22313

SAE Transactions 80-2255

PEBSOHAL AOTBOB ISDEI

p0018 B80-10037

Analysis of moisture exchange in aircraft fuel tanks
p0479 880-36779

VASCAS, J. P.

Characteristics of a Laval nozzle with gasdynamic regulation
p0527 880-10482

Experimental investigation of the strength of rotor materials with surface cracks
p0030 880-12911

Analysis of moisture exchange in aircraft fuel tanks
p0527 880-10482

Validation of the rotorcraft flight simulation program (CH1) using operational loads survey
flight test data
[AD-A0889008] p0560 880-33422

VANGEN, R. F.

The influence of simulator motion wash-out filters on the performance of pilots when stabilizing aircraft attitude in turbulence
[BLR-TS-78022-0] p0102 880-17094

VANHEE, R.

Target tracking using Doppler-information in sensor oriented coordinates with a three dimensional array radar
[HEPT-270] p0123 880-14325

VANHOREN, J. T.

Flow visualization techniques in the airborne laser Laboratory program
p0400 880-25608

Reduction of unsteady wind torques on an open port airborne optical turret
p0400 880-25609

Validity of small scale tests for turret/fairing loads and cavity effects
p0400 880-25611

VANHANSART, W.

New directions in spin research
[AAAF PAPER 80-10-12] p0377 880-36843

VANHANSART, W.

Feasibility study for integrated flight trajectory control fighter
[AD-A084784] p0591 880-30314

VANHANSART, W. A.

A compilation and analysis of helicopter handling qualities data. Volume 1: Data compilation
[NASA-CR-3164] p0001 880-11097

VANHOREN, E.

Aspects of flight test instrumentation
p0240 880-19998

VARGANOV, L. S.

Gas cushions in gas turbine engines
p0003 880-10608

Characteristics of a Laval nozzle with gasdynamic regulation
p0527 880-10482

VARNES, J. L.

Organizing multistage energy conversion systems
p0526 880-47183

VARTY, D.

The re-organisation of airport administration in Canada
p0191 880-25245

VASHREY, L. G.

An experimental method for investigating the actual aerodynamic interference of aircraft components at supersonic velocities
p0056 880-15476

VASILCEKOH, G. S.

Experimental investigation of the strength of rotor materials in the presence of surface cracks
p0003 880-10482

Experimental investigation of the strength of rotor materials with surface cracks
p0278 880-32044

VASTENHOEY, V. T.

Analysis of moisture exchange in aircraft fuel tanks
p0564 880-37412

VASEN, V. A.

Construction of a nonstationary nonlinear propeller theory
p0015 880-12911

Construction of a nonstationary nonlinear theory of helicopter rotors
p0328 880-34711

VATALLO, F.

Automatic systems for airport surface mobile media surveillance based on the use of secondary media
p0117 880-11400

VATOLIN, A. K.

On approximating the aerodynamic characteristics of a wing with two-element trailing flap
p0376 880-36779

VATOLIN, V. V.

Optimal control of flight vehicle with elastic elements
p018 880-10037

VAUCHER, K.

Expected improvements from wind tunnel model
testing at high angle of attack. [OMEGA, TP NO. 1980-36] p0444 A80-60804

VAUGHAN, J. C., III
Multirole cargo aircraft options and configurations [AIAA PAPER 80-0935] p0195 A80-26645
Technology requirements and readiness for very large aircraft [NASA TM-80-1001] p0034 A80-32297
Multirole cargo aircraft options and configurations [NASA TM-80-1017] p0037 A80-11053
Technology requirements and readiness for very large aircraft [NASA TM-80-8173] p0287 A80-20223
Light airplane crash tests at three pitch angles [NASA TP-1181] p0044 A80-11505
Crash tests of four identical high-wing single-engine airplanes [NASA TP-12-1699] p0586 A80-30296

VAUSE, R.
Optically swept rotor [NASA-CASE-ARC-11106-1] p0118 A80-14107

VENDBERT, R. P.
Study of rotor wakes at very low advance ratios [AD-A080711] p0303 A80-21291

VENDPESEL, D.
Airliner simulator census [TPE 1002] p0166 A80-29472

VENET, N.
The pilot face to face with concrete realities [AIAA PAPER 80-0300] p0156 A80-22747

VENKATARAJU, K.
Processing and analysis of the data from a two spool gas turbine engine [NASA PAPER 79-102] p0343 A80-36149

VENKATESAN, C.
Establishment criteria for Distance Measurement Equipment (DME) with instrument landing system and/or localizer approach [AD-A06918] p0077 A80-13046

VENNES, B. H.
The IMT Lille rotation balance and associated experimental techniques [AIAA PAPER 80-031] p0377 A80-13044

VERBERGH, B. A.
Initial study of the response of an aircraft to lateral gusts [AIAA PAPER 79-28-03] p0181 A80-17048

WIND TUNNEL AND FREE FLIGHT MODEL IDENTIFICATION EXPERIENCE [AIAA PAPER 80-0969] p0337 A80-35940

VERDALL, P. L.
Is the structural life of an aircraft wing limited? [AIAA PAPER 80-0891] p0063 A80-17335

VERMA, K. R.
Processing and analysis of the data from a two spool gas turbine engine [NASA PAPER 79-129-7] p0051 A80-14742

VERMA, K. R.

VILLAHER, J. C.
Unsteady wake behind a profile at variable incidence [AIAA PAPER 80-0101] p0377 A80-36164

VIGNOSI, L. P.

VINGEBO, B. W.
A cooled laminar radial turbine technology demonstration [AIAA PAPER 80-0100] p0156 A80-22748

VINGEBO, B. W.
Potential roles for the cockpit traffic display in the evolving ATC system [SAE PAPER 800736] p0575 A80-34688

VINGERS, S. A.
Effect of aromatic hydrocarbons on the oxidizability of hydrogenated jet fuel [AIAA PAPER 80-0002] p0156 A80-22727

VIKEL, B.
Infrastructure of cargo airships [AIAA PAPER 80-0300] p0156 A80-39306

VIKEL, B.
Reduced bleed air extraction for DC-10 cabin air conditioning [AIAA PAPER 80-1197] p0448 A80-41194

VIGNEC, M.
Engine bleed air reduction in DC-10 [NASA-CB-159846] p0633 A80-32378

VIGNEVIC, M.
CTOL/STOL comparison – A view from the deck [AIAA PAPER 80-1812] p0469 A80-43289

VIJAYAKRISHNAN, A.
Transmission of high frequency sound waves through a slug flow jet [AIAA PAPER 80-0969] p0337 A80-35940

VIKAS, S. A.
Unified nomenclature of oils for aircraft gas-turbine engines [AIAA PAPER 80-0300] p0156 A80-20690

VINK, H.
Biodiesel-based lubricating oils [AIAA PAPER 80-0300] p0156 A80-50349

VINCENT, C. R.
Advanced integrated test subsystem evaluation [AD-A081400] p0351 A80-29336

VINCENT, J. H.
Analysis of T-2C high angle of attack flight test data with nonlinear system identification methodology [AD-A066327] p0539 A80-30298

VINCENT, H. C.
Application of ECS guidelines to weight effective aircraft design [SAE PAPER 1270] p0103 A80-20626

VINICK, R. V.
Trajectories optimization in hypersonic flight [NASA CR-162846] p0322 A80-19026

VINODRAOVA, V. L.
Analog modeling in studying supersonic flow around a wing and its governing analog-criteria [AIAA PAPER 80-10038] p0210 A80-10038

VINODRAOVA, V. L.
Experimental investigation of the flow past a wing of finite width [AIAA PAPER 80-2922] p0262 A80-19026

VINODRAOVA, V. L.
Calculation of flow in a supersonic air intake with allowance for the boundary layer on the fairings [AIAA PAPER 80-46047] p0525 A80-46047
The use of simulators for training in-flight emergency procedures  
[AGARD-AR-248]  p0606  N80-31412
Advanced simulator for pilot training: Design of automated performance measurement system  
[AD-A088855]  p0669  N80-33421
VAK, T.
Improved maneuver criteria evaluation program  
[AD-A082808]  p0336  N80-22310
WACHTER, J.
Sculptural solution of the steady flow in turbojet engine blades and ducts of arbitrary shape  
Flow induced spring coefficients of labyrinth seals for application in rotor dynamics  
WADCOCK, A. J.
Simple turbulence models and their application to boundary layer separation  
WACHTER, E.
System for measurement of Category II TLS  
[WAPF-AB-36-764]  p0374  N80-36764
WAPFORD, J. N.
Application of MIL-STD-810C dynamic requirements to USAF avionics procurements  
WAGGONER, R. G.
Computational transonic analysis for a supercritical transport wing-body configuration  
[AIAA Paper 80-0129]  p0162  N80-22332
WAGGONER, B.
Third body formation and the wear of PTFE fibre-based dry bearings  
WAGNER, B.
Yawed slender wings at small angles of attack  
[AST-180-26268]  p0019  N80-26268
WAGNER, D.
Laser-based flow-field diagnostics of two large hypersonic test facilities  
[AD-A078289]  p0246  N80-19135
WAGNER, O.
The influence of the thrust direction on the level flight of light airplanes  
[AD-A085-0697]  p0445  N80-40979
WAGNER, S. N.
Technical evaluation report on the Flight Mechanics Panel Symposium on the use of Computers as a Design Tool  
[AGARD-AR-158]  p0533  N80-28348
WAGNER, W. B.
Performance of annular prediffuser-combustor systems  
WAGNER, W. M.
Turbo engines in the '80s  
[AST-180-37460]  p0034  N80-37460
WABA, W. M.
Pressures inside a roon subjected to simulated sonic booms  
A new type of flap valve for generating sonic booms in a pyramidal horn  
[AD-A0881160]  p0059  N80-23100
WALZ, R. B.
Minimizing the cost of operating aircraft on multistop tours  
[AST-180-31140]  p0593  N80-31140
WALZ, C. R.
Built-up low-cost advanced titanium structures  
[BU-241]  p0031  N80-35005
WALDMANN, A. B.
Environmental control system design for the Tomahawk Cruise Missile  
WALDEN, S.
Flight safety of Bojallaq hang gliders. Theoretical and experimental study of the flight envelope  
[ONERA-BT-1979-8]  p0363  N80-23301
WALKER, R. A.
Development of an integrated ceramic blade-metal disk with circumferential blade attachment  
[AGARD-AR-248]  p0553  N80-29349
WALKER, D.
Periodic optimal cruise of a hypersonic vehicle  
[AIAA 80-1777]  p0511  N80-05555
WALKER, D. J.
Fin design with ACT in the presence of strakes  
[AD-A0846750]  p0324  N80-23722
WALKER, R. X.
Design for continuing structural integrity  
[AD-A081160]  p0593  N80-23136
WALKER, G.
Logistics forecasting for achieving low life cycle cost  
P0598  N80-31347
WALKER, R. P.
Interferometer design and data handling in a high-vibration environment. I - Interferometer design  
WALKINGTON, J. W.
Achieving effective Radar Cross Section flight profiles on the B-1 aircraft  
P0205  N80-27277
WALKLEY, K. B.
Aerodynamic design and analysis of the AST-204, AST-205, and AST-206 blended wing-fuselage wing-body configuration concepts  
[WASP-CR-159223]  p0286  N80-20232
WALKO, L. C.
Full scale lightning test technique  
[WASP-CR-159254]  p0314  N80-21952
WALLACE, P. A.
Silicon nitride turbine blade development  
WALLACE, P. F.
Silicon nitride turbine blade development  
[AD-A077661]  p0244  N80-29347
WALLACE, T. F.
Aircraft crashworthiness studies: Findings in accidents involving an aerial application aircraft  
[AD-A0846750]  p0324  N80-32356
WALTHER, N.
Applied technology in turbofan engines  
WALTHER, E. J.
The Surface Contour Radar, a unique remote sensing instrument  
P0192  N80-26085
WALTHER, K. B.
Flight tunnel tests on the Sheriff twin-engine light aircraft  
[DD-241]  p0361  N80-23727
WALTHER, W. A.
Stability analysis of the YF401 engine in the XFY-12A aircraft  
[AIAA Paper 80-1246]  p0045  N80-41204
WALTHER, W. R.
Distributed analysis for F100(3) engine  
[WASP-CR-159754]  p0179  N80-17073
WALTHER, W. A.
Development of flexible rotor balancing criteria  
[WASP-CR-159506]  p0366  N80-32720
WALVERVIC, R. H.
Flow visualization techniques in the Airborne Laser Laboratory program  
WALTHER, R. L.
DACS - A prototype general aviation digital avionics control system  
P0211  N80-32430
FAA Technical Center Digital Cockpit Simulation Facility navigation, guidance, and control software architecture  
[AD-A0846750]  p0510  N80-45521
WALTHER, R. E.
Vertical axis wind turbine development: Executive summary  
[OBO-5135-77-5-SUM]  p0371  N80-23845
WALTHER, R. V.
Vertical axis wind turbine development  
[OBO-5135-77-5]  p0371  N80-23845
WALTHER, B. V.
Microprocessor control of low speed V/S/STOL flight  
[AD-A0776561]  p0245  N80-19129
WALTHER, R. D.
Design considerations for an active laser seeker  
P0324  N80-34189
WANG, J. F.
Flapping response of lifting rotor blades to exciting forces  
WANG, B. A.
Flow induction in the presence of strakes  
[ASBE PAPEB 79-LDB-7]  p0456  N80-21545
WANG, K. R.
Microwave booms in a pyramidal horn  
[BU-241]  p0361  N80-23277
WANG, R. H.
Development of high-speed digital circuits  
[BU-241]  p0011  N80-12003
WANG, R. H.
Development of high-speed digital circuits  
P0192  N80-26085
WANG, H. B.
Development of high-speed digital circuits  
P0192  N80-26085
WANG, R. H.
Development of high-speed digital circuits  
[AD-A077661]  p0244  N80-29347
WANG, R. H.
Development of high-speed digital circuits  
[AD-A077661]  p0244  N80-29347
B-164

PERSONAL AUTHOR INDEX

WAPNER, D. R.
Flight test of navigation and guidance sensor
errors measured on STOL approaches
[NASA-TN-81154] p0080 H80-13041

WAPNER, J. S.
Analytical techniques for aeroelastic components
in aircraft
[AD-100343] p0592 H80-30536

WARRICK, W. R.
Study of an advanced transport airframe design
concept known as Felted
[NASA-CN-159337] p0633 H80-32377

WARRICK, C. E. R.
The equations of motion of an aircraft embracing
its whole-body and deformational degrees of
freedom

WARRI, E. L.
Effect of water injection and off-scheduling of
a multi-inlet guide vanes, gas generator speed
and power turbine nozzle angle on the
performance of an automotive gas turbine engine
[AD-100345] p0292 H80-20272

WARRI, H.
High-temperature ceramic heat exchanger
[AD-100342] p0645 H80-33307

WARRICK, G.
Forward sweep - Rockwell's new broom
[NASA-TP-1127] p0426 H80-24588

WATT, J.
Test and evaluation of Texas instruments small
parabolic microwave landing system
[AD-100351] p0614 H80-33837

WATT, A. R.
Effect of water injection on surface noise
[AD-100343] p0592 H80-30536

WATT, W. B.
Effect of Reynolds number on stability
characteristics of a cruciform wing-body
[NASA-TP-1683] p0487 H80-27283

WATT, R. N.
The development and application of improved
combustor wall cooling techniques

WATTERS, A. B.
Effect of temperature on surface noise
[AD-100352] p0216 H80-28419

WATTS, S.
Test and analysis of the ASALP-PEU insulated
combustion chamber

WATTS, C. R.
Effect of Reynolds number on stability
characteristics of a cruciform wing-body
[NASA-TP-1683] p0087 H80-27283

WATTS, R. N.
Correction procedures for aircraft noise data.
Volume 4: Tone perception
[AD-100370] p0560 H80-30157

WATTS, I. A.
Common Cause Failures - A dilemma in perspective
[AD-100343] p0410 H80-30344

WATSON, J. H.
Redundancy management considerations for a
control-configured fighter aircraft triplex
digital fly-by-wire flight control system
[AD-100343] p0111 H80-14026

WATSON, W.
An aerodynamic method for control and range
improvement of rotary compressors

WATT, C. W.
Amendment of operational automated guideway
systems-ALRTANS, phase 2
[PHR0-102538] p0613 H80-32302

WATT, R. N.
Dual-gas effects on the aerodynamics of blunt
cones as measured in a hypervelocity range

WANG, N.
Near-field pattern analysis of airborne antennas
[AD-100343] p0094 A80-38646

WANG, N.
Research on near field pattern effects
[AD-100343] p0311 H80-21640

WANG, S. T.
Atmospheric turbulence simulation techniques with
application to flight
[NASA-CH-3309] p0612 H80-32025

WAXBARBER, B. P.
Fuel conservation through active control of rotor
clearances
[NIAR Paper 80-1067] p0610 A80-41506

WANEHILL, R. J. H.
Flight simulation fatigue crack propagation in
7010 and 7075 aluminum plate
[NIAR Paper 80-30771] p0273 H80-30771

PSEOBAL AOTHOB IB DEI

Enginee ing application of fracture mechanics to
flight simulation fatigue crack propagation
[NIAR Paper 80-53839] p0623 H80-53839

Flight simulation fatigue crack propagation
evaluation of candidate lower wing skin
materials with particular consideration of
spectrum truncation
[NASA-TB-77002-0] p0049 H80-11524

Fatigue crack propagation in aluminum alloy sheet
decided by wavelength constant amplitude loading
[NASA-TB-78025-0] p0357 H80-22749

Gust severity effects on fatigue crack propagation
in aluminum alloy sheet materials
[NASA-TB-78041-0] p0369 H80-23849

Significance of a rotor blade failure for fleet
operation, inspection, maintenance, design and
certification
[NASA-TB-79021-0] p0603 H80-31392

Maneuver spectrum fatigue crack propagation in
aluminum alloy sheet materials
[NASA-TB-80091-0] p0603 H80-31393

Flight simulation fatigue crack propagation in
7010 and 7075 aluminum alloy plate
[NASA-TB-80091-0] p0611 H80-31947

WARGOBBEL, J.
AF-86 - A second generation V/STOL
[SAA Paper 791070] p0194 A80-26533

WARCOP, R. W.
Jet delay rate effects on hover jet-induced loads
p0527 A80-47324

WARD, A. O.
An approach to the derivation and validity of
requirements
p0612 H80-32126

WARD, C. R.
Advanced signal processing concepts for
multi-function radio systems
p0204 A80-32461

WARD, V. S.
Development of a visual inspection technique
(optical assessment of aircraft transparencies)
[AD-100369] p0239 H80-19086

WARD, R.
Research on the flutter of axial turbomachinery
loading
[AD-100357] p0171 H80-16064

WARD, G.
Design and operation of multi-specimen fully
reversed fatigue systems for advanced composite
materials
p0002 A80-10206

Failure mechanisms for advanced composite sandwich
construction in hostile environments
p0197 H80-26848

WAREBROOK, W.
Formulation of coupled rotor/fuselage equations of
motion
[AD-100357] p0089 A80-17717

Coupled rotor and fuselage equations of motion

WARREN, D. A.
Flight path displays
[AD-100369] p0241 H80-19107

WARREN, D. J.
Feasibility study of applying laminar flow control
to an LTA vehicle
[AD-100350] p0629 H80-32351
BATTBBS, K.; C.

AT*S, P. B.; MTfS, P. A.; BAKTS, F. A.

BAB, J. D.

SAT.

BABBKS, B. A.

BBBKS, B. J.

EBB, J. A., JB.

EBEB, B.

WEBB, B. B.

EBEB, B. J.

BBBBT, J. P.

BEAtBEHILI, 8. H.

BEBSTEB, B.

WEBEB, B. J.

EBBB, O.

BEBOPEB, S.

BEISS, V.

BEISS, B. A.

BEIHSTBIH, 8.

BEIHHOLD, J. H.

BBILBOEHSTEB, K. J.

BEI1EBSTBIH, 6.

BEBEBG, J. A.

BEIBEBG, J. A.

BEHBBAH, 8. D.

BEISS, B. A.

BEIHSTBIH. 8.

BEIHHOLD, J. H.

B202: A FOBTBAH program for two-dimensional

A preliminary assessment of the impact of 2-D

entrophy analysis of feedback flight dynamic

system simulation

Hybrid computer errors in engineering flight

simulation

[AD-A0801953]

WEIKS, Y.

Airflow effects on fires, part 2

[AT-0737846]

WEIKOS, D.

Software impact of selected en route NTC computer

replacement strategies

[AD-1081470]

WEIKES, D.

Investigation of the oscillatory and flight

behavior of rotor systems in relation with

atmospheric turbulence

[TTG-PWT-79-5]

WHOOPPER, S.

Measurement of turbine engine transient airflow in

ground test facilities

[AD-A080706]

WHEDW, W. E., JR.

Pilot control through the TAFCONS automatic flight

control system

[NASA-TM-81152]

Flight tests of the total automatic flight control

system (Tafcos) concept on a DHC-6 Twin Otter

aircraft

[NASA-TP-1513]

WHEDW, J. B.

CAD produced aircraft drawings

[AA0-07359]

WEIKES, H. L.

Entropy analysis of feedback flight dynamic

control systems

[AD-A072259]

WEIKES, J. P.

Propulsion/Airframe integration considerations for

high altitude hypersonic cruise vehicles

[AA0-PAPER-80-0117]

A preliminary assessment of the impact of 2-D

exhaust-nozzle geometry on the cruise range of a

hypersonic aircraft with top-mounted ramjet

propulsion

[NASA-TM-80562]

WEIKDED, J. L.

Aeropropulsion in year 2000

[HASA-TH-81152]

WEIKIEH, J. B.

Airfield surveillance by radar

[ASME PAPEB 80-61-35]

WHIKES, G.

AFT2: A FORTRAN program for two-dimensional

chemically reacting, hyperthermal, internal

flows. Volume 1: Method of analysis

[HASA-TH-81841]

WEBER, G. A., JR.

Minimum-mass designs of stiffened

graphite/polyimide compression panels

[HASA-TH-81416]

WEBBER, R. W.

A low cost airborne data acquisition system

[CLUS-TP-13016]

WEBBEY, J. F.

Experience in producing software for the ground

station of a remotely piloted-helicopter system

[CLUS-TP-387]

WEBEN, 0.

The superposition of two-dimensional error fields

and its influence on flight safety of air traffic

[HABFE-PAPER-80-019]

WEBAEY, R. W.

Flight tests for the study of radioelectric

perturbations of electromagnetic origin

[HASA-TH-81040]

WEBER, R. J.

Aeropropulsion in year 2000

[HASA-TH-81841]

Airflow measurements in a large irregularly

shaped tunnel using anemometer and pitot-static

tube traverse

[TTG-660]

WEBER, B.

Airflow measurements in a large irregularly

shaped tunnel using anemometer and pitot-static

tube traverse

[TTG-660]

WEAKS, G. J.

An investigation of scale effects on the transonic

flow over swept wings. Part 1: Measurements on

a model of a transport-aircraft configuration

[ARC/NASA-3862-PF-1]

WEIKS, R. A.

Continuous-to-discrete transformations for control

system simulation

[AD-A0077846]
Fiscal year 1979 scientific and technical reports, P-16 independent assessment - An Air Force viewpoint & hybrid composite helicopter main rotor blade

An exploratory investigation of the STOL landing maneuver

Composite structural materials {NASA-CH-162578}
Composite structural materials {NASA-CH-163777}

Release experiments in DFVLR wind tunnels

Flight performance of the TCV B-737 airplane at

The simulation and modeling of jet plumes in wind tunnel facilities

The simulation and modeling of jet plumes in wind tunnel facilities

A technique for simulating the motion and ground effect of aircraft wake vortices

A streamtube concept for lift - With reference to the maximum size and configuration of aerial spray emissions

Computer simulation of canopy-pilot response to bird-strike

Effect of tip vortex structure on helicopter noise due to blade-vortex interaction

Aircraft collisions

Representativeness of wind observations at airports

Integrated thermal-structural finite element analysis

Evaluation of a new concept for reducing free-stream turbulence in wind tunnels

The influence of bending-torsional coupling on the buckling load of general orthotropic, midplane symmetric and elastic plates

Structural design of transport airplanes for transient environments

Prediction of the interior noise levels of high-speed propeller-driven aircraft

Evaluation of Aero Commander sidewall vibration and interior acoustic data: Static operations {NASA-CH-159290}

Evaluation of Aero Commander sidewall vibration and interior acoustic data: Static operations {NASA-CH-159290}

Evaluation of Aero Commander sidewall vibration and interior acoustic data: Static operations {NASA-CH-159290}

Evaluation of Aero Commander sidewall vibration and interior acoustic data: Static operations {NASA-CH-159290}

A time-shared nonpulsed approach to air/surface radar ranging

[HASA-CB-3191] p0076 80-12996

[AD-A085733] p0544 A80-41190

[AD-A085733] p0544 A80-41190
WILCOX, R. S.

WILCOX, R. S.
Evaluation of RC (hydrocarbon) control strategies for general aviation piston engines
[PM80-155391] p0485 N80-26971

WILCOX, B. A.
Development of fire-resistant, low smoke, generating, thermally stable end items for commercial aircraft and spacecraft using a basic polyimide resin
[NASA-CH-160576] p0356 N80-22492

WILEY, C. D.
Closed loop aspects of aircraft identification
Investigation of leading flame in presence of wind shear
[FCPLB-FB-79-20] p0363 N80-23299

WILMOTT, R. V.
Effects of relaxed static longitudinal stability on a single-stage-to-orbit vehicle design
[NASATP-1590] p0081 N80-13052

WILL, J. H.
Hardware-in-the-loop simulation of a digital autopilot
p0578 A80-49830

WILLIAMS, A. L.
Comparison of the minilir location system and the SLV inertia measuring system STALIRS
[RLMP-7026-07] p0347 N80-22303

WILLIAMSON, B. H.
Acceptance criteria for bituminous surface course on civil airport pavements
[AD-A080430] p0423 N80-24335

WILLIAMS, B. A.
An overview of Goodyear modern airship activities
p0403 A80-39291

WILLIAMS, J. R.
The USAF stability and control digital Datcom.
Volume 1: User's manual
[AD-A086557] p0591 N80-30315
The USAF stability and control digital Datcom.
Volume 2: Implementation of Datcom methods
[AD-A086558] p0592 N80-30316
The USAF stability and control digital Datcom.
Volume 3: Plot module
[AD-A086559] p0592 N80-30317

WILLIAMS, J. D.
Modification of axial compressor streamline program for analysis of engine test data
[ASTP-H-79312] p0013 N80-14051

WILLIAMS, L. J.
Toward new small transports for computer airlines
p0140 N80-21224
The future of short-haul transport aircraft
[SAEPAPER 800755] p0578 A80-49703

WILLIAMS, R. H.
Aerodynamic coefficients in generalized unsteady thin airfoil theory
p0390 N80-38036

WILLIAMS, M.
Antennas for RPVs
p0266 A80-29666

WILLIAMS, V. W.
Wasser helicopter/sonar dynamics study NHL program description and operations
[ARL/AERO-NOTE-385] p0545 N80-29288

WILLIAMS, P. D.
Studies of turbulent confined jet mixing
p0390 N80-38257

WILLIAMS, P. Y.
Digital Avionics Information System (DAIS): Mission software
[AD-A085136] p0530 N80-28350

WILLIAMS, R. L.
Top inlet system feasibility for transonic-supersonic fighter aircraft applications
[PM80-1808] p0512 A80-45735

WILLIAMS, W. D.
Laser-Hamam flow-field diagnostics of two large hypersonic test facilities
[AD-A070289] p0246 N80-19135

WILLIAMS, W. J.
Statistical review of counting accelerometer data for Navy and Marine fleet aircraft
[AD-A085080] p0348 N80-22308

WILLIAMS, K. A.
Development and flight test of a two-place night/adverse weather A-10 for the close-air support and battlefield attack mission from turboshaft
[SACEPAPER 7901969] p0194 N80-26632

WILLIAMS, J. L.
Opportunistic Maintenance Engine Simulation Model: AEMES 2
[AD-A0702516] p0040 N80-11088

WILLIAMS, W. H., JR.
A comparison of first and second order techniques for computing optimal horizontal gliding trajectories
[AIAPAPER 800061] p0093 N80-18260

WILLS, C. H.
Experimental study of acoustic loads on an upper-surface-blown STOL airplane configuration
[NASATP-1577] p0085 N80-13879

WILLS, W. C.
The effects of turbine inlet temperature and engine complexity on VCE/HALS powered supersonic Y/STOL aircraft
[AIAPAPER 80-1853] p0513 A80-45744
The effect of cross-shafting on engine-out vertical landing reliability of Y/STOL aircraft
[AIAPAPER 80-1853] p0513 A80-45746
Quiet Clean Short-haul Experimental Engine (QCSEE)
[NASA-CH-159073] p0135 N80-15120

WILLS, W. H.
Comparative resistance of Beta-Si3N4 solid solutions to molten silicon attack
p0091 A80-18062

WILLSHEIE, W. L., JR.
Ground effects on aircraft noise
p0075 N80-12820

WILSON, C. A.
Avco Lycoming quiet clean general aviation turbofan engine
p0381 N80-22333

WILSON, C. W.
Microphysical properties of artificial and natural clouds and their effects on OH-6 helicopter icing
[AD-A088633] p0530 N80-28324

WILSON, J. A.
Exhaust system performance improvement for a long-duct nacelle installation for the DC-10
[AIAPAPER 80-1195] p0040 N80-44114

WILSON, J. E.
ATE system acquisition for E-3A sensor WACS/
[PO-2271] A80-30033

WILSON, J. N., JR.
Study of an advanced transport airplane design concept known as Flatbed
[NASA-CH-1592137] p0063 N80-32377

WILSON, J. W.
The advanced flight deck
p0624 A80-53556

WILSON, J. J.
A summer of an in-flight evaluation of control system time delays during landing using the F-8 DFBW airplane
[AIAPAPER 80-1626] p0520 A80-45914

WILSON, R. P., JR.
Study of research and development requirements of small gas-turbine combustors
[NASA-CH-159796] p0224 N80-18040

WILSON, V. E.
Design studies of Laminar Flow Control (LFC) wing concepts using superplastics forming and diffusion bonding (SPF/DB)
[NASA-CH-159220] p0479 N80-26293

WILTON, D. H.
The SEB description of interaction of a transient electromagnetic wave with an object
p0313 N80-21941

WILTON, R. M.
Advanced infrared signature prediction program, Spectral calculation of radiation from a turbine propulsion system as intercepted by an observer (SCORFIN). Volume 3: Analysis
p0248 N80-19124

WINBLADE, B. L.
Advanced transport aircraft technology
p0505 A80-44114

WINDHBECK, T.
Wind tunnel investigations of the release behavior of aircraft stores at low and high velocities
WOOD, A. A.

Interchange design

WOOD, C. D.
The Russian satellite navigation system

WOOD, D.
V/STOL at the crossroads

WOOD, E. R.
Practical design considerations for a flightworthy higher harmonic control system

WOOD, E. W.
Toward more effective evaluation and control of airport noise

WOOD, H. A.
USAF damage tolerant design handbook: Guidelines for the analysis and design of damage tolerant aircraft structures, revision A

WOOD, R. B.
Electromechanical actuation development

WOOD, T.
Improved maneuver criteria evaluation program

WOODALL, P. J.
Very lightweight air traffic management system using an electronic scan antenna

WOODCOCK, D. L.
The use of strip theory in the dynamics of deformable aircraft

WOODBEE, B. W.
Vected engine over wing concept for V/STOL

WOODREP, B. H.
Effects of varying visual display characteristics of the T-38, a T-37 flight simulator

WOOD, W. H.
Reliability growth models

WOODSON, B. H.
Detailed design, fabrication and testing of an engineering prototype compensated pulsed alternator

WOODWARD, B. S.
Some wind tunnel measurements of the effectiveness of aircraft control systems at low speeds of combined lift and roll control

WOODWARD, F. A.
USSAERO Computer program development, versions B and C

WOODWARD, R. F.
Forward acoustic performance of a shock-swallowing high-tip-speed fan (QP-13)

WOOLLDEE, L.
Air combat maneuvering performance measurement

WOOLLITUT, B. E.
Zero-length, slotted-lip inlet for subsonic military aircraft

WOOLLIT, T. E.
Development, flight test and application of HRV control law concepts for microprocessor based computers

WOODS, R.
Rotor model parameters estimation and rotor balancing studies with quadratic programming

WORDSHECK, R.
Microphysical properties of artificial and natural clouds and their effects on UT-38 helicopter icing

WORR, P.
Program involving surveillance and cargo airships

WORTH, D. N.
Summary of aircraft results for 1978 southeastern Virginia urban plane measurement study of ozone, nitrogen oxides, and methane

WORSTEIN, J. B.
Mechanisms of nitrogen heterocycle influence on turbine fuel stability

WORTHY, J. G.
The design, development and operation of gas turbine radio telemetry systems

WUR, W.
Thermostats

WEIGHT, C. C.
Thermal-structural design study of an integrator fixed wing target technology system

WEIGHT, P.
Antennas for BPV's

WU, K. C.
Boker-bearing dynamics technology design guide, Part 1: Flexible rotor dynamics

WU, F. T.
Infrared sensor system performance simulations

WU, J. C.
Numerical study of separated turbulent flow over airfoils

WU, J. J.
Recent development of a jet-diffuser ejector

WU, J. M.
The analysis of wing-body combinations at moderate angles of attack

WU, L. T.
Performance evaluation of the SIFT computer

WURBLER, D. J.
Potential environmental effects of aircraft emissions

WUESSERING, H.
Ball control by digitally controlled segment spoilers

WURST, P.
New tasks and progressive integration in the areas of flight and power plant control

WURST, W.
Pressure and flow measurement

WOLF, B. H.
CF6-60 engine short-term performance deterioration

WOORES, E. R.

p0297 A80-20567

WORMS, R.

p0403 A80-20567

WORMT, J. B.

p0530 A80-28324

WOOLSEY, B. M.

p0550 A80-29327

WOODY, H.

p0302 A80-21282

WOOLLITUT, B. E.

p0449 A80-41203

WOOLLITUT, T. E.

p0266 A80-29661
Endurance and failure characteristics of modified BASA gear research and its probable effect on tracking algorithms for mono and multiradar systems. Volume 2: Test data

Maintenance of aircraft, helicopters, and aircraft systems. Volume 2: Test data

Acoustic characteristics of jets issuing from ring-and-needle nozzles

Acoustic radiation from axisymmetric ducts - a comparison of theory and experiment

The reliability of the mechanical components of flight vehicles

Hydrogen as a fuel. Citations from the International Aerospace Abstracts Data Base

Acoustic radiation from axisymmetric ducts - a comparison of theory and experiment

Optimal wing profile in the flow of an ideal, incompressible fluid

The significance of wing end configuration in airfoil design for civil aviation aircraft

Experimental verification of propeller noise prediction

Laser anemometer measurements at the exit of a T63 combustor

Optimization of the mathematical model of a structure

Flight test of all-electronic propulsion control system

Some aspects of the thermodynamics of duct jet flows

Acoustic radiation from axisymmetric ducts - a comparison of theory and experiment

The reliability of the mechanical components of flight vehicles

Hydrogen as a fuel. Citations from the International Aerospace Abstracts Data Base

Experimental investigation of the strength of rotor materials in the presence of surface cracks
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Pages</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUBARY, T. G.</td>
<td>Calculation of minimum-weight and maximum-rigidity structures in the presence of design constraints</td>
<td>p0172</td>
<td>NASA-RP-1056</td>
</tr>
<tr>
<td>EUBARY, T. G.</td>
<td>Summary of data required for the AGARD SRF activity standard aerelastic configurations - two-dimensional configurations</td>
<td>p0204</td>
<td>A80-27165</td>
</tr>
<tr>
<td>ZWICKER, P. E.</td>
<td>Analytical design and evaluation of an active control system for helicopter vibration reduction and gust response alleviation</td>
<td>p0361</td>
<td>A80-23273</td>
</tr>
<tr>
<td>ZVEIKOV, B. E.</td>
<td>Aircraft torque motors</td>
<td>p0536</td>
<td>A80-28369</td>
</tr>
<tr>
<td>YUNSA-MOLOSEN, L. N.</td>
<td>Computer-aided designing of temperature fields for cooled gas-turbine blades</td>
<td>p0277</td>
<td>A80-31208</td>
</tr>
<tr>
<td></td>
<td>Temperature distribution planning for a cooled gas-turbine blade using an electronic computer</td>
<td>p0625</td>
<td>A80-53636</td>
</tr>
</tbody>
</table>
### Typical Corporate Source Index Listing

<table>
<thead>
<tr>
<th>CORPORATE SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADAPTOSOBICS, INC., MCLEAN, VA.</td>
</tr>
<tr>
<td>ADVISORY GROUP FOR AEROSPACE RESEARCH AND DEVELOPMENT, NEDHE-LY-SUB-SCEN (FRENCH)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TITLE</th>
<th>REPORT NUMBER</th>
<th>PAGE NUMBER</th>
<th>ACCESSION NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigation into adaptive control of a slip-cast, reaction-bonded silicon-nitride process via a constructive learning network modeling</td>
<td>AD-A0983730</td>
<td>p0034</td>
<td>H80-28091</td>
</tr>
<tr>
<td>Technical evaluation report on the fluid dynamics panel symposium on high angle of attack aerodynamics</td>
<td>AGABD-AR-165</td>
<td>p0025</td>
<td>H80-101147</td>
</tr>
<tr>
<td>Aircraft dynamic response to damaged runways</td>
<td>AGABD-AR-156</td>
<td>p0028</td>
<td>H80-10203</td>
</tr>
<tr>
<td>Maneuver limitations of combat aircraft</td>
<td>AGABD-AR-155A</td>
<td>p0028</td>
<td>H80-10203</td>
</tr>
<tr>
<td>Dynamic characteristics of flight simulator motion system</td>
<td>AGABD-AR-184</td>
<td>p0032</td>
<td>H80-10238</td>
</tr>
<tr>
<td>Propulsion and energetic panel working group 2 on aircraft fire safety. Volume 1: Executive summary</td>
<td>AGABD-AR-132-VOl-1</td>
<td>p0069</td>
<td>H80-12079</td>
</tr>
<tr>
<td>The impact of global positioning system on guidance and controls system design of military aircraft, volume 1</td>
<td>AGABD-AR-167-VOl-1</td>
<td>p0070</td>
<td>H80-12092</td>
</tr>
<tr>
<td>Determination in ground facilities of aerodynamic stability parameters of aircraft</td>
<td>AGABD-AR-242</td>
<td>p0072</td>
<td>H80-12102</td>
</tr>
<tr>
<td>Advances in guidance and control systems using digital techniques</td>
<td>AGABD-CP-272</td>
<td>p0111</td>
<td>H80-14017</td>
</tr>
<tr>
<td>Technical evaluation report on the 28th guidance and control panel symposium on advances in guidance and control systems using digital techniques</td>
<td>AGABD-AR-146</td>
<td>p0138</td>
<td>H80-15140</td>
</tr>
<tr>
<td>Low cost aircraft flutter clearance</td>
<td>AGABD-CP-278</td>
<td>p0138</td>
<td>H80-15191</td>
</tr>
<tr>
<td>Aerodynamic characteristics of controls</td>
<td>AGABD-CP-262</td>
<td>p0139</td>
<td>H80-15199</td>
</tr>
<tr>
<td>Avionics Reliability, Its Techniques and Related Disciplines</td>
<td>AGABD-AR-261</td>
<td>p0250</td>
<td>H80-19519</td>
</tr>
</tbody>
</table>

### Design, Development and Implementation of an active control system for load alleviation for a commercial transport airplane | AGABD-R-603 | p0367 | H80-23331 |
### Aircraft dynamic response to damaged runways | AGABD-R-605 | p0333 | H80-25325 |
### Technical evaluation report on the 56th propulsion and energetic panel meeting on advanced control systems for aircraft powerplants | AGABD-AR-152 | p0436 | H80-25347 |
### Materials Coating Techniques | AGABD-LS-106 | p0437 | H80-25699 |
### Technical evaluation report on the 25th guidance and control panel symposium on air traffic management. Civil/Military systems and technologies | AGABD-AR-149 | p0479 | H80-26291 |
### Technical evaluation report on the fluid dynamics panel symposium on aerodynamic characteristics of controls | AGABD-AR-157 | p0483 | H80-26330 |
### Air Traffic Management: Civil/Military systems and Technologies | AGABD-CP-273 | p0491 | H80-27248 |
### Combustor Modelling | AGABD-CP-275 | p0507 | H80-27371 |
### Mathematical modelling of linear and non-linear aircraft structures | AGABD-R-657 | p0509 | H80-31326 |
### Aircraft Assessment and Acceptance Testing | AGABD-LS-108 | p0596 | H80-31329 |
### The application of design to cost and life cycle cost to aircraft engines | AGABD-LS-107 | p0597 | H80-31342 |
### The use of simulators for training in-flight and emergency procedures | AGABD-AG-248 | p0606 | H80-31412 |
### Atmospheric Electricity-Aircraft Interaction | AGABD-LS-110 | p0608 | H80-31743 |
### Guidance and control software | AGABD-AG-258 | p0612 | H80-31275 |
### Special Course on Unsteady Aerodynamics | AGABD-R-679 | p0643 | H80-33363 |
### Helicopter flight test instrumentation | AGABD-AG-160-VOl-10 | p0647 | H80-33406 |
### Pressure and flow measurements | AGABD-AG-160-VOl-11 | p0647 | H80-33407 |

### ADVISORY GROUP FOR AEROSPACE RESEARCH AND DEVELOPMENT, PARISS (FRANCE) |
### Propulsion and energetic panel working group 11 on aircraft fire safety. Volume 2: Main report | AGABD-AR-132-VOl-2 | p0234 | H80-19047 |
### Dynamic Environmental Qualification Techniques | AGABD-R-662 | p0239 | H80-19090 |
### Parameter Identification | AGABD-LS-104 | p0240 | H80-19099 |
### Toward new transonic wind tunnels | AGABD-AG-240 | p0246 | H80-19137 |
### Modeling and Simulation of Avionics Systems and Command, Control and Communications systems | AGABD-CP-258 | p0253 | H80-19809 |
### AERITALIA S.P.A., TORINO (ITALY) |
### Wing design processes by inverse potential flow computer programs | AGABD-AR-167-VOl-2A | p0363 | H80-23303 |

### Typical Corporate Source Index Listing

<table>
<thead>
<tr>
<th>CORPORATE SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATHEMATICAL CO., BOSTON, MASS.</td>
</tr>
</tbody>
</table>

### The title of the document is used to provide a brief description of the subject matter. The page number and NASA accession number are included in each entry to assist the user in locating the abstract.
On steady pressure measurements on oscillating models in European wind tunnels

Flying qualities design requirements for sidestick controllers

Computer simulation of ejection seat performance and preliminary correlation with empirical data

A compilation of computer software programs available in the Flight Dynamics Laboratory, 1979

AIB FORCE FLIGHT TEST CENTER, Edwards AFB, Calif.

Development and evaluation of a tower slant.

A study of two avionics life cycle cost models

Minimum time turns with thrust reversal

Ground plane effects on a contoured surface at

Thrust vectoring to eliminate the vertical.

A study to develop optimization algorithms for

Advanced simulator for pilot training: Design

Application of flight simulator record/playback feature

Advanced simulator for pilot training of automated performance measurement systems

Some tests on small-scale rectangular throat ejector

A study to develop optimization algorithms for aircraft wing structures

The use of the Nauer factor for estimating the cost of a turbine engine in the early stages of development

Thrust vectoring to eliminate the vertical stabilizer

Minimum time turns with thrust reversal

An analysis and synthesis of engine condition monitoring systems

Ground plane effects on a contoured surface at low subsonic velocities

Development of a bird/aircraft strike hazard assessment methodology

A study of two aviation life cycle cost models and their applicability in the communications-electronics-meteorological environment

An operating and support cost model for avionics automatic test equipment

Velocity profiles in a long inlet duct employing a photon correlating laser velocimeter without seeding

An experimental study of static thrust augmentation using a 2-d variable ejector

The prediction of mass loaded natural frequencies and forced response of complex, rib-stiffened structures

AIB FOBCE GEOPHYSICS LAB., Hanscom AFB, Mass.

Preliminary assessment of an automated system for detecting present weather

Icing nozzle element optimization test, January 1979

Development and evaluation of a tower slant visual range system

Thrust Vectoring System (TABS)

A demonstration test of the Modular Automated Weather System (MAWS)

Initial development for a flutter analysis of the configured TF-16

The graphical display of multi-dimensional aerodynamic flow field data

Model order reduction using the balanced state representation theory, application and critical analysis of output predictive digital acquisition system

A statistical model for multipath reflection effects of antennas mounted on aircraft

Evaluation of as improved parachute test data acquisition system

Using vertical gust alleviation to improve the target tracking capability of the control configured TP-16

The application of output predictive digital control to wing flutter suppression and terrain following problems

Analysis of the effects of higher order control systems on aircraft approach and landing longitudinal handling qualities

Initial development for a flutter analysis of damaged T-38 horizontal stabilizers using FASTBRA

Development and application of a subsonic triangular vortex panel

Production oriented maintenance organization: A critical analysis of sortie-generation capability and maintenance quality

An analysis of the future requirements for materials handling equipment in the military airlift command

Some civil engineering and management aspects of conversion from JP-4 to JP-8 fuel by the United States Air Force in the continental United States

Development of an automated system for detecting present weather and preliminary correlation with empirical data

A study to develop optimization algorithms for aircraft wing structures

The use of the Nauer factor for estimating the cost of a turbine engine in the early stages of development

Thrust vectoring to eliminate the vertical stabilizer

Minimum time turns with thrust reversal

An analysis and synthesis of engine condition monitoring systems

Ground plane effects on a contoured surface at low subsonic velocities

Development of a bird/aircraft strike hazard assessment methodology

A study of two aviation life cycle cost models and their applicability in the communications-electronics-meteorological environment

An operating and support cost model for avionics automatic test equipment

Velocity profiles in a long inlet duct employing a photon correlating laser velocimeter without seeding

An experimental study of static thrust augmentation using a 2-d variable ejector

The prediction of mass loaded natural frequencies and forced response of complex, rib-stiffened structures

AIB FOBCE LOGISTICS COMAND, Wright-Patterson AFB, Ohio.

Opportunistic maintenance engine simulation model: ONES 2

Vibrations of a compressor blade with slip at the root

An analysis of residual stresses and displacements due to radial expansion of fastener holes

Viscous damping in USAF applications

Soft body impact of cantilever beams

Navy AIAA Technical Information Exchange

C-5
AIBSEAECH HF6. CO.. JBOBBIX. ABIZ.

Improved packaging for the L8-31 inertial
Progress on the DS Air Force approach for the
Cycle II.5 aircraft aero-optical turbulent
Contact stress analysis of ceramic-to-metal
Flow visualization techniques in the Airborne
Overview of recent aero-optics flight tests
Inviscid Flow Field Effects: Experimental results
Transient corona effects on a jet
Demonstration program for a flexible duct valve
Preliminary studies of a turbofan engine and
Full scale lightning test technique •
Seduction of unsteady wind torques on an open
Experimental investigation of the crack growth
Flying qualities design criteria
Service test of two fuel conductivity additives
Atmospheric electricity interactions with
Aero-optics overview
Use of the method of variable directions for
Optimal control of flight vehicle with elastic
Analysis of thin-wall beams by the method of
Selecting the geometric parameters and position
Laminar boundary layer calculation from
On modeling sensitivity of a linear system to
On the empennage snap-through problem
Electrical charging of fabric and film materials
Notion of rectangular wing between parallel walls
Structural analysis of variable-sweep wings
Determination of strain fields near
On thin-wall beams effective stiffness

AirResearch QCGAT engine: Acoustic test results
Concept definition study of small Brayton cycle engines for dispersed solar electric power systems
Silicon nitride turbine blade development Advanced technology components for model. OTP305-2 aircraft auxiliary power system

AirResearch QCGAT engine performance and emissive tests
AirResearch QCGAT engine, airplane, and nacelle design features
AirResearch QCGAT engine performance and emissive tests

AIR FORCE PACKAGING EVALUATION AGENCY, WEIGEHT-PA TTERSON AFB, OHIO.
Evaluating packaging for the CR-1325/135-108 ANS displacement gyro, F-15 aircraft
[AD-A0876267] p0562 880-20744 Improved packaging for the LN-31 inertial measurement unit (F-15 aircraft
[AD-A080745] p0362 880-22329

AIR FORCE SYSTEMS COMMAND, WEIGHT-PA TTERSON AFB, OHIO.
Progress on the US Air Force approach for the the practical management of engine life cycle costs
[AD-A087840] p0351 880-22330

AIR FORCE WEAPONS LAB., KIRTLAND AFB, N. M.
Airblastoate vulnerability envelopes for supersonic aerospace vehicles
[AFRL 80-1628] p0520 880-45916

Cycle II.5 aircraft aero-optical turbulent boundary-layer/shear-layer measurements
[AD-A082745] p0399 880-25605

AirbsearCh engme: Acoustic test results

Airborne lightming characterization
[PSM 80-21935]

Vibrations of a compressor blade with slip at the root
[AD-A086852] p0591 880-30312

Full scale lightning test technique
[PSM 80-21952]

Parametric method of aircraft engine status diagnosis based on limited information
[AD-A0889137] p0659 880-33801

AIRCRAFT RESEARCH ASSOCIATION LTD., BEDFORD (ENGLAND) The design of axisymmetric coils for poled
macelles for high by-pass ratio turbofan engines
[ARC-E/R-3946] p0603 880-31394

AIRESEARCH CO., PHOENIX, ARIZ.
Proximate studies of a turbofan engine and fuel system for use with liquid hydrogen
[PSM 80-37342]

Contact stress analysis of ceramic-to-metal interfaces
[AD-A076491] p0124 880-14417

Demonstration program for a flexible duct valve
for ramjet engine fuel controls
[AD-A076522] p0244 880-19123

AirResearch QCGAT program
[ASA-CR-159758] p0306 880-21331

AirResearch QCGAT engine, airplane, and nacelle design features
[AD-A0878618] p0350 880-22328

AirResearch QCGAT engine performance and emissive tests
[AD-A0878618] p0351 880-22329
The 4th International Symposium on Air Breathing Engines

- Overall aerodynamic characteristics of caret and Installation of C-6533 (IE-2)/ABC ICS in OH-1H
- Selecting the passenger airplane fuselage
- HIP silicon nitride
- Harmonic oscillations of annular ving in steady flow
- Analytic formulas for wing profile aerodynamic characteristics in incompressible flow
- On a smooth approximation method and its application to mathematical description of wing aerodynamic characteristics
- Influence of wing deformation on trailing-edge flap deflections
- Harmonic oscillations of annular wing in steady ideal fluid flow
- Overall aerodynamic characteristics of caret and delta wings at supersonic speeds
- Selecting the passenger airplane fuselage
- Application of the factor interpolation method in flight vehicle landing gear analytic design
- Flow-around small-aspect-ratio delta wing with vortex "bursting"
- Gas curtains in gas turbine engines
- Study of homogeneous combustion characteristics of gas turbine engines with primary zone parameter variation
- Selection of optimal parameters of heat-exchange in a gas turbine engine
- Systematization of simple details of regulable nozzle of gas turbine engine
- Dynamics of diesel fuel combustion in turbulent flow
- Study of mass exchange between primary zone and secondary air jets in gas turbine engine combustion chambers

Analytic Sciences Corp., Reading, Mass.
F-A computer system real-time environmental simulator
A plan for developing and validating a gas system design trade-off methodology
Validation of high angle-of-attack analysis methods

Model development for automatic guidance of a vertical take-off aircraft to a small aviation ship
Concepts for generating optimum vertical flight profiles
Navigation systems for approach and landing of VTO aircraft
Analytical methodology for determination of helicopter IFR precision approach requirements

Analytical Methods, Inc., Bellevue, Wash.
Prediction of aerodynamic characteristics of fighter wing at high lift

Avionics installation (AVSTALL) cost model for FAA communications cost model program
An evaluation of aircraft-separation assurance concepts using airline flight simulators
Standard avionics packaging, mounting, and cooling baseline study
Avionics master plan data base mechanism architecture
The application of reliability improvement warranty to dynamic systems
The application of reliability improvement warranty to dynamic systems
Mechanization architecture for enhancement of avionics planning data base
Standard avionics packaging, mounting, and cooling baseline study
An evaluation of aircraft separation assurance concepts using airline flight simulators
An evaluation of aircraft separation assurance concepts using airline flight simulators
ARIZONA UNIV., TUCSON.
Aircraft motion analysis using limited flight and radar data
[AD-A086061] p0627 880-32326

AVIATION RESEARCH LAB., FORT RUCKER, ALA.
In-flight performance evaluation of experimental information
[AD-A071170] p0040 880-11084

AVIATION TRAFFIC CONTROL OFFICE, APO NEW YORK, N.Y.
09056.
05 Army users outlook on air traffic management systems
[AD-A071261] p0110 880-27333

AVIATION RESEARCH AND DEVELOPMENT COMMAND,
DOVER, N. J.
Program report 3 of cooperative program for
design, fabrication, and testing of high modulus composite helicopter shafting
[AD-A078876] p0236 880-19067

AVIATION ENGINEERING FLIGHT ACTIVITY, EDWARDS AFB, CALIF.
Preliminary airworthiness evaluation US-1H
helicopter equipped with multiple target
Electronic Warfare System (MULTENS)
[AD-A078876] p0236 880-19067

AVIATION ENGINEERING FLIGHT ACTIVITY, EDWARDS AFB, CALIF.
Preliminary airworthiness evaluation, AH-1G
with the airborne target acquisition fire control system
and the helicopter modular missile system installed
[AD-A078360] p0291 880-20265

Aviationworthiness and flight characteristics
evaluation. On-5C interstate scout helicopter
[AD-A080138] p0305 880-21320

Artificial landing test C5-47C helicopter with
fiberglass rotor blades
[AD-A081860] p0419 880-28305

Flight evaluation of nondimensionalistic static
longitudinal stability test methods
[AD-A082831] p0422 880-28329

Microphysical properties of artificial clouds
and their effects on US-1H helicopter icing
[AD-A086633] p0530 880-38234

AVIATION RESEARCH AND DEVELOPMENT COMMAND,
CLEVELAND, OHIO.
Some considerations of the performance of two
combustor gas path seal material systems
[NASL-TN-81398] p0172 880-16143

Composite wall concept for high temperature
combustor shroud: Survey of low modulus strain
isolator materials
[NASL-TN-81443] p0295 880-20398

Loss model for off-design performance analysis of radial turbines with pivoting-vane,
variable-area stators
[AD-A076352] p0496 880-27365

AVIATION RESEARCH AND DEVELOPMENT COMMAND,
ROSEFLY, FIELD, CALIF.
A comprehensive analytical model of rotorcraft
aerodynamics and dynamics. Part 1: Analysis
development
[AD-A076812] p0529 880-28296

A comprehensive analytical model of rotorcraft
aerodynamics and dynamics. Part 2: User's manual
[NASL-TN-81163] p0529 880-28297

Calculation of three-dimensional unsteady
transonic flows past helicopter blades
[AD-A077271] p0642 880-33356

AVIATION RESEARCH AND DEVELOPMENT COMMAND, ST.
LOUIS, MO.
Cost analysis of a helicopter transmission and
drive train
[AD-A080516] p0305 880-21322

Development and validation of a combined rotor
fuselage induced flow field computational method
[AD-A071656] p0431 880-25296

A comprehensive analytical model of rotorcraft
aerodynamics and dynamics. Part 3: Program manual
[AD-A071104] p0529 880-28298

Investigation of helicopter wire strike
protection concepts
[AD-A086857] p0568 880-30285

Aerodynamic characteristics of three helicopter
rotor airfoils sections at Reynolds number from
modal scale to full scale at Mach numbers from
0.15 to 0.90

(AD-A086857) p0568 880-30285

(AD-A071104) p0529 880-28298

(AD-A071656) p0431 880-25296

(AD-A080516) p0305 880-21322
The VC-14 upper surface blown flap: A unique control surface

New remotely piloted vehicle launch and recovery concepts. Computer program listing.

Incandescence lamp life under random vibration

New remotely piloted vehicle launch and recovery concepts. Volume 1: Analysis, preliminary design and performance/cost trade studies.

A JMD performance model for the E-3A

PIPSI/Navy rapid evaluation of propulsion system effects for the Navy gas turbine engine code

An improved method for the solution of threedimensional leading edge vortex flows

Evaluating and selecting the preferred air breathing weapon system

Hybridized polymer matrix composites

BOEING CO., SEATTLE, WAS.

BOEING CO., PHILADELPHIA, PA.

Two-dimensional wind-tunnel tests of a NASA supercritical airfoil with various high-lift systems. Volume 1: Data analysis

Two-dimensional wind-tunnel tests of a NASA supercritical airfoil with various high-lift systems. Volume 2: Test data


BOEING CO., WICHITA, KANS.

Jet engine datacomtable test cell exhaust system phase: Coanda/refraction noise suppression concept. advanced development

Jet engine class C test cell exhaust system phase: Coanda/refraction noise suppression concept-advanced development

Evaluation of the crack gage concept for monitoring aircraft flow growth potential, Volume 2

Evaluation of the crack gage concept for monitoring aircraft flow growth potential, Volume 1: Technical discussion

Developing, mechanizing and testing of a digital active flutter suppression system for a digitized E-52 wind-tunnel model

BOEING COMMERCIAL AIRPLANE CO., BRENTWOOD, TAH.

BOEING COMMERCIAL AIRPLANE CO., SHATTucks, WASH.

Analysis of transonic flow about harmonically oscillating airfoils and wings

Analysis of transonic flow about harmonically oscillating airfoils and wings

Upper surface blowing noise of the NASA-Ames quiet short-haul research aircraft

Fault-tolerant system optimization

A multi-grid code for 3-D transonic potential flow about axisymmetric inlets at angle of attack

BOEING VERTOL CO., PHILADELPHIA, PA.

Helicopter canopy internal reflection investigation

Analysis: wind correlation with theory of rotor lift-limit test data

CI-46 composite rotor blade flight test data. Volume 3: Plotted forward rotor blade chord, torsion and absolute loads

Synthesis of rotor test data for real-time simulation

CORPORATE SOURCE INDEX

[AD-A076511] p0223 880-18035

[AD-A077475] p0236 880-19066

[AD-A083172] p0480 880-26304

[AD-A085279] p0486 880-27280

[AD-A086378] p0487 880-27282


[NASA-CR-159159] p0183 880-17148

[NASA-CR-159168] p0200 880-17149

[NASA-CH-3279] p0486 N80-27280

[NASA-CB-159126] p0086 N80-13986

[NASA-CB-152319] p0628 N80-32337

[NASA-CB-159333] p0655 B80-34219


[NASA-CR-159155] p0252 880-15966

[NASA-PAPER 80-0109] p0510 880-45545

[NASA-PAPER 80-0109] p0510 880-45545

[NASA-PAPER 80-1064] p0361 880-36002

[NASA-PAPER 80-1064] p0361 880-36002

[NASA-CR-152311] p0222 880-18029
The accelerometer methods of obtaining aircraft air combat maneuvering performance measurement CL-600 challenger unsteady aerodynamics in turbomachinery advanced restraint system modeling direct force control and testing aerodynamic and acoustic investigations of axial flow fan and compressor blade rows, including three-dimensional effects analysis of experiments on the effects of jet plumes on pressure distribution over a cylindrical afterbody at transonic speeds advanced restraint system modeling. Calspan advanced technology center, buffalo, N.Y. Implicit model following and parameter identification of unstable aircraft identification of flexible aircraft from flight data treestle wind tunnel study design criteria for optimal flight control systems tests of an improved rotating stall control system on a 3-65 turbojet engine basic studies of rotating stall in axial flow compressors aerospace and acoustic investigations of axial flow fan and compressor blade rows, including three-dimensional effects analysis of experiments on the effects of jet plumes on pressure distribution over a cylindrical afterbody at transonic speeds advanced restraint system modeling.
ILLUSTROBICS (1842BD), SCOTT AFB, H.
ELECTRO-HEAT APPLICATIONS, INC., UDBQOBBQOB, AtBDQOBBQDE, R. HEX.
DTBABICS-TECBBOLOGY, IBC.,'TOBBABC8. CALIF.
DTTBC BRGIBBEBIBG, ISC., BDBII8GTOB BBACB, CALX!.
DTBABICS BBSBABCH COBP., VILRIRGTOB, BASS.
DIBABIC COHTB01S, ISC., DAITOB, OHIO.
DBEYFOSS-PBLLBAB COBP., STABFOBD, CORD.
CEEDOB, COHTB01S, ISC., PHILADELPHIA, PA.

State-of-the-art methods for computing the E-34 BMP-evaluation program

The allocation of runway slots by auction.

Atmospheric turbulence effects on aircraft noise

The allocation of runway slots by auction.

Review of turbofan-engine combustion and modern jet engines

Feasibility study of applying laminar flow control to an LTA vehicle

Application of the Estimation-Before-Modeling (EBM) system identification method to the high angle of attack/sideslip flight of the T-2C jet trainer aircraft. Volume 2: Simulation study using T-2C wind tunnel model data

Application of the Estimation-Before-Modeling (EBM) system identification method to the high angle of attack/sideslip flight of the T-2C jet trainer aircraft. Volume 3: Identification of T-2C aerodynamic stability and control characteristics from actual flight test data

Volume 3: Theory and technical issues for slot auction testing

Volume 2: Simulation for integration with dynamic tests of the logical elements of principal onboard computers

DREXEL UNIV., PHILADELPHIA, PA.
Significance of large scatter of composite properties to aircraft reliability

A singular perturbation analysis of minimum time long range intercept

Computer modeling of terrain effects on instrument landing system (ILS) glide slope systems

Radar approach control (RACPON) primary input power supply study

ELECTRO-STRUCTURE, ST. CLODD (FBABCE).

Reliability management of the avionics of a military strike aircraft

Design and simulation of a C3 system for surveillance purpose

Technical and operational factors concerning theliciation and introduction of a new microwave landing system for category 2

Reliability, Maintainability, and Cost Model (RMCM): User's guide

Software development for TOEN4DO: A case history from the reliability and maintainability aspect

Cruises-in-sailor-carrier navigation requirements

Computer modeling of terrain effects on instrument landing system (ILS) glide slope systems

Radar approach control (RACPON) primary input power supply study

ELECTRONIC DEMONSTRATION PROGRAM, ST. CLODD (FBABCE).

The significance of large scatter of composite properties to aircraft reliability

A singular perturbation analysis of minimum time long range intercept
CORPORATE SOURCE INDEX

engine test cell aerosol [**AD-A078779**] p0295 N80-20287
ENVIRONMENTAL PROTECTION AGENCY, ANN ARBOR, MICH.
Evaluation of HC (hydrocarbon) control
strategies for general aviation piston engines [**PB80-155393**] p0486 N80-26971
EUROCONTROL AGENCY, BRUSSELS (BELGIUM)
Data link: The key to improvements in
civil/military air traffic management? [**PBB-80-27330**] p0691 N80-27330
EUROPEAN SPACE AGENCY, PARIS (FRANCE).
The normal force on a cruciform missile at bank
angles of a deg and 45 deg [**ESA-TT-527-BFY**] p0078 N80-13022
Normal force derivative and center of pressure
movement due to Mach number on wing-body
combinations with triangular wings of the same
span and different aspect ratios at supersonic speeds [**ESA-TT-503-BFY**] p0082 N80-13059
Verification of the experimentally determined
laminar-turbulent transition on a swept wing
Construction problems for high Reynolds number
vital tunnel models [**ESA-TT-565**] p0072 N80-12101
The superposition of two-dimensional error
fields and its influence on flight safety of air
traffic [**ESA-TT-527-BFY**] p0078 N80-13022
Investigations on unsteady pressure distribution
measurements in rotating systems [**ESA-TT-503-BFY**] p0082 N80-13059
Flight testing of the buffeting behavior of
combat aircraft [**ESA-TT-523**] p0122 N80-14143
In flight tests of a parameter insensitive
transport controllers [**ESA-TT-565**] p0310 N80-21350
Calculation of the interference effects between
the engine wing and the base wing of a civil
and military transport aircraft by the vortex
lattice method [**ESA-TT-493**] p0346 N80-22272
Calculations of the turbulent boundary layer on
an infinite swept wing using a
three-dimensional mixing length model [**ESA-TT-534**] p0346 N80-22273
Investigations into an active vibration
isolation systems for helicopters with rigid
and elastic airframe modeling [**ESA-TT-534**] p0349 N80-22315
Civil component program wing section.
Predimensioning of a supercritical wing [**ESA-TT-542**] p0349 N80-22317
Control system design using vector-valued
performance criteria with application to the
time subsecond control rate reduction in parameter
insensitive control systems [**ESA-TT-564**] p0355 N80-22363
Noise generation by jet-engine exhaust deflection [**ESA-TT-553**] p0358 N80-23104
Pressure distribution measurements on wedges at
subsonic and transonic velocities [**ESA-TT-554**] p0360 N80-23267
Afterbody drag and base pressure measurements on a
body of revolution at angles of incidence up
to alpha = 25 deg at subsonic and transonic
Mach numbers [**ESA-TT-569**] p0360 N80-23268
On disturbance fields of owing singularities in
aerodynamic and acoustics [**ESA-TT-570**] p0360 N80-23269
The harmonically oscillating body in subsonic
flow: Effect of compressibility [**ESA-TT-584**] p0360 N80-22370
Investigations of the design of active vibration
isolation systems for helicopters with rigid
and elastic modeling of the fuselage [**ESA-TT-556**] p0363 N80-23300
Definition of a two-level control system for
nonlinear motion of an aircraft [**ESA-TT-614**] p0367 N80-23330
EXECUTIVE OFFICE OF THE PRESIDENT, WASHINGTON, D. C.
Carbon/graphite composite materials study [**PB80-175235**] p0555 N80-29402
NIXON RESEARCH AND ENGINEERING CO., LINDE, N.J.
Fundamental characterization of alternate fuel
effects in continuous combustion systems

FEDERAL AVIATION ADMINISTRATION

**Carbon slurry fuels for volume limited missiles** [**AP-108**] p0043 N80-11244
**Effect of refining variables on the properties**
and composition of JP-5 [**AD-A084710**] p0500 N80-27512
**Fuel property effects in stirred combustors** [**PBB-80-29306**] p0549 N80-29321
**FACILITY CHECKING SQUADRON (1666SH) (APCS), SCOTT**
**APB, ILL.**
**SLE25 initial evaluation report. Davis-Monthan**
**APB, Arizona, 16-20 November 1979 [**AD-A086635**] p090 N80-27320
**FAILURE ANALYSIS ASSOCIATES, PALO ALTO, CALIF.**
**Fracture and fatigue properties of 1Cr-Bo-v**
**bainitic turbine rotor steels [**PBB-80-11201**] p0903 N80-11201
**FAIRCHILD REPUBLIC CO., FARMINGDALE, N. Y.**
**Surface conforming thermal/pressure seal**
**system on the preflight briefing position at**
**the Chicago Flight Service Station [**AD-A088415**]** p0639 N80-33065
**Precise 1-band SAR tests** [**FA-D-800953**] p0645 N80-33388
**FEDERAL AVIATION ADMINISTRATION, WASHINGTON, D.C.**
**IFS aircraft forecasted by air route**
**traffic control center, fiscal years 1979-1990** [**AD-A070786**] p0026 N80-10153
**Wind shear hazard definition for a wide body jet**
**[PAAD-79-90] p0046 N80-11715
**Installation criteria for the Approach Lighting**
**System Improvement Program (ALSIP)**
**[AD-A070076]** p0082 N80-13057
**Cooperative evaluation of firefighting foam agents**
**[AD-A074940]** p0063 N80-13253
**Reflection cracking of bituminous overlays for**
**airport pavements: A state of the art**
**[AD-A073488]** p0122 N80-14144
**Report on the FAA task force on airport**
**separation assurance. Volume 2: Concept**
**description [**AD-A077713**] p0177 N80-17050
**Airport activity statistics of certificated**
**route air carriers [**AD-A076719**] p0181 N80-17089
**Field impact evaluation report on the Electronic**
**Tabular Display Subsystem (ETABS)**
**[AD-A070086]** p0185 N80-17357
**Report on the task force on aircraft separation**
**assurance, appendices [**AD-A077713**] p0222 N80-18017
**Airborne radar approach system flight test**
**experiment [**AD-A077700**] p0234 N80-19054
**Nondestructive evaluation of airport pavements.**
**Volume 2: Operational manual for PAVBER**
**[AD-A079940]** p0245 N80-19130
**Global positioning system for general aviation:**
**Joint FAA-BASA Seminar**
**[NASA-TR-81017] p0304 N80-21299
**Engineering and development program plan: En**
**route control, Program 12**
**[AD-A082871]** p0416 N80-24287
**Discrete address beacon system** [**AD-A089535**] p0495 N80-27355
**Integrated Noise Model (INM). Version 2.**
**User's guide**

C-17
The criticality of engine exhaust simulations on V/STOL model-measured ground effects

Optimization of computer automated ultrasonic inspection system

Fastener hole quality, volume I

V/STOL propulsion-induced aerodynamics hover calculation method

In-service inspection of advanced composite aircraft structure

Advanced design concepts and practices in the F-16 mission computer software

Study for conceptual design of VEO, VTOl exhaust system design

Advanced catalytic combustors for low pollutant emissions, phase II

Scale model performance test investigation of exhaust system mixes for an Energy Efficient Engine /E3/ propulsion system

Analytical study of the effects of wind tunnel turbulence on turbofan rotor noise

Airbreathing propulsion component technologies

A model for helicopter guidance on spiral trajectories

Quiet Clean Short-haul Experimental Engine (QCSEE) acoustic and aerodynamic tests on a scale model over-the-wing thrust reverser and forward thrust nozzle

Quiet Clean Short-haul Experimental Engine (QCSEE) aerodynamic and performance

Quiet Clean Short-haul Experimental Engine (QCSEE) Over-the-Wing (OTW) engine acoustic design

Quiet Clean Short-haul Experimental Engine (QCSEE) Over-the-Wing (OTW) graphite/PMM cox development

Demonstration of short haul aircraft aft noise reduction techniques on a twenty inch (50.8 cm) diameter fan, volume 3

Quiet Clean Short-haul Experimental Engine (QCSEE) Over-the-Wing (OTW) design report

Quiet Clean Short-haul Experimental Engine (QCSEE) turboprop engine performance of a 50.8 cm (20 inch) diameter 1.34 PB variable pitch fan with core flow

Quiet Clean Short-haul Experimental Engine (QCSEE) preliminary under the wing flight propulsion system design analysis report

Quiet Clean Short-haul Experimental Engine (QCSEE) propulsion-induced aerodynamics hover calculation method

Quiet Clean Short-haul Experimental Engine (QCSEE) software generation

Quiet Clean Short-haul Experimental Engine (QCSEE) front mount

Quiet Clean Short-haul Experimental Engine (QCSEE) Aerodynamics and performance

Quiet Clean Short-haul Experimental Engine (QCSEE) Under-the-Wing (UTW) engine composite nacelle test report, Volume 2: Aerodynamic and aeromechanical performance

Quiet Clean Short-haul Experimental Engine (QCSEE) composite fan frame subsystem test report
Preliminary design of composite wing-box structures for global damage tolerance

Dynamics of oscillating airfoils in oscillating free-streams

Effects of axisymmetric contractions on turbulence of various scales

Adaptive allocation of decisionmaking responsibility between human and computer in multitask situations

Scaling wake-particle interactions for aerial applications research

Description and report on the calibration of an unsteady flow wind tunnel, part 1. The unsteady lift generated on an airfoil at moderate incidence to a flow containing streaming oscillations, part 2

Mathematical modelling of gas-turbine combustion chambers

Some recent trends in aircraft flutter research

Remarks on simulation, Objectives/areas of use/possibilities/limitations: An overview

Air-to-air engagement simulation

Fire control for air-to-air gunnery in high performance fighter aircraft

The use of computer aided design methods in airborne systems evaluation

Analysis and identification of subsynchronous vibration for a high pressure parallel flow centrifugal compressor

Transient effects on a stalled airfoil in a pulsed flow: Comparison with results from a similar airfoil undergoing horizontal shaking

Wind tunnel and free flight model identification experience

Assessment of operational automated guideway systems-AERTRANS, phase 2

Pollution by aircraft traffic. Pollution forecast model in the vicinity of airports. Application to various airports: Delft and Bolsay-en-France

The development of passive Doppler techniques in 1855/TSL and their applications to ballistic and aerodynamic measurements

Airport obstacle maps

On the use of vibration self-damping materials in the manufacture of parts for rotating machinery

INSTITUTE FOR DEFENSE ANALYSES, ARLINGTON, VA. Cost-effectiveness of flight simulators for military training

INSTITUTE FOR TELECOMMUNICATION SCIENCES, BOULDER, COLO.

Comparison of measured data with IF-77 passenger flow model predictions

INSTITUTE OF AVIATION MEDICINE, PABBROUGH (ENGLAND).

Real-time simulation: An indispensable but underused evaluation technique

INSTITUTE OF GAS TECHNOLOGY, CHICAGO, ILL.

Development of gas turbine fuels and combustion: An overview

INTERACTION RESEARCH CORP., SPRINGIELD, ILL.

In-flight simulation: An investigation of factors affecting aircraft passenger attention to safety information presentations

INTERTECHNICS, INC., DAYTON, OHIO.

Digital Avionics Information System (DAIS): Mission software

INTERTECHNICS, INC., HUNTSVILLE, ALA.

SSSC-2 operating system design requirements specification

INDIAN INST. OF TECH., KANPUR.

Some recent trends in aircraft flutter research

INDUSTRIEANLAGEN-BAUGESELLSCHAFT R.B., OTTOBUNN (WEST GERMANY).

Remarks on simulation, Objectives/areas of use/possibilities/limitations: An overview

INSTITUT DE MECAQUE DES FLUIDES DE NARBES (FRANCE).

Effect of axisymmetric contractions on turbulence of various scales

INSTITUT DE RECHERCHE DE TRANSPORTS, BRON (FRANCE).

Wind tunnel and free flight model identification experience

INSTITUT DE RECHERCHE DES TRANSPORTS, BRON (FRANCE).

Pollution by aircraft traffic. Pollution forecast model in the vicinity of airports. Application to various airports: Delft and Bolsay-en-France

INSTITUT FRANCO-ALLEMAND DE RECHERCHES, ST. LOUIS (FRANCE).

The development of passive Doppler techniques in 1855/TSL and their applications to ballistic and aerodynamic measurements

INSTITUT FUR AEROKRAFTE GEOPHYSIK, FRANKFURT AN MAEN (WEST GERMANY).

Airport obstacle maps

INSTITUT NATIONAL DES SCIENCES APPLIQUES, LYON (FRANCE).

On the use of vibration self-damping materials in the manufacture of parts for rotating machinery

JET PROPULSION LAB., CALIFORNIA INST. OF TECH., PASADENA.

Aerobraking and aerocapture for planetary missions

Noise generation by a lifting wing/flap combination at Reynolds numbers 2.8 x 10 to the 6th

INVESTIGATION OF FACTORS AFFECTING AIRCRAFT PASSENGER ATTENTION TO SAFETY INFORMATION PRESENTATIONS

IRGOSA, LONGBORO (ITALY).

Effects of axisymmetric contractions on turbulence of various scales

IRGOSA, LONGBORO (ITALY).

Effects of axisymmetric contractions on turbulence of various scales
JOHNS HOPKINS UNIV., BALTIMORE, MD.
Ultrasonic and acoustic emission detection of fatigue damage
[AD-A079277] p0310 N80-21510

JOHNS HOPKINS UNIV., BALTIMORE, MD.
Minimizing the cost of operating aircraft on multistep tours
[AD-A064312] p0593 N80-31160

JOHNS HOPKINS UNIV., LAUREL, MD.
Advanced missile technology. A review of technology improvement areas for cruise missiles
[ADA-CR-3167] p0022 N80-10103

JOHNS-HOPKINS NUS CORP., DENVER, CO.
Heat reclamation from flight simulators
[AD-A007158] p0004 N80-26334

JOHNS-HOPKINS NUS CORP., DENVER, CO.
Heat reclamation from flight simulators: Summary
[AD-A007295] p0066 N80-31615

JOINT INST. FOR ADVANCEMENT OF FLIGHT SCIENCES,
HANOVER, VA.
Noise from a vibrating propeller
[AI A-PAPEB 80-1011] p0339 A80-35969

JOHNS HOPKINS UNIV., BALTIMORE, MD.
A review of cyclic frequency noise prediction technology with emphasis on two current methods for time domain calculations
[AD-A086756] p0567 A80-87656

JOHNS HOPKINS UNIV., BALTIMORE, MD.
Effect of a flexibly mounted store on the flutter speed of a wing
[AD-A073554] p0078 N80-13029

KANSAI AEROSPACE CORP., BLOOMFIELD, CONN.
A study of the AUTO finite element program for application to aircraft overpressure vulnerability
[AD-A074726] p0169 N80-16056

KANSAI AEROSPACE CORP., BLOOMFIELD, CONN.
The VIBRA-9 subsonic aerodynamic nuclear gust alleviation code
[AD-A081722] p0359 N80-23256

KANSAI AEROSPACE CORP., BLOOMFIELD, CONN.
Design criteria for dry lubricated flight control bearings
[AD-A071322] p0031 N80-10228

KANSAI AEROSPACE CORP., BLOOMFIELD, CONN.
Design assessment of advanced technology lightweight, low-cost mission-configured gondola modules
[AD-A078559] p0078 N80-13029

KANSAS AVIATION, HORNELL, MASS.
An evaluation of the ADTRAN finite element program for application to aircraft overpressure vulnerability
[AD-A074726] p0169 N80-16056

KANSAS UNIV., LAWRENCE.
The VIBRA-9 subsonic aerodynamic nuclear gust alleviation code
[AD-A081722] p0359 N80-23256

KANSAS UNIV., LAWRENCE.
Tradeoff between picture element dimensions and noncoherent averaging in side-looking airborne radar
[AD-A073253] p0053 A80-14949

KANSAS UNIV., LAWRENCE.
Structural parameters that influence the noise reduction characteristics of typical general aviation materials
[AI A-PAPEB 80-0038] p0092 A80-18028

KANSAS UNIV., LAWRENCE.
Effect of winglets on performance and handling qualities of general aviation aircraft
[AI A-PAPEB 80-1670] p0472 A80-63314

KANSAS UNIV., LAWRENCE.
Noise reduction characteristics of general aviation type single-pass windows
[AI A-PAPEB 80-1670] p0472 A80-63317

KANSAS UNIV., LAWRENCE.
The development of the DAST 1 remotely piloted research vehicle for flight testing an active flutter suppression control system
[AD-A078657] p0070 N80-12083

KANSAS UNIV., LAWRENCE.
The quasi-vortex-lattice method for wings with edge vortex separation
[AD-A073253] p0214 N80-14052

KANSAS UNIV., LAWRENCE.
Comparison of theoretically predicted lateral-directional aerodynamic characteristics with full-scale wind tunnel data on the ALT IV airplane
[AI A-PAPEB 151250] p0417 N80-24295

KANSAS UNIV., LAWRENCE.
An analytical study of effects on aerodynamic characteristics on control effectiveness
[AI A-PAPEB 151250] p0241 N80-24232

KANSAS UNIV., LAWRENCE.
A computer program for calculating aerodynamic characteristics of low aspect-ratio wings with partial leading-edge separation
[AI A-PAPEB 151250] p0277 N80-26256

KARLSKRONA UNIV. (SWEDEN)
Classification of operating conditions of turbomachines from solid bore sound
[AD-A064280] p0130 N80-25202

KAY AND ASSOCIATES, INC., MOUNT PROSPECT, I11.
Aerodynamics/strategic support including V/STOL, LAND, and instrument repair
[AD-A1077660] p0239 N80-19087

KEFENRO INTERNATIONAL, INC., HARPSTOR, VA.
The development of the structural concepts for hypersonic cruise vehicles
[AI A-PAPEB 80-0407] p0162 A80-22950

KELCO REDUCERS, INC., NEWINGTON, NJ.
Aircraft control by propeller cyclic blades
[AI A-PAPEB 80-1090] p0313 N80-21941

KELCO REDUCERS, INC., NEWINGTON, NJ.
The noise from a vibrating propeller
[AI A-PAPEB 80-1090] p0313 N80-21941

KEL ROYAL DUTCH AIRLINES, AMSTERDAM (Netherlands).
The use of AIDS data at KLM
[AD-A085525] p0503 N80-28153

KLOCKNER-HUBELOE-DUEN A.G., OBERKURZWE (WEST GERMANY).
Fatigue at high temperatures: Examination of the behavior of gasturbine casting materials also in simultaneous temperature and strain cycles
[AI A-PAPEB 80-2344] p0368 N80-23444

KORE STEEL LTD. (JAPAN).
A mathematical model for the separation of gust data on the ATLIT airplane
[AD-A080525] p0557 N80-29713

KORE UNIV. (JAPAN).
Evaluation of instability forces of labyrinth seals in turbines or compressors
[AD-A080525] p0557 N80-29715

KOREN (RICHARD H.), NEWPORT NEWS, VA.
Height of spray produced by vertical takeoff and landing (VTOL) aircraft
[AD-A073099] p0039 N80-11075

KOREN (RICHARD H.), NEWPORT NEWS, VA.
Conceptual study of modifying an existing fighter for V/STOL capability and combat maneuvering enhancement
[AD-A087657] p0633 N80-32380

LABORATORIUM FUR BETRIEBSFESTIGKEIT, DARMSTADT
(WEST GERMANY).
Review of investigations into aeronautics related fatigue Federal Republic of Germany
[AD-A018422] p0129 N80-11075

LABORATORIUM FUR BETRIEBSFESTIGKEIT, DARMSTADT
(WEST GERMANY).
The analysis of measured surface loads as a basis for the derivation of acceptable load limits for military aircraft components
[AI A-PAPEB 151250] p0175 N80-17038

LABORATORIUM FUR BETRIEBSFESTIGKEIT, DARMSTADT
(WEST GERMANY).
On the fatigue life evaluation of jointed specimens undergoing load transfer with regard to stress concentration
[AI A-PAPEB 151250] p0186 N80-17519

LABORATORIUM FUR BETRIEBSFESTIGKEIT, DARMSTADT
(WEST GERMANY).
Mathematical model for the separation of gust and maneuver loads of civil aircraft
[AI A-PAPEB 151250] p0230 N80-19838

LE GANSER TELEPHONIE, TRAPPES (FRANCE).
Using a language developed for aircraft simulators
[AD-A087878] p0255 N80-19033

LEAR SINGLES, INC., GRAND RAPIDS, MICH.
Feasibility study for integrated flight trajectory control fighter
[AD-A085014] p0591 N80-30314

LEAR SINGLES, INC., SANTA MONICA, CALIF.
A comparison of flight and simulation data for three automatic landing system control laws for the augmentor wing jet STOL research airplane
[AD-A085014] p0591 N80-30314
As assessment of power system vulnerability to release of carbon fibers during commercial aviation accidents

A review and analysis of fiber counting methods

A high accuracy flight profile determining system

Development of advanced avionics systems

Zero-length, slotted-lip inlet for subsonic military aircraft

Influence of interface on composite failure

Lightning and Transients Research Inst.

Susceptibility of avionics to lightning indirect effects

Protection of aircraft avionics from lightning indirect effects

Lightning effects on aircraft: A cockpit perspective

Improved test methods for determining lightning-induced voltages in aircraft

The Aircraft Reply and Interference Environment Simulator (ARIES). Volume 3: Programmer's manual

The Aircraft Reply and Interference Environment Simulator (ARIES). Volume 1: Principles of operation

The Aircraft Reply and Interference Environment Simulator (ARIES). Volume 2: Appendices to the principles of operation

Optical measurements of degradation in aircraft boundary layers

Surveillance performance measurements of the SSR mode of the discrete address beacon system

Generation of the Discrete Address Beacon System (DABS) network coverage maps

Discrete Address Beacon System (DABS) installation and siting criteria

Discrete Address Beacon System (DABS) description and functional description

Remote sensing of turbine engine gases

Alternate waveforms for a low-cost civil global positioning system receiver

Assessment of risk due to the use of carbon fiber composites in commercial and general aviation

Assessment of risk arising from electrical effects associated with the release of carbon fibers from general aviation aircraft fibers

An assessment of the risk arising from electrical effects associated with carbon fibers released from commercial aircraft fibers

Characteristics of internal and jet-noise radiation from a multi-lobe, multi-tube supersonic inlet design
The effects of ground wall-jet characteristics on fountain upwash flow formation and development

V/STOL equivalent systems analysis

Chemical characterization and quality control for an adhesive

Aircraft windup experience from atmospheric electricity hazards

Lightning test criteria for aircraft avionics systems

Lightning testing for aircraft avionics systems

McDonnell Douglas Corp., St. Louis, MO

Effect of tip vortex structure on aircraft noise due to blade-vortex interaction

Numerical flow field program for aerodynamic heating analysis. Volume 1: Equations and results


The USAF stability and control digital Datcom. Volume 3: Plot module

McDonnell-Douglas Corp., Long Beach, Calif.

Cargo Logistics Airlift Systems Study (CLASS).

McDonnell-Douglas Electronics Co., St. Charles, MO

Development of panel methods for subsonic analysis and design

McDonnell-Douglas Research Labs., St. Louis, MO

Unsteady transonic flows in a two-dimensional swept diffuser

Mechnical Technology, Inc., Latham, N. Y.

Design of elastomer dampers for a high-speed flexible rotor

Riesheussich-Bollag-Bollag G.B.B., Hamburg (West Germany)

Some investigations concerning the effects of gaps and vortex generators on elevator efficiency and of landing flap sweep on aerodynamic characteristics

An Automatic Fault Identification System (AFIS)

Winds tunnel flutter investigations
Flight flutter testing  p0065 80-12011
Failure detection, isolation and indication in highly integrated digital guidance and control system  p0066 80-12012
Investigation of the oscillatory and flight behavior of fighter systems in relation with atmospheric turbulence  p0112 80-14027
Wind tunnel investigation of controls for DF on a fighter-type configuration of higher angles of attack  p0142 80-15166
Computational aerodynamic design tools and techniques used at fighter development  p0300 80-21261
External store flutter suppression with active controls  p0309 80-23151
Parameters affecting aircraft performance on runways in bad condition  p043a 80-25328
System, airspace, and capacity requirements for future ATC-systems  p0491 80-27328
The Tornado all-weather high-speed low-level system  p0594 80-31306
High angle of attack characteristics of different fighter configurations  [MB-BF-1443(0) ] p0114 80-14058
Excitation and analysis technique for flight flutter tests  [MB-BF-1446(0) ] p0122 80-14140
Stability and control aspects of the CCT-F104G  [MB-BF-1447(0) ] p0122 80-14141
Interactive aided design system for aircraft dynamic control problems  p0301 80-21274
Interactive design system for aircraft dynamic control problems  [MB-FS-324/S/PD/11] p0463 80-26329
HESSESCHNITZ-BOELKOW G.B.B.H., BUCHEN (WEST GERMANY).
Dynamic environments and test simulation for qualification of aircraft equipment and external stores  p0280 80-19092
HESSESCHNITZ-BOELKOW G.B.B.H., OTTOBOH (WEST GERMANY).
A theoretical investigation of the shock location on an axisymmetric body and on a two dimensional airfoil in transonic flows affected by axial pressure gradients and shifts in pressure level  [MBB-FS-124/S/PB/9] p0587 80-30283
REAL PROPERTIES COUNCIL, INC., NEW YORK.
MICHIGAN UNIV., ANN ARBOR.
Performability evaluation of the SIFT computer  p0390 80-38043
The effect of local parameters on gas turbine emissions  [AIAA PAPER 80-1290] p0901 80-39006
Trajectories optimization in hypersonic flight  [NASC-82-162846] p0232 80-19206
ELCO INTERNATIONAL, INC., HUNTINGTON BEACH, CALIF.
Avionics and controls in review  p0263 80-29469
State of the art for digital avionics and controls, 1978  p0111 80-14018
EXHIBIT OF DEPFHECH, LONDON (ENGLAND).
The integrated management of reliability and maintainability in procurement  p0252 80-19558
Computer simulation model of the logistic support system for electrical engineering test equipment  p0252 80-19560
Design to life cycle costs interaction of engine and aircraft  p0598 80-31304
Main computer software for the MCA TORNADO  p0612 80-32136
MINNESOTA UNIV., MINNEAPOLIS.
Active flutter suppression using Linear Quadratic Gaussian theory  [AIAA 80-1758] p0510 80-45546
ROGERY SERVICES, INC., WASHINGTON, D.C.
Inferred climatology for U.S. airports  [AIAA-800407] p0293 80-20987
MISSISSIPPI STATE UNIV., MISSISSIPPI STATE.
A study of stall deterrent systems for general aviation aircraft  [AIAA 80-1562] p0514 80-45861
An approximate factorization solution of the Mavier-Stokes equations for transonic flow using body-fitted coordinates with application to NASA 644010 airfoils  p0529 80-28307
MISSISSIPPI STATE UNIV., STATE COLLEGE.
Full scale visualization of the wing tip vortices generated by a typical agricultural aircraft  [NASA-CR-162796] p0220 80-17992
MISSOURI UNIV., COLOMBIA.
Inherent error in asynchronous digital flight controls  [AD-A082622] p0436 80-25346
MISSOURI UNIV., KIRKWOOD.
On sound transmission into a stiffened cylindrical shell with rings and stringers treated as discrete elements  p0620 80-52723
Sound transmission into a lashed isotropic cylindrical shell  p0620 80-52724
MITEE CORP., BEDFORD, MASS.
The application of modeling and simulation to the development of the E-3A  p0254 80-18023
JTEDS: An integrated communications navigation and identification system, and its potential for air traffic management  p0493 80-27343
MITEE CORP., MCLEAN, VA.
Evaluation of the potential for reduced longitudinal spacing on final approach  [AD-A076434] p0169 80-16049
Opportunities analysis of potential advanced rotor systems separation standards  [AD-A081479] p0361 80-23281
Procedural feasibility of reduced spacing under NWS operations with applications to Atlanta and O'Hare  [AD-A081480] p0362 80-23287
Preliminary computer sizing estimates for Automated En Route AFC (ARAC)  [AD-A082628] p016 80-29288
FAA integrated noise model validation. Phase 1: Analysis of integrated noise model calculations for air carrier flyovers  [AD-A081426] p0502 80-27842
Discrete address beacon system/automated traffic advisory and resolution service/air traffic control operational system description  [AD-A085180] p0532 80-28337
HORAS VW RESEARCH CORP., DAVTON, OHIO.
Assessment of the flammability of aircraft hydraulic fluids  [AD-A076512] p0183 80-17227
Integral aircraft fuel tank leak classification  [AD-A080168] p0634 80-32388
MORGAN SECONCDCUKTOR, INC., GARLAND, TEX.
GE-SI supersonic flir window  [AD-A078771] p0257 80-19948
Development of high temperature resistant ceramic parts for gas turbines  [BMT-FP-79-09] p0366 80-23324
Mode control: A flexible control concept for military aircraft engines  p0482 80-26319
The effect of viewing time, time to encounter, and practice on perception of aircraft separation on a cockpit display of traffic information
[NASA-TR-81173]  p0224 880-18038
V/STOL/BD avionics system flight-test data on a VH/1B helicopter
[NASA-TR-78591]  p0225 880-18047
Ames Research Center publications: A continuing bibliography, 1978
[NASA-TR-78617]  p0231 880-18995
Analysis of fuel-conservative curved decelerating approach trajectories for powered-lift and CTOL jet aircraft
[NASA-TR-1650]  p0231 880-19022
Workshop on Aircraft Surface Representation for Aerodynamic Computation
[NASA-TR-81170]  p0232 880-19025
Application of the concept of dynamic trim to automatic landing of carrier aircraft
[NASA-TP-1512]  p0234 880-19126
Pilot evaluation of configuration management system concepts during transition to the landing approach for a powered-lift STOL aircraft
[NASA-TR-11146]  p0245 880-19127
On the nonlinear deformation geometry of Euler-Bernoulli beams
[NASA-TR-1556]  p0297 880-20619
An acceptable role for computers in the aircraft design process
[NASA-TR-11146]  p0298 880-21246
Use of advanced computers for aerodynamic flow simulation
[NASA-TR-81196]  p0299 880-21257
Three-dimensional interactions and vertical flows with emphasis on high speeds
[NASA-TR-81169]  p0302 880-21286
An experimental evaluation of a helicopter rotor section designed by numerical optimization
[NASA-TR-78622]  p0303 880-21287
A new algorithm for horizontal capture trajectories
[NASA-TR-81186]  p0347 880-22297
Conceptual studies of a long-range transport with an upper surface blowing propulsive lift system
[NASA-TR-81196]  p0358 880-23249
Low-fre flow over delta wings at supersonic speeds
[NASA-TR-81187]  p0358 880-23250
Operations manual: Vertical Motion Simulator (VMS) 5.0
[NASA-TR-81180]  p0362 880-23295
Static calibration of a two-dimensional wedge nozzle with thrust vectoring and spanwise blowing
[NASA-TR-81161]  p0365 880-23317
Comparison of calculated and measured model rotor loading and wake geometry
[NASA-TR-81189]  p0413 880-24262
A candidate V/STOL research aircraft design concept using an S-2A aircraft and 2 Pegasus 11 engines
Wind-tunnel tests of the XV-15 tilt rotor aircraft
[NASA-TR-81177]  p0417 880-24294
Equations for determining aircraft motions for accident data
[NASA-TR-78609]  p0432 880-25306
Large-scale wind-tunnel tests of inverting flaps on a STOL utility aircraft model
[NASA-TR-81176]  p0432 880-25318
Optimized laser turrets for minimum phase distortion
[NASA-TR-81189]  p0439 880-25600
Summary of all cycle II.5 shear and boundary layer measurements, aerodynamics
[NASA-TR-81189]  p0439 880-25609
A computer program to generate two-dimensional grids about airfoils and other shapes by the use of Poisson equation
[NASA-TR-81198]  p0477 880-26266
Head-up display in the non-precision approach
[NASA-TR-81177]  p0477 880-26266
Reduction of nitric oxide emissions from a combustor
[NASA-CF-DAC-1918-1-2]  p0479 880-26298
Experimental studies of scale effects on oscillating airfoils at transonic speeds
[NASA-TR-1532]  p0799 880-26298

C-30
Friction characteristic of steel skids equipped with skegs on a lakebed surface

Landing approach airframe noise measurements and analysis

Wing-tunnel/flight correlation study of aerodynamic characteristics of a large flexible supersonic cruise airplane (28-70-1).

A comparison between characteristics predicted from wind-tunnel measurements and those measured in flight

Design of a non-linear adaptive filter for suppression of shuttle pilot-induced oscillation tendencies

Wind tunnel investigation of an airfoil data system for a large subsonic aircraft

Development and flight test results of an autotrottle control system at Mach 3 cruise

Portable device for use in starting air-start units for aircraft and having cable lead testing capability

System for use in conducting wake investigation for a wing in flight

Flight research techniques utilizing remotely piloted research vehicles

Calculation of the transient motion of elastic airfoils forced by control surface motion and gusts

Use of nose cap and fuselage pressure orifices for determination of air data for space shuttle orbiter below supersonic speeds

Multiple pure tone elimination strut assembly

The aerodynamic airfoil research aircraft

Estimation of the accuracy of dynamic flight-determined coefficients

Stall/spin flight results for the remotely piloted spin research vehicle

Experience with an adaptive stick-gas system to reduce pilot-induced oscillation tendencies

A summary of an in-flight evaluation of control system performance time delays during landing using the P-8D drone airplane

Low order equivalent models of highly augmented aircraft determined from flight data using maximum likelihood estimation

Determination of an oblique wing aircraft's aerodynamic characteristics

Application of high-alpha control system concepts to a variable-sweep fighter airplane

Improved Sun-sensing guidance system for loading tests of a wing structure for a

Application of high-alpha control system

A summer of an in-flight evaluation of control system lead testing capability

Shuttle orbiter landing loads with model description and correlation with ALT flight data

Complementary cross-slot phased array antenna for On-orbit

Simultaneous use of nose cap and fuselage pressure orifices for use in starting air-start units for aircraft and having cable leading testing capability

Parametric study of the Orbiter rollover using an approximate solution

Surface conforming thermal/pressure seal

Orbiter landing loads with model description and correlation with ALT flight data

Performance uncertainties on the Shuttle Orbiter

Development of a vortex-lift design method and application to a slender maneuver-wing configuration

Hybrid vortex method for lifting surfaces with free-vortex flow

A general approach for the prediction of aerodynamic characteristics of arbitrary bodies at supersonic speeds

A spin-recovery parachute system for light general aviation airplanes

Durability of foam insulation for LH2 fuel tanks of future subsonic transports

Helicopter/NSRA in-flight escape system - Component qualification

Stress-intensity factors for two symmetric corner cracks

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. GODDARD SPACE FLIGHT CENTER, GREENBELT, MD. Air deployment of satellite-tracked drifters

Flight research techniques utilizing remotely piloted research vehicles

Data and analysis procedures for improved aerial applications mission performance

An improved sensing element for skin-friction balance measurements

Propulsion/airframe integration considerations for high altitude hypersonic cruise vehicles

Studies of leading-edge thrust phenomena

Assessment of analytic methods for the prediction of aerodynamic characteristics of arbitrary bodies at supersonic speeds

A spin-recovery parachute system for light general aviation airplanes

Durability of foam insulation for LH2 fuel tanks of future subsonic transports

Helicopter/NSRA in-flight escape system - Component qualification

Stress-intensity factors for two symmetric corner cracks

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. LABORATORY FOR Tucker, VA. Real-time data acquisition system for the NASA Langley transonic dynamics tunnel

The role of technology in air transportation faces the fuel situation

Assessment of airframe noise

Examination of the flap-lag stability of rigid articulated rotor blades

Data and analysis procedures for improved aerial applications mission performance

An improved sensing element for skin-friction balance measurements

Propulsion/airframe integration considerations for high altitude hypersonic cruise vehicles

Studies of leading-edge thrust phenomena

Assessment of analytic methods for the prediction of aerodynamic characteristics of arbitrary bodies at supersonic speeds

A spin-recovery parachute system for light general aviation airplanes

Durability of foam insulation for LH2 fuel tanks of future subsonic transports

Helicopter/NSRA in-flight escape system - Component qualification

Stress-intensity factors for two symmetric corner cracks

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.Flight Research Center, Edwards, Calif.

Estimation of the accuracy of dynamic flight-determined coefficients

Stall/spin flight results for the remotely piloted spin research vehicle

Experience with an adaptive stick-gas system to reduce pilot-induced oscillation tendencies

A summary of an in-flight evaluation of control system performance time delays during landing using the P-8D drone airplane

Low order equivalent models of highly augmented aircraft determined from flight data using maximum likelihood estimation

Determination of an oblique wing aircraft's aerodynamic characteristics

Application of high-alpha control system concepts to a variable-sweep fighter airplane

A general approach for the prediction of aerodynamic characteristics of arbitrary bodies at supersonic speeds

A spin-recovery parachute system for light general aviation airplanes

Durability of foam insulation for LH2 fuel tanks of future subsonic transports

Helicopter/NSRA in-flight escape system - Component qualification

Stress-intensity factors for two symmetric corner cracks

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. LYNDON B. JOHNSON SPACE CENTER, HOUSTON, Tex.

Effects of aerodynamic heating and TPS thermal performance uncertainties on the Shuttle orbiter

Hydrazine monopropellant reciprocating engine development

Navigation and meteorological error equations for some aerodynamic parameters

Aircraft identification experience

Air speed and attitude probe

Improved Sun-sensing guidance system for

Loading tests of a wing structure for a

Application of high-alpha control system

A summer of an in-flight evaluation of control system lead testing capability

Shuttle orbiter landing loads with model description and correlation with ALT flight data

Development and analysis of the Learjet 54/55 airfoil data system for a large subsonic aircraft

Portable device for use in starting air-start units for aircraft and having cable leading testing capability

System for use in conducting wake investigation for a wing in flight

Flight research techniques utilizing remotely piloted research vehicles

Calculation of the transient motion of elastic airfoils forced by control surface motion and gusts

Use of nose cap and fuselage pressure orifices for determination of air data for space shuttle orbiter below supersonic speeds
Investigation of trailing-edge noise

Thermodynamic analyses of structural concepts for hypersonic cruise vehicles

Full scale aircraft simulation with cryogenic tunnels and status of the National Transonic Facility

Control system techniques for improved departure/spin resistance for fighter aircraft

Multirate cargo aircraft options and configurations

The National Transonic Facility - Status and operational planning

Automatic control of NASA Langley's 0.3-meter cryogenic test facility

A study of nonadiabatic boundary-layer stabilization time in a cryogenic tunnel for typical wing and fuselage models

Development of test methods for scale model simulation of aerodynamic characteristics in the NASA Langley Vortex Facility

A comparison of experimental and theoretical turbulence reduction from screens, honeycomb and honeycomb-screen combinations

Additional flow quality measurements in the Langley Research Center 8-Foot Transonic Pressure Tunnel

The influence of wing, fuselage and tail design on rotational flow aerodynamics data obtained beyond maximum lift with general aviation configurations

Exploratory investigation of the effects of vortex bursting on the high angle-of-attack lateral-directional stability characteristics of highly-swept wings

The potential for damage from the accidental release of conductive carbon fibers from aircraft composites

Graphite-epoxy panel compression strength reduction due to local impact

Operational implications of some NASA rotary wing induced velocity studies

Evaluation of finite element formulations for transient conduction forced-convective analysis

Development of a metric half-span model for interference free testing

Noise radiation from the side edges of flap

Cockpit Display of Traffic Information /CDTI/

Design of slotted transonic wind tunnels for supersonic flow development

Some unique characteristics of supersonic cruise vehicles and their effect on airport community noise

Technology requirements and readiness for very large aircraft

Modern fluid dynamics of subsonic and transonic flight

Modern fluid dynamics of supersonic and hypersonic flight

Current and projected use of carbon composites in United States aircraft

Preliminary design of composite wing-box structures for global damage tolerance

Wing/store flutter with nonlinear pylon stiffness

Integrated thermal-structural finite element analysis

A collection of formulas for calculation of rotating blade noise - Compact and noncompact source results

Noise transmission and control for a light, twin-engine aircraft

Prediction of noise constrained optimum takeoff procedures

An overview of NASA's propeller and rotor noise research

Output feedback non-linear decoupled control, synthesis and observer design for manoeuvring aircraft

Aircraft noise-induced building vibrations

A model for broadband jet noise amplification

Comparison of stack plume properties obtained from aircraft and spacecraft measurements

Investigation of advanced thrust vectoring exhaust systems for high speed aircraft lift

Careful numerical study of airflow near asymmetric external conical corners

Numerical solution of the Navier-Stokes equation for a family of three-dimensional corner geometries

Complete viscous/fideld solutions about a blunt parabolic body in a supersonic stream

Analysis of nonlifting and lifting airfoils in transonic flow by parametric differentiation

Prediction and measurement of turbulent aerodynamic trailing edge flows

A simplified shock-fitting solution to a supersonic internal corner flowfield

Effects of discontinuous drooped wing leading-edge modifications on the spinning characteristics of a low-wing general aviation airplane

Full-scale wind-tunnel investigation of the effects of wing leading-edge modifications on the high angle-of-attack aerodynamic characteristics of a low-wing general aviation airplane

Determination of an angle of attack sensor correcion for a general aviation airplane at large angles of attack as determined from wind tunnel and flight tests

Aerodynamic design optimization of fuel-efficient high-performance, single-engine, business airplane

Effect of winglets on performance and handling qualities of general aviation aircraft

An analysis of thrust-induced effects on the longitudinal aerodynamics of STOL fighter configurations

Sensitivity of the optimal preliminary design of a transport to operational constraints and performance index

Location and propagation of shock associated noise from supersonic jets
microwave landing system [NASA-TP-1574]

Application of modified profile analysis to function testing of the notion/no-mention issue in an aircraft ground-handling simulation [NASA-TP-1560]

Analytical investigation of the landing dynamics of a large airplane with a load-control system in the main landing gear [NASA-TP-1555]

Exploratory study of the effects of wing-leading-edge modifications on the stall/spin behavior of a light general aviation airplane [NASA-TP-1589]

Effects of related static longitudinal stability on a single-stage-to-orbit vehicle design [NASA-TP-1594]

Experimental study of acoustic loads on an upper-surface-blown STOL airplane configuration [NASA-TP-1577]

Sonic-boom wave-front shapes and curvatures caused by aircraft-flyover noise [NASA-TP-1576]

A computerized method for calculating flutter characteristics of a system characterized by two degrees of freedom [NASA-TP-80153]

Preliminary test results of a flight management algorithm for fuel conservative descents in a time-based metered traffic environment [NASA-TP-80199]

Simulator study of stall/post-stall characteristics of a fighter airplane with relaxed longitudinal static stability [NASA-TP-1538]

Altitude response of several airplanes during landing approach [NASA-TP-80186]

Effect of spanwise gust variations [NASA-TP-80160]

Applications of diffraction theory to aeroacoustics [NASA-TP-80160]

Experimental and numerical results of sound scattering by a body [NASA-TP-80145]

Computer program to prepare airfoil characteristic data for use in helicopter performance calculations [NASA-TP-78627]

A parametric wing design study for a modern laminar flow wing [NASA-TP-80158]

Control considerations for CCV fighters at high angles of attack [NASA-TP-80158]

A study of partial coherence for identifying interior noise sources and paths on general aviation aircraft [NASA-TP-80197]

Wind-tunnel/flyt correlation study of aerodynamic characteristics of a large flexible supersonic cruise airplane (TB-701)

2. Extrapolation of wind-tunnel data to full-scale conditions [NASA-TP-1515]

Means for controlling aerodynamically induced twist [NASA-CASE-LAB-12175-1]

Design considerations for obtaining 200-knot test velocities at the aircraft landing loads and traction facility [NASA-TP-80096]

Summary of aircraft results for 1978 southeastern Virginia urban plume measurement study of oxides, nitrogen oxides, and methane [NASA-TP-80146]

Comparison of analytical and flight test identified aerodynamic derivatives for a tandem-rotor transport helicopter [NASA-TP-1581]

Interaction of a two-dimensional strip boundary layer with a three-dimensional transonic swept-wing code [NASA-TP-78640]

Effect of sweep and aspect ratio on the longitudinal aerodynamics of a spanloader wing in-axis-out-of-ground effect [NASA-TP-80199]

The aerial relay system: An energy-efficient solution to the airport congestion problem [NASA-TP-80208]

Flight performance of the TCV B-737 airplane at Jorge Newberry Airport, Buenos Aires, Argentina using TESB/MLS guidance [NASA-TP-80223]

Terminal-configured vehicle program: Test facilities guide [NASA-TP-80211]

Earlier test experience with Cockpit Displayed Traffic Information (CDTI) [NASA-TP-80221]

Thrust augmented spin recovery device [NASA-TP-80203]

The potential for damage from the accidental release of conductive carbon fibers from burning composites [NASA-TP-80213]

Composite components on commercial aircraft [NASA-TP-80231]

Static pressure orifice system testing method and apparatus [NASA-CASE-LAB-12269-1]

Improved tire/wheel concept [NASA-CASE-LAB-11696-2]

Publications in acoustic and noise control from NASA Langley Research Center during 1990-1979 [NASA-TP-80211]

Computer programs for estimating civil aircraft economics [NASA-TP-80196]

Aeroacoustic wind-tunnel tests of a light twin-boom general-aviation airplane with free or shrouded-pusher propellers [NASA-TP-80203]

Military aircraft and missile technology at the Langley Research Center: A selected bibliography [NASA-TP-80204]

A flight investigation of blade section aerodynamics for a helicopter main rotor having NHL-7 airfoil sections [NASA-TP-80166]

Identification evaluation methods [NASA-TP-80146]

A theoretical analysis of simulated transonic boundary layers in cryogenic-nitrogen wind tunnels [NASA-TP-1531]

Design considerations for attaining 250-knot test velocities at the aircraft landing dynamics facility [NASA-TP-80222]

Development of the cryogenic tunnel concept and application to the US National Transonic Facility [NASA-TP-80146]

Assessment of Carbon Fiber Electrical Effects [NASA-CP-2119]

Approach to the assessment of the hazard [NASA-TP-80146]

Release of carbon fibers from burning composites [NASA-TP-80146]

Dissemnation, resusension, and filtration of carbon fibers [NASA-TP-80146]

Large-scale fiber release and equipment exposure experiments [NASA-TP-80146]

Perspective on the results [NASA-TP-80146]

Trends in reliability modeling technology for fault tolerant systems [NASA-TP-80146]

Technology requirements and readiness for very large aircraft [NASA-TP-80146]
Low-speed airspeed calibration data for a single-engine research-support aircraft
[BASA-TP-1701] p0628 880-32333
A new theory for rapid calculation of the ground pattern of the incident sound intensity produced by a maneuvering jet airplane
[BASA-TP-1702] p0628 880-32334
Flight performance of the TCV B-737 airplane at Montreal/Dorval International Airport, Montreal, Canada, using TESS/TEC guidance
[BASA-TP-1703] p0630 880-32361
Preliminary evaluation of time and distance spacing between a cockpit displayed target
[BASA-TP-1704] p0630 880-32362
Some aerodynamic considerations related to wind tunnel model surface definition
[BASA-TP-1705] p0633 880-32376
A preliminary assessment of the impact of 2-D exhaust-noise geometry on the choking of a hypersonic aircraft with top-mounted ramjet propulsion
[BASA-TP-1706] p0636 880-32397
Low-pressure solder for joining large cryogenic structures
[BASA-TP-1707] p0637 880-32400
Aeroelastic analysis of a wing-elevator cove with variable leakage
[BASA-TP-1708] p0638 880-32410
Loads calibrations of strain gage bridges on the National Transonic Facility and flight performance of the TCV B-737 airplane at
[BASA-TP-1709] p0640 880-33340
Development and test results of a flight management algorithm for fuel conservative descents in a time-based metered traffic environment
[BASA-TP-1710] p0644 880-33393
Conceptual model of turbulent flameholding for scramjet combustors
[BASA-TP-1711] p0647 880-33400
Longitudinal stability and control in wind shear with energy heigh rate feedback
[BASA-TP-1712] p0648 880-33409
Plumes response to simulated disturbances of the model and fan inlet guide vanes in a transonic tunnel
[BASA-TP-1713] p0649 880-33416
Electronic equipment vulnerability to fire released carbon fibers
[BASA-TP-1714] p0651 880-33419
A compendium of computational fluid dynamics at the Langley Research Center
[BASA-TP-1715] p0652 880-33716
Predicted airframe noise levels
[BASA-TP-1716] p0655 880-34218
J9D-7A (SP) jet engine performance
Composite vail concept for high temperature turbine shrouds: Survey of low modulus strain isolator materials
Computerized systems analysis and optimisation of aircraft engine performance, weight, and life cycle costs
High speed turboprops for executive aircraft, potential and recent test results
Aerodynamic performances of three fan stator designs operating with rotor having tip speed of 337 meters per second and pressure ratio of 1.54. Relation of analytical code calculations to experimental performance
Performance of single-stage axial-flow transonic compressor with rotor and stator aspect ratios of 1.19 and 1.26 respectively, and with design pressure ratio of 2.05
Analysis of uncertainties in turbine metal temperature predictions
Steady-state performance of J85-21 compressor at 100 percent of design speed with and without interstage rake blockage
Application of superalloy powder metallurgy for aircraft engines
Effects of time porosity on the fatigue behavior of a powder metallurgy superalloy
Similarity tests of turbine vanes, effects of ceramic thermal barrier coatings
Operating characteristics of high-speed, jet-lubricated 35-millimeter-bore ball bearing with a single-outlet-land-guided cage
Noise suppression due to annulus shaping of conventional coaxial nozzle
An improved prediction method for the noise generated in flight by circular jets
General Aviation Propulsion
Comparison of elastic and elastic-plastic structural analyses for cooled turbine blade airfoils
An overview of NASA research on positive displacement general aviation engines
Positive displacement type general aviation engines: Summary and concluding remarks
NARA propulsion technology program
High-speed-propeller wind-tunnel aeracoustic results
Advanced propulsion aerodynamic analyses
Preliminary study of advanced turboprop and turboshaft engines for light aircraft
Aerodynamic performance of a shock-swallowing high-tip-speed fan (QF-13)
Forward acoustic performance of a sprayed ceramic coatings for gas turbine engines
State-of-the-art Silicon materials p054 880-29358
Single-stage electrohydraulic servosystem for actuating on airflow valve with frequencies to 500 hertz [NASA-TP-1678] p054 880-29369
Damping in ring seals for compressible fluids p057 880-29716
Reverse thrust performance of the QC82 variable pitch turbofan engine [NASA-TR-81558] p060 880-31399
The NASA high-speed turboprop program [NASA-TR-81561] p060 880-31402
Improved components for engine fuel savings [NASA-TR-81577] p060 880-31402
Performance deterioration of commercial high-bypass ratio turbofan engines [NASA-TR-81556] p063 880-32398
The energy efficient engine project [NASA-TR-81566] p063 880-32395
Low-pressure performance of annular, high-pressure (20 atm) high-temperature (2480 K) combustion system [NASA-TP-1713] p063 880-32396
Experimental performance and analysis of 15.04-centimeter-diameter, radial-inflow turbine with work factor of 1.126 and thick blading [NASA-TR-1730] p064 880-33410
Effect of cage design on characteristics of high-speed-jet-lubricated 35-millimeter-bore ball bearing [NASA-TR-1732] p065 880-33749
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.

MARSHALL SPACE FLIGHT CENTER, HUNTSVILLE, ALA. Flight through thunderstorm outflows p010 880-11648
Pilot-aircraft system response to wind shear [FADA-80-1569] p051 880-45868
Fiscal year 1979 scientific and technical reports, papers and presentations [NASA-TR-70425] p0174 880-17014
F-104 low-gravity calibration tests for materials processing in space precursory experiments [NASA-TR-70278] p0436 880-25355
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.

PASADENA OFFICE, CALIF. Frequency-scanng particle size spectrometer [NASA-CSE-80-13606-2 p0229 880-18364
Interferometric locating system [NASA-CSE-80-14171-1] p0630 880-32359
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.

WALLEYS FLIGHT CENTER, WALLOWS ISLAND, VA. The Surface Contour Radar, a unique remote meaning instrument p0192 880-26085
The role of satellite altimetry in climate studies [NASA-TP-1570] p0174 880-16676
Remarks on the transonic flow past oscillating airfoils [NASA-TR-77092-0] p0065 880-12009
The influence of simulator motion wash-out filters on the performance of pilots when stabilizing aircraft attitude in turbulence [NASA-TR-78022-0] p0162 880-17094
Additional information about PALTROS [NASA-TR-79056-0] p0186 880-17508
Aspects of flight test instrumentation p0240 880-15098

C-40

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, CONTD.

CORPORATE SOURCE INDEX

Analysis of aircraft performance stability and control measures p0240 880-19099
The cryogenic wind tunnel: another option for the European Transonic Facility p0266 880-19180
A flight simulation investigation on the feasibility of curved approaches under MLS guidance p0256 880-19844
Comparison of the similar location system and the MLS inertia measuring system [HASL-TP-79026-U] p0347 880-22303
Summary of data required for the AGARD CRM activity standard aerelastic configurations - two-dimensional configurations [NASA-TR-79011-U] p0361 880-23273
Failure analysis in aviation [NASA-TR-80-8008-U] p0362 880-23285
Narada calibration evaluation with a computer-controlled avionics-data acquisition system p0430 880-25287
Determination of the safety in a Borth Atlantic organized track system with reduced lateral separation p0492 880-27322
Boundary layer measurements on a two-dimensional wing with flap and a comparison with calculations p0501 880-27665
Ranges and critical values of advance ratio for blade/vortex interaction patterns of [WPL-TR-9030-U] p0559 880-31360
A simulation investigation on the feasibility of curved approaches under Microwave landing System (MLS) guidance [NASA-TR-78038-U] p0601 880-31380
Helicopter-flight qualification testing [NASA-TR-78027-U] p0603 880-31391
Significance of a rotor blade failure for fleet operation, inspection, maintenance, design and certification [NASA-TR-7807-U] p0603 880-31392
Environmental testing of coatings for gas turbines [NASA-TR-7807-U] p0605 880-31404
Evaluation and comparison of nondestructive service inspection methods [NASA-TR-7805-U] p0611 880-31895
NATIONAL AEROSPACE LAB., COPENHAGEN. Post-flight take-off path of jet lift VTOL aircraft, log no. C3558 p0038 880-11066
Cable hazards from a large external fuel fire adjacent to an aircraft fuselage [AD-A073670] p0043 880-11050
Voice data entry in air traffic control [AD-A072695] p0043 880-11273
OBS single sensor performance test plan [AD-A072695] p0069 880-12080

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, CONTD.

C-40
Lubricating oil analysis for wear monitoring. Citations from the NTIS data base.

Inertial navigation and guidance. Citations from the NTIS data base.

Omega navigation system. Citations from the NTIS data base.

Hydrogen use as a fuel. Citations from the NTIS data base.

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, ANNAPOLIS, MD.

Spectrum resource assessment in the 2.7-2.9 GHz band phase 2: Radar signal processing.

Spectrum resource assessment in the 2.7 to 2.9 GHz band. Phase 2: LSR deployment in the Los Angeles area and San Francisco areas.

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, BOULDER, COLO.

Potential use of high frequency data transmission for oceanic air traffic control improvement.

Theoretical feasibility of digital communication over ocean areas by high frequency radio.

NATIONAL TRANSPORTATION POLICY STUDY COMMISSION, WASHINGTON, D. C.

New aircraft technology: Report on the Farnborough International Air Show.

Utilization concerns of potential transportation fuels.

NATIONAL TRANSPORTATION SAFETY BOARD, WASHINGTON, D. C.


Aircraft accident reports: Brief forcast, US civil aviation issue number 9, 1979 accidents.

Light twin-engine aircraft accidents following engine failures.

General aviation accidents: Postcrash fires and some severe fire for use in air traffic control.

NATIONAL WEATHER SERVICE, SPRING, MD.

Nowcast and short-range (0-2 hour) forecasts of thunderstorms and severe convective weather.

NAVAL ACADEMY, ANNAPOlis, MD.

Microprocessor control of low speed V/STOL flight.

NAVAL AEROSPACE MEDICAL RESEARCH LAB., FREDERICK, MD.


NAVAL AIR DEVELOPMENT CENTER, WARRINGTON, PA.

A computerized VSTOL/small platform landing dynamics investigation model.

Visual accommodation responses in a virtual image environment.

The aerodynamics of a jet in a crossflow.

Feasibility testing of a body inflatable Bladder (BIB) restraint device.

Design and test of a boron - aluminum high temperature wing.

Proceedings of a Workshop on V/STOL Aircraft Aerodynamics, Volume 1.

E-3A navigational computer system real-time environmental simulator.

Modeling the human operator: Applications to system cost effectiveness.

Predicting field of view requirements for V/STOL aircraft approach and landing.

Estimation of dynamic windblast pressure on aircraft landing systems.

Statistical review of counting accelerometer data for Navy and marine fleet aircraft.

NAVAVIONIC dynamic flight simulator design and multipurpose crew station concept design and development plan.

Current and projected use of carbon composites in United States aircraft.

The ZFV-12A Thrust-Augmented Sing (TAB) JA-6A circulation control wing contractor flight test.

Determination of jet fuel thermal deposit rate on turbine flowmeters and their applications at the Turbine Lubricants test facility.

Effect of oxidizing fuels on aircraft fuel system elastomers and sealants.

Investigation of transient induced aerodynamics in a moving deck environment.

Development and testing of an automatic lap belt retraction and release system.

A time response approach to equivalent aircraft dynamics.

Inertial navigation and guidance. Citations from the NTIS data base.

Determination of the character of the lateral-directional motion of an airborne towing vehicle.

Effect of oxidizing fuels on aircraft fuel system elastomers and sealants.

Investigation of transient induced aerodynamics in a moving deck environment.

Design concept for fuel fire facility scale-down.

NAVAL AIR ENGINEERING CENTER, LAKEHURST, N.J.

Compiled list of data covering aircraft servicing facilities aboard aviation and amphibious aviation ships.

NAVAL AIR ENVIRONMENTAL CENTER, ThESSALONIKI, N. J.

Investigation of lubricant concepts applicable to future Navy aircraft propulsion systems.

Development of the full scale T66 test for specification MIL-L-23699 and MIL-2358 gas turbine lubricants.

Turbine flowmeters and their applications at the Naval Air Propulsion Center.

Determination of jet fuel thermal deposit rate using a modified JPTOT.

NAVAL AIR SYSTEMS COMMAND, WASHINGTON, D. C.

Current and projected use of carbon composites in United States aircraft.

The EFP-12A Thrust-Augmented Wing (TAW) prototype aircraft.

Designing on-condition tasks for naval aircraft.

Ceramics in rolling element bearings.

NAVAL AVIATION TEST CENTER, PATUXENT RIVER, MARYLAND.

Simulated Mission Endurance Test (SMET) for an aircraft engine to be used in a fighter/attack role.

JA-6A circulation control wing contractor flight demonstration.

CORPORATE SOURCE INDEX

C-42
NETHERLANDS ORGANIZATION FOR APPLIED SCIENTIFIC RESEARCH TNO, DELFT.

Failure analysis

p0539 880-28518

NEVADA UNIV., LAS VEGAS.

Two dimensional aerodynamic interference effects on oscillating airfoils with flaps in ventilated subsonic wind tunnels

[NASA-CR-3210] p0113 880-14047

NEW MEXICO UNIV., ALBUQUERQUE.

Hydrogen as a fuel. Citations from the International Aerospace abstracts data base

[NYS/P-79/0771/0] p0032 880-10397

Aircraft fuel. Citations from the International Aerospace Abstracts Data Base

[NYS/P-79/0764/5] p0033 880-10665

Internal navigation and guidance. Citations from the International aerospace abstracts data base

[NYS/P-79/0825/8] p0038 880-11064

Clear air turbulence. Citations from the International aerospace abstracts data base

[NYS/P-79/0910/7] p0170 880-16057

Predicting the fatigue life of flexible airfield pavements: A recommended approach

[AD-A0790767] p0423 880-26338

NEW YORK UNIV., B. Y.

Shockless airfoils for wings, compressors, and turbines

p0581 880-50311

NORTH CAROLINA STATE UNIV., RALEIGH.

Investigation of trailing-edge noise

p0161 880-23901

NORTHROP CORP., HAYWARD, CALIF.

Top inlet system feasibility for transonic-supersonic fighter aircraft applications

[AILA PAPPS 80-1809] p0512 880-45735

Effect of radial loading on crank growth. Volume 1: Technical summary

[AD-A07212] p0048 880-11513

Forebody vortex blowing: A novel control concept to enhance departure/spin recovery characteristics of fighter and trainer aircraft

[AD-A0815172] p0810 880-15172

Advanced FIFEIB assessment generalized mechanism requirements report

[AD-A07976] p0291 880-20263

P-3F Shark nose radar lightning test

p0313 880-21950

Transonic kernel function method for unsteady flow calculations using a unified linear pressure panel procedure

p0345 880-22267

Hybrid computer errors in engineering flight simulation

[AD-A081953] p0419 880-24307

System description and analysis. Part 1: Feasibility study for helicopter/VTOL wide-angle simulation image generation display system

[ASA-CR-152376] p0899 880-23793

Flow visualization study of the MiHAT BPH

[ASA-CR-163004] p0862 880-31381

Flow visualization study of the F-14 fighter aircraft configuration

[ASA-CR-163005] p0862 880-31382

NORTHROP CORP., LOS ANGELES, CALIF.

Plafecos control: The versatile surface for fighter aircraft

p061 880-33350

Applications of NASTRAN in gust response analysis at Northrop

p0427 880-24658

NORTHROP RESEARCH AND TECHNOLOGY CENTER, PALOS VERDES PENINSULA, CALIF.

Investigation of advanced prognostic analysis techniques

[AD-A073553] p0679 880-13032

NORTHEASTERN UNIV., HAVENSTON, ILL.

Factors affecting the retirement of commercial transport jet aircraft

[ASA-CR-152308] p0025 880-10148

Computer simulation of canopy-pilot response to bird-strike

[AD-A080122] p0304 880-21296

NOTRE DAME UNIV., IND.

Frequency dependent precompensation for dominance in a four input/output problem model

p0164 880-24242

Visualization of the laminar-turbulent transition in the flow over an airfoil using the smoke-wire technique

[AILA PAPPS 80-0921] p0199 880-26935

Experimental studies of the laminar separation bubble on a two-dimensional airfoil at low Reynolds number

[AILA PAPPS 80-1440] p0513 880-41062

Alternatives for jet engine control

[ASA-CR-16251] p0293 880-20273

O

OAK RIDGE NATIONAL LAB., TN.

Statistical techniques for automating the detection of anomalous performance in rotating machinery

[COFF-790035-2] p0084 880-13381

OFFICE NATIONAL DE RECHERCHES AERONAUTIQUES, PARIS (FRANCE).

Direct forces from flight testing

p0309 880-22139

Aerodynamic study of a combustion chamber with a view to its naval-empirical modelling

p0899 880-22795

Basic phenomenon of electrical discharges at atmospheric pressure

p0610 880-31754
Effect of winglets on performance and handling qualities of general aviation aircraft [AIAA PAPER 80-0070] p0472 A80-43314

Avoidance of debonding during manufacturing of composite materials [BASA-CB-3297] p0434 880-25330

Application of random time domain analysis to the design of an ultrasonic flaw detection system using the difference program [BASA-CB-16289] p0296 B80-20274

Jet transport performance in thunderstorm wind conditions [BASA-CB-159184] p0114 B80-14054

Technical analysis of the vortex flowfield in a slotted test section [PB-297681/9] p0075 B80-12635

Handling qualities of large flexible aircraft [AD-A080430] p0499 B80-27398

Jet decay rate effects on hover jet-induced loads [SASA-CB-162816] p0220 B80-17994

Optimization of computer automated ultrasonic inspection system [BASA-CB-3188] p0035 B80-11034


Aircraft emergency decisions: Cognitive and adaptive allocation of decision making.

Aircraft program for target background, and sky development and test of log-impact resistant general aviation icing flight test.

Data analysis methodology for day/night inflight F100 exhaust nozzle area control.

Transducers for engine control systems engine intake control design for advanced four method for evaluating aircraft take-off performance duct burner for variable cycle engine.

Shock wave thermomechanical processing of compressor blades.

Experimental evaluation of exhaust mixers for an Energy Efficient Engine.

As an experimental investigation of chemical profiling in a turbine vane cascade.

Development of improved-durability Plasma sprayed ceramic coatings for gas turbine engines.

Plume sprayed ceramic thermal barrier coatings for turbine vane platforms.

Performance of annular prediffuser-cooler systems.

The Energy Efficient Engine /E3/ advancing the state of the art.

Results from tests on a high work transonic turbine for an energy efficient engine.

JT9D-7A /SP/ jet engine performance deterioration trends.

Aero-acoustic tests of duct-burning turbofan exhaust nozzles.

Flight effects on the aero/acoustic characteristics of inverted profile annular nozzles.

Effect of time dependent flight loads on JT9D-7 performance deterioration.

Design, durability and low cost processing technology for composite fan exit guide vanes.

Expanded study of feasibility of measuring in-flight 747/JT9D loads, performance, clearance, and thermal data.

Some considerations of the performance of two honeycomb gas path seal material systems.

Core compressor exit stage study, 1: Aerodynamic and mechanical design characteristics of inverted profile coannular exhaust nozzles.

Manufacture of low carbon astronomy turbine disk shapes by hot isostatic pressing. Volume 2, project 1.

Development of improved high pressure turbine outer gas path seal components.

Performance deterioration based on existing (historical) data; JT9D jet engine diagnostics program.

Performance deterioration based on in-service engine data: JT9D jet engine diagnostics program.

Experimental aerodynamic and acoustic model testing of the Variable Cycle Engine (VCE) tested coaxial exhaust nozzle systems.

Experimental aerodynamic and acoustic model testing of the Variable Cycle Engine (VCE) tested coaxial exhaust nozzle systems: Comprehensive data report.

The broadened-specification fuele combustion technology program at Pratt and Whitney Aircraft.

Laser-optical blade tip clearance measurement systems.

Improved capabilities to detect incipient bearing failures.
PRINCETON UNIV., N. J.


Purdue Univ., Lafayette, Ind.


Purdue Univ., School of Science at Indianapolis, Ind.

Investigation of transonic flow in a cascade using an adaptive mesh [ATAA PAPER 80-1930] p0452 N80-11617

QUANTUM SYSTEMS CORP., Rockville, Md.

Optimum intensity setting of approach and runway light systems [NASA-CR-157548] p0168 N80-16046

QUEEN MARY COLLEGE, London (England)

Unsteady aerodynamics of two-dimensional spoilers at low speeds p0182 N80-15170 On the effects of gaps on control surface characteristics p0183 N80-15176 Some introductory concepts based on the unsteady flow about circular cylinders p0643 N80-33364 Sole of unsteady aerodynamics in aircraft response p0644 N80-33371

QUEENSGROVE COMMUNITY COLLEGE, RAYSHDE, N. Y.

Intercommunications in real time, redundant, distributed computer system [NASA-CR-163604] p0652 N80-33642

RADIO TECHNICAL COMMISSION FOR AERONAUTICS, Washington, D. C.


RAND CORP., Washington, D. C.

An approach to the life cycle analysis of aircraft turbine engines p0598 N80-31343

RATCHFORD CO., Bedford, Mass.

Guidance subsystems with position measurement for gliding airdrop systems [AD-A080730] p0414 N80-29274

RAZAK (KINGDOM), Malaysia


RCA GOVERNMENT COMMUNICATIONS SYSTEMS, Camden, N. J.

Solid state power controllers (ISEB-2A) p0349 N80-21679

REMEMCH, INC., HUNTSVILLE, Ala.


RENSSELAER POLYTECHNIC INST., Troy, N. Y.


Project filter holder. Tests on 25 mm dust filter holders [IG-TBO-F-1638] p0371 N80-23887 RESEARCH TRIANGLE INST., Durham, N. C.


RESEARCH TRIANGLE INST., RESEARCH TRIANGLE PARK, N. C.

Application of a ground based minicomputer system for real time, closed loop control of remotely piloted aircraft models used in stall/spin research [AD-A078338] p0276 N80-31018
The Engine Usage Monitor System (EUMS): An
Results from flight noise tests on a Viper
Aero-servo-elastic stability analysis
Design and test of a prototype scale ejector wing
Feasibility study of active control of a rotor
Development of flexible rotor balancing criteria
Mechanical behavior of airframe materials
Analyses and tests of the B-1 aircraft
Improved methods for predicting spectrum loading
Complementary cross-slot phased array antenna
OB-53C helicopter on band sight/designator
Flight verification of direct digital drive for
Investigation into corner separation within a
Use of computers in the aerodynamic design of
Fuselage-pylon-store interactions
The effects of general altimeter errors on
The use of sound absorbing walls to reduce
Fuselage-pylon-store interactions
Air Force Tornadoes
Visual signature analysis of a projected aircraft
The nuclear thermal effects on humidity
Saturation of composite materials
Experimental flight control of a flexible rotor
Pendulum tests of the rotor
Design and test of a prototype scale ejector wing
Improved methods for predicting spectrum loading
The equations of motion of an aircraft embracing
A suggestion as to a general derivation of the
The digital control system as part of an
Investigation into compressor aeroelastic
The use of strip theory in the dynamics of
Proof of the flutter analysis of a full-scale B-1
The effects of general errors on
Control system for a V-22 Osprey
The use of computers in the aerodynamic design of
Aerodynamic preliminary analysis system. Part
Aerodynamic characteristics of moving
An investigation of the geometry of the flow
Circular interference in wind tunnels
Aero-servo-elastic stability analysis
Aero-servo-elastic stability analysis
Aero-servo-elastic stability analysis
Wind tunnel measurement of lateral aerodynamic
Experimental techniques in unsteady aerodynamics
The use of strip theory in the dynamics of
Formulation of the equations of motion of a
The equations of motion of an aircraft
The equations of motion of an aircraft
Experimental techniques in unsteady aerodynamics
The use of strip theory in the dynamics of
time
Aerodynamic preliminary analysis system. Part
Aerodynamic preliminary analysis system. Part
Experimental techniques in unsteady aerodynamics
Some measurements of buffetting on an aeroelastic model of a slender wing aircraft [BAE-TB-79002] p0081 800-13055
The diffusion of water vapour in humid air into the adhesive layer of bonded metal joints [BAE-LIB-TBABS-2038] p0539 800-28047
A flutter-speed formula for wings of high aspect ratio p0139 800-15147
A survey of experimental data on the aerodynamic characteristics of controls, in the light of future needs p0139 800-15151
Some wind tunnel measurements of the effectiveness at low speeds of combined lift and roll controls p0140 800-15153
Holographic interferometry of carbon fiber reinforced plastic wingtips [BAE-TS-78058] p0076 800-17041
The application of a parametric method of fatigue load measurement to wings based on flight measurements on a light-weight F/A-18 [ABC-R/M-3836] p0179 800-17068
SESAIR: A system of equations for the simulation of a aircraft in a modular environment [BAE-TB-79008] p0179 800-17069
The identification of the flutter mechanism from a large-order flutter calculation [ABC-R/M-3832] p0181 800-17085
On interfacing structural information and loading data in aeroelastic analysis [ABC-R/M-3833] p0187 800-17521
Identification experience in extreme flight regimes p0241 800-19102
Contribution of photoelastic analysis to the study of turbo-engine components [BAE-TB-79031] p0242 800-19112
The role of HP in air-ground communications: An overview p0248 800-19373
HP communication to small low flying aircraft p0248 800-19374
Assessment of HP communications reliability p0249 800-19377
Simulation of a night vision system for low level helicopter operations p0255 800-19832
The use of computer based optimization methods in aircraft studies p0299 800-21247
A computer based system for structural design, analysis and optimization p0300 800-21265
Investigations of an active vibration isolation system for helicopters [BAE-LIB-TBABS-1993] p0305 800-21315
Engineering of control systems and implications on control law design p0308 800-21341
An investigation into the real gas effects of cryogenic nitrogen in inviscid homentropic flow [BAE-TM-1896] p0311 800-21611
A comment on the origin of endwall interference in wind tunnel tests of airfoils [BAE-TM-1816] p0346 800-22280
Aerodynamic characteristics of moving trailing-edge controls at subsonic and transonic speeds [BAE-TM-1830] p0347 800-22281
Wind tunnel measurements of the mean flow in the turbulent boundary layer and wake in the region of the trailing edge of a swept wing at subsonic speeds [BAE-TM-1830] p0415 800-24278
Performance of Omega R-field antennas recessed into airfoils [BAE-TM-79047] p0416 800-24290
Wind-shear encounters during visual approaches at night. A piloted simulator study [BAE-TM-79126] p0417 800-24291
SANDIA LABS., ALBUQUERQUE, N. M.
Aerodynamic design of an extended-range guided bomb
[LOU-C3719] p0076 N80-13023
Roll control of an attitude-controlled aerodynamic vehicle which has strong roll-yaw coupling.
[SAND-79-1400] p0022 N80-19038
SANTA CATARINA UNIV., FLORIDAPOLIS (BRAZIL).
Output feedback non-linear decoupled control synthesis and observer design for maneuvering aircraft
p0374 A80-36645
SCHOOL OF AEROSPACE MEDICINE, BROOKS AFB, TX.
Critical interfaces between environment and organisms in class A mishaps: A retrospective analysis
[AD-A087384] p0600 N80-31371
SCIENCE APPLICATIONS, INC., CANDOA PARK, CALIF.
APPRO Contractors Meeting on Air-Breathing Combustion Dynamics and Kinetics, 1979 Abstracts
[AD-A083651] p0497 N80-27367
SCIENCE APPLICATIONS, INC., IVITA, CALIF.
Hydrodynamic interference flow flight experiment design
[AD-A078861] p0233 N80-19044
SCIENCE APPLICATIONS, INC., LOS ANGELES, CALIF.
Application of parametric weight and cost estimating relationships to future transport aircraft
[SAnE PAPER 1292] p0105 A80-20637
Parametric study of helicopter aircraft systems costs and weights
[NASA-CR-152315] p0347 N80-22305
SCIENCE APPLICATIONS, INC., WOODLAND HILLS, CALIF.
Fundamental characterization of alternative fuel effects in continuous combustion systems
p0496 N80-27382
SCIENTIFIC RESEARCH ASSOCIATES, INC., GLASTONBURY, CONN.
Viscous flow in the region of a rounded trailing edge
[AD-A076586] p0233 N80-19045
SCIENTIFIC SYSTEMS, INC., CAMBRIDGE, MASS.
Aircraft trajectory optimization using singular perturbation methods
p0584 A80-51065
Global stability and control analysis of aircraft at high angles of attack
[AD-A084938] p0536 N80-28376
SEGRELLMENTO NAZIONALE ED AEREO S.P.A., FLORENCE (ITALY).
Development trends of airport surface traffic control radar
p0117 N80-14087
SELINIA S.P.A., BOME (ITALY).
Methodology for the evaluation of a radar site
p0115 N80-14067
Performance evaluation methods of a secondary radar network
p0115 N80-14068
Tracking algorithms for mono and multiradar
p0116 N80-14074
A distributed processing system for radar data presentation
p0116 N80-14075
Filtering of synthetic radar data
p0116 N80-14076
Visual displays for air traffic control data
p0116 N80-14077
Implementation of air traffic control radar receivers with fast Fourier transform processors
p0116 N80-14086
Antireflection techniques for detecting false tracks in air traffic surveillance with secondary radar
p0117 N80-14100
A study for development of methods for air traffic management
p0091 N80-27327
SINGULA, INC., TEMPE, ARIZ.
Aircraft crash survival design guide.
Volume 1: Aircraft crash environment and human tolerance
[AD-A084249] p0357 N80-28379
SHAKER RESEARCH CORP., BALLSTON LAKE, N. Y.
Radar-bearing dynamics technology design guide.
Part 4: Cylindrical roller bearings
[AD-A082355] p0400 N80-25662
Rotor-bearing dynamics technology design guide.
Part 5: Dynamic analysis of incompressible fluid bearings
[AD-A086160] p0539 N80-28725
Rotor-bearing dynamics technology design guide.
Part 1: Flexible rotor dynamics
[AD-A087086] p0611 N80-31802
SHEFFIELD UNIV. (ENGLAND).
The structure of eddies in turbulent flows.
Volumes 1-3
[AD-A076625] p0295 N80-20341
SIFEROSE AIRCRAFT, STRATFORD, CONN.
Ice-remote coating for disconnect switches
p0556 N80-29594
SINOVO RESEARCH CORP., ROOKSTOWN, N. J.
Avionics system architecture investigation (AVSAB II)
[AD-A0771743] p0040 N80-11100
SERO, INC., ROOKSTOWN, N. J.
Rotable device for use in starting air-start-units for aircraft and having cable lead testing capability
[NASA-CASE-PBC-1073-1] p0085 N80-26599
SIMULA, INC., TEMPE, ARIZ.
Aircraft crash survival design guide.
Volume 2: Aircraft crash environment and human tolerance
[AD-A082512] p0832 N80-25307
Aircraft crash survival design guide.
Volume 5: Aircraft postcrash survival
Control of the engines for the new Airbus family

Evolution of materials and associated technologies in aerospace material structures

Impact of modern materials on the development of helicopters

Using the computer to produce electric schematics

Development of self-streamlining flexible walled transonic test section

Direct effects of lighting on an aircraft during intentional penetrations of thunderstorms

Restoring essential flow and ignition properties concerning helicopters

Design of a simulator for studying the helicopter - SDVH

Effect of fuel molecular structure on soot formation in gas turbine combustion

Evaluation of JP-5 turbine fuel in the single cylinder cve 1790 diesel engine

The physical and chemical characterization of the military engine lubricant deposition mechanism of turbine engine lubricant deposition

Development of fire-resistant, low smoke generating, thermally stable end items for commercial aircraft and spacecraft using a basic polyside resin

Development and evaluation of processes for deposition of H/Cr-Al (MCrAl) coatings for gas turbine components

Study for incorporating time-synchronized approach control into the CH-47/7ALT digital navigation system

The logic of the electric flight control system experiment on the Concord

SOCIETY OF EXPERIMENTAL TEST PILOTS, LANCASTER, CALIF. P-59

SOLAR TURBINES INTERNATIONAL, SAN DIEGO, CALIF. Development of fire-resistant, low smoke generating, thermally stable end items for commercial aircraft and spacecraft using a basic polyside resin (NASA-CR-160576) p0356 880-22492

Development of ceramic nozzle section for small radial gas turbine

The logic of the electric flight control system experiment on the Concord

SOCIETY OF EXPERIMENTAL TEST PILOTS, LANCASTER, CALIF. P-59

SOLAR TURBINES INTERNATIONAL, SAN DIEGO, CALIF. Development of fire-resistant, low smoke generating, thermally stable end items for commercial aircraft and spacecraft using a basic polyside resin (NASA-CR-160576) p0356 880-22492

Development of ceramic nozzle section for small radial gas turbine

Generating, thermally stable end items for commercial aircraft and spacecraft using a basic polyside resin (NASA-CR-160576) p0356 880-22492

Development of ceramic nozzle section for small radial gas turbine

A study of the reinforcement required for composite aircraft operations with dust and rain erosion resistant coated metallic clads for helicopter rotors

Development of ceramic nozzle section for small radial gas turbine

Manufacturing process development for dust and rain erosion resistant coated metallic clads for helicopter rotors (NASA-CR-160576) p0356 880-22385

Direct effects of lighting on an aircraft during intentional penetrations of thunderstorms (NASA-CR-160576) p0356 880-22385

The logic of the electric flight control system experiment on the Concord (NASA-CR-160576) p0356 880-22385

SOCIETY OF EXPERIMENTAL TEST PILOTS, LANCASTER, CALIF. P-59

SOLAR TURBINES INTERNATIONAL, SAN DIEGO, CALIF. Development of fire-resistant, low smoke generating, thermally stable end items for commercial aircraft and spacecraft using a basic polyside resin (NASA-CR-160576) p0356 880-22492

Development of ceramic nozzle section for small radial gas turbine

Generating, thermally stable end items for commercial aircraft and spacecraft using a basic polyside resin (NASA-CR-160576) p0356 880-22492

Development of ceramic nozzle section for small radial gas turbine

A study of the reinforcement required for composite aircraft operations with dust and rain erosion resistant coated metallic clads for helicopter rotors (NASA-CR-160576) p0356 880-22385

Development of ceramic nozzle section for small radial gas turbine

Manufacturing process development for dust and rain erosion resistant coated metallic clads for helicopter rotors (NASA-CR-160576) p0356 880-22385
Forunal methods for achieving reliable software
Airborne aids for coping with low-level wind shear
Static charging effects on avionic systems
Designing low cost receivers for general aviation users

Assymetric trailing-edge flows at high Reynolds number
Analysis of electrical transients created by lightning
Asymmetric trailing-edge flows at high Reynolds number

Optimal washout for control of a moving base simulator
Strohal number influence on flight effects on jet noise radiated from convecting quadrupoles

STANFORD TELECOMMUNICATIONS, INC., MOUNTAIN VIEW, CALIF.

Designing low cost receivers for general aviation users

Static charging effects on avionic systems
Design for active flutter suppression and gust alleviation using state-space aerelastic modeling

STATE UNIT. OF NEW YORK, ALBANY.

Circuropular measurements of ozone, particles, and carbon monoxide from a commercial airliner

STATE UNIT. OF NEW YORK AT BUFFALO.

Design criteria for optimal flight control systems
Prototype development of a wind-tunnel mounted lift test system

STEERING SYSTEMS, INC., WASHINGTON, D.C.

An experimental study of multiple jet mixing

STATE UNIT. OF NEW YORK, ALBANY.

Circuropular measurements of ozone, particles, and carbon monoxide from a commercial airliner

STEERING INSTR. OF TECH., DETROIT, M. J.

Research on the flutter of axial turbomachine blading

PORTER'S program oblique in PL-format user's manual

STORE AND WEBSTER ENGINEERING CORP., BOSTON, MASS.

Hydroprocessing of light pyrolysis fuel oil for kerosene type jet fuel

STUTTGART (WEST GERMANY).

Design of supercritical compressor and turbine cascades with a numerical method considering axial velocity density ratio
Flow induced spring coefficients of labyrinth seals for application in rotor dynamics

SWEDISH AIR FORCE, STOCKHOLM.

Measurement of local skin friction and static pressure on a swept wing in flight

SYRACUSE UNIV., N. Y.

Oil whirl and critical instabilities in rotor-bearing systems

SYSTEMS AND APPLIED SCIENCES CORP., HARPON, VA.

Comparison of methods for prediction of transition by stability analysis

SYSTEMS CONTROL, INC., SANTA ANA, CALIF.

A new approach to active control of rotorcraft vibration

SYSTEBS RESEARCH LABS., INC., DAYTON, OHIO.

Development of a visual inspection technique (optical assessment of aircraft transparencies)

SYSTEBS RESEARCH LABS., INC., HUDSON, WASH.

Summary of theoretical and experimental investigations of vortex lift at high angles of attack

SYSTEBS TECHNOLOGY, INC., HAYBORNBE, CALIF.

A dynamic analysis of the motion of a low-wing, general aviation aircraft about its calculated equilibrium flat spin mode

Tassan engineering flight simulation validation, Part 1. Simulation requirements and simulator motion system performance

Tassan engineering flight simulation validation, part 2. Software user's guide

Development of VOTL flying qualities criteria for low speed and hover

Development of aerodynamic disturbance test procedures, volume 1: Executive summary

Practical optimal flight control system design for helicopter aircraft. Volume 1: Technical Report

SYSTEMS TECHNOLOGY, INC., BOULDER VIEW, CALIF.

NASA-CR-3275

p0367 880-23328

SYSTEMS TECHNOLOGY, INC., BOULDER VIEW, CALIF.

A compilation and analysis of helicopter handling qualities data. Volume 1: Data compilation

NASA-CR-3746

p0041 880-11097

Predicting field of view requirements for VSTOL aircraft approach and landing

p0257 880-19047

TACTICAL AIR COMMAND, Langley AF, VA.

F-4 radar altimeter aural warning

TAD-907870

p0040 880-11085

TECHNICAL UNIV. OF DENMARK, COPENHAGEN.

Effect of fluid forces on rotor stability of centrifugal compressors and pumps

558 880-29720

TECHNION - ISRAEL INST. OF TECH., Haifa.

Active controls for flutter suppression and gust alleviation in supersonic aircraft

ATAA PAPER 79-0792

p0438 880-40746

Allervation of the side force and the yawing moment acting on a slender cone-cylinder body at high angles of attack, using small jet injection at subsonic and transonic speeds

AD-A080317

p0803 880-21289

Azimuth observability enhancement during IFR in-flight alignment

F632-367

p0630 880-32360

TECHNISCHE HOCHSCHULE, AACHEN (WEST GERMANY).

High speed blade-vane interactions

p0073 880-12336

Collection and analysis of in service flight histories of the initiation of fatigue damage

[88W-PWMT-79-10]

Engine parameter trend analysis by LADAS 200: Possibilities and limitations

p0429 880-25277

Investigations on local fault detection at turbojet engines

p0429 880-25278

TECHNISCHE HOCHSCHULE, DELFT (HOLLAND).

Aviation safety and its improvement

p0222 880-18014

Aspects of flight test instrumentation

p0240 880-19098

Analysis of aircraft performance stability and control measures

p0240 880-19099

Some fundamental aspects of transport aircraft conceptual design optimization

p0299 880-21248

TECHNISCHE UNIVERSITAT, BREMEN (WEST GERMANY).

Localization of faults in jet engines by calculation of component characteristics

p0429 880-25279

Reduction of measured data and a method of early detection of sensor breakage

p0430 880-25283

APPLICATION OF THE SINS CONCEPT TO NAVY HELICOPTERS

p0327 A80-34652

TECHNISCHE UNIVERSITAT, BREMEN (WEST GERMANY).

Types of delta wing flow over delta wings

p0327 A80-34652

TECHNISCHE UNIVERSITAT, BREMEN (WEST GERMANY).

Application of the SINS concept to Navy helicopters

AD-A074801

p0126 A80-15030

TELEDYS(CONTINENTAL MOTORS, HICKSVILLE, N.Y.

A 150 and 300 kW lightweight diesel aircraft engine design study

[NASA-CR-3260]

p0292 880-20271

Design study: A 186 kW lightweight diesel aircraft engine

[NASA-CR-3261]

p0350 880-22326

The spark-ignition aircraft piston engine of the future

p0351 880-22337

Lightweight diesel aircraft engines for general aviation

p0352 880-22338

TELEDYS HEAT AERONAUTICAL CO., SAN DIEGO, CALIF.

Backup Flight control system for a highly maneuverable remotely piloted research vehicle

[68-80-1761]

p0511 A80-45548

Study of the feasibility aspects of flight testing an aerodynamically tailored forward swept research wing on a 96M-34F drone vehicle

[NASA-CR-159149]

p0027 880-10195

TELEDYS SYSTEMS CO., LOS ANGELES, CALIF.

Design approaches for GPS receiver/processors

p0304 880-21308

TENNESSEE TECHNOLOGICAL UNIV., COOKEVILLE.

Use of sensor functions in airfoil design optimization

[AD-A072636]

p0025 880-10139

Identification of noise sources in fan centrifugal fan rotors

p0299 880-18395

TENNESSEE UNIV., KNOXVILLE.

Prediction and measurement of turbulent aerodynamic trailing edge flows

[ATAA PAPER 80-1395]

p0452 A80-41599

Atmospheric turbulence simulation techniques with application to flight

p0559 880-29961

TENNESSEE UNIV., TULLahoma.

Pilot-aircraft system response to wind shear

p0516 A80-45868

Solute distribution of the vortices in a swirling flow in a gas turbine

[AD-806765]

p0593 880-30697

TENNESSEE UNIV. SPACE INST., TULLahoma.

Flight through thunderstorms outflow

p0110 880-11046

Aerodynamic analysis of a supersonic cascade vibrating in a complex mode

p0154 A80-45841

The analysis of wing-body combinations at moderate angles of attack

[AD-807428]

p0036 880-11040

Current research on aviation weather (bibliography), 1979

[88A-CR-3216]

p0125 880-14651

Meteorological turbulence simulation techniques with application to flight analysis

[AD-88-3309]

p0612 880-32025

TEXAS A&M UNIV., COLLEGE STATION.

A navigation algorithm for single channel low-cost GPS receiver

p0284 A80-23457

TEXAS A&M UNIV., KNOXVILLE.

Cross flow fan experiment development and finite element modeling

p0299 880-10098

The influence of ballistic damage on the aerelastic characteristics of lifting surfaces

[AD-A082536]

p0433 880-25322

Detailed design, fabrication and testing of an engineering prototype compensated pulsed alternator

[OC-EL-15213]

p0556 880-29595

A modeling technique for design and simulation of hydrostatic journal bearings

p0653 880-33745

TEXTRON BELL HELICOPTER, FORT WORTH, TEX.

Analysis of low-speed helicopter flight test data

[AD-8074181]

p0130 880-15079

Investigation of the crash-impact characteristics of advanced airframe structures

[AD-8075163]

p0179 880-17067

Improved maneuver criteria evaluation program

[AD-6080048]

p0348 880-22310

AN-15 high-survivable transmission systems

[AD-8080568]

p0348 880-22311

Rotorcraft flight simulation, computer program CS1. Volume 1: Engineer's manual

[AD-8079631]

p0348 880-22312

Rotorcraft flight simulation, computer program CS1. Volume 2: User's manual

[AD-8079632]

p0348 880-22313

Lateral controller protection concepts for helicopter components

[AD-8081420]

p0416 880-28284

Conceptual design of a helicopter composite tram tail boom

[AD-8081512]

p0532 880-28342

THERMAL TECHNOLOGY LABS., BUFFALO, N. Y.

Development of lightweight transformers for airborne high power supplies

[AD-8076215]

p0185 880-17366

THORSON-CSP, ANCEIL (FRANCE).

SINTAC-C TMA: Application of SINTAC-C in the terminal area, during landing and ground taxiing

p0936 880-27338
CORPORATE SOURCE INDEX

THOBSON-CSP, HALAFORD (FRANCE).
Methods used for discerning the reliability of military aircraft radar
Carbon fiber plume sampling for large scale fire tests at Dryway Proving Ground

THORSON-CSP, PARIS (FRANCE).
Reliability of high-brightness CRTs for airborne displays

TOKYO UNIV. (JAPAN).
Fluid forces on rotating centrifugal impeller with whirling motion

TOKYO UNIV., OHIO.
Identification and dual adaptive control of a turbojet engine

TOLEDO UNIV., OHIO.
Examination of the flap-lag stability of rigid articulated rotor blades
[NASA-CR-159210] p0054 A80-15123

Dispersion of sound in a combustion duct by fuel droplets and soot particles
[NASA-CR-159211] p0108 A80-20953

TORNTO UNIV., DOWNSVIEW (ONTARIO).
Research on the stability of air cushion systems
[NASA-CR-159212] p0219 N80-17985

TRANSPORTATION RESEARCH BOARD, WASHINGTON, D.C.
Aviation forecasting, planning, and operations
[PB80-153541] p0477 N80-26265

TRANSPORTATION SYSTEMS CENTER, CAMBRIDGE, MASS.
Airport ground access
[AD-A068679] p0298 N80-20284

Chicago monostatic acoustic vortex sensing system, Volume 1: Data collection and reduction
[AD-A076629] p0468 N80-27306

Analysis of expandability and modifiability of computer configuration concepts for ATC
Volume 1: Distributed concept
[AD-A084045] p0490 N80-27314

An investigation of laser lighting systems to assist landing
[AD-A077722] p0490 N80-27316

Enhanced Terminal Information Services (ETIS) utilizing the Discrete Address Beacon System (DABS) data link-concept description
[AD-A071205] p0401 N80-27319

Theoretical feasibility of digital communication over ocean areas by high frequency radio
[AD-A079426] p0500 N80-27568

Ground wind vortex sensing system calibration tests
[AD-A085647] p0542 N80-29259

Interference and noise in and adjacent to the
LORAN-C spectrum at airports
[AD-A086043] p0544 N80-29281

Visual configuration of voice takeoff clearance (VICOM) alternative study
[AD-A086060] p0545 N80-29282

Vortex advisory system, Volume 1: Effectiveness for selected airports
[AD-A086065] p0548 N80-30206

Assessment of operational automated guided vehicle (AGV) systems—LIMAN, phase 2
[PB80-160065] p0613 N80-32302

General aviation activity and avionics survey, 1978
[AD-A087653] p0627 N80-32325

Locom-based bouy position auditing systems:
Analytical evaluation
[AD-A088266] p0631 N80-32369

Detection and assessment of secondary sonic booms in New England
[AD-A088365] p0643 N80-33362

TREasu Rn ING CO., CLEVELAND, OHIO.
Evaluation of new materials for rotor hub journal bearings
[AD-A089694] p0441 N80-25655

TRIESTE UNIV. (ITALY).
Automatic systems for airport surface mobile media surveillance based on the use of secondary media
[AD-A089090] p0117 N80-18104

THE DEFENSE AND SPACE SYSTEMS GROUP, REDONDO BEACH, CALIF.
Data reduction and analysis of graphite fiber release experiments

Evaluation of micron size carbon fibers released from burning graphite composites

TUBINGHENS UNIV. (WEST GERMANY).
Phenomenology of lighting/aircraft interaction
[NASA-CR-159207] p0609 N80-31746

TUBINGHENS UNIV. OF TECHNOLOGY, KNOX, (GERMANY).
Methods for strap-down attitude estimation and navigation with accelerometers
[NASA-CR-159208] p0112 N80-14034

ULTRASISTERS, INC., IREON, CALIF.
Fluid contamination of aircraft-cabin air and breathing oxygen
[AD-A085818] p0543 N80-29268

UNION CARBIDE CORP., TOHIAWA, N.R.
Economics of hydrogen production and liquefaction updated to 1980
[NASA-CR-159163] p0043 N80-11238

UNITED AIR LINES, INC., CHICAGO, ILL.
Current jet fuel trends

UNITED KINGDON ATOMIC ENERGY AUTHORITY, ARINGDOR
(MEANGL). Models for assessing hazards due to lighting
[AD-A085647] p0468 N80-27306

The coupling of lighting fields into aircraft and cables
[AD-A085647] p0468 N80-27306

UNITED KINGDON ATOMIC ENERGY AUTHORITY, SPRINGFIELDS (ENGLAND).
The fabrication and properties of HEMI silicon carbide in relation to gas turbine components
[AD-A085647] p0468 N80-27306

UNITED TECHNOLOGIES CORP., EAST HARTFORD, CONN.
External fuel vaporization study, phase 1

UNITED TECHNOLOGIES CORP., WINDSOR LOCKS, CONN.
Influence of noise reduction on weight and cost of general aviation propellers
[AD-A086210] p0497 N80-27366

UNITED TECHNOLOGIES RESEARCH CENTER, EAST HARTFORD, CONN.
A comparison of the pitching and plunging response of an oscillating aircraft
[NASA-CR-3172] p0034 N80-11030

Noise of a model helicopter rotor due to ingestion of turbulence

Experimental investigation of compressors rotor wakes
[AD-A081911] p0426 N80-28582

Analytical design and evaluation of an active control system for a helicopter wind and gust response alleviation

Experimental study of turbine fuel thermal stability in an aircraft fuel system simulator

Autoignition characteristics of aircraft-type fuels

Influence of mistuning on blade torsional flutter

UNIVERSAL SYSTEMS, INC., ARLINGTON, VA.
Object detection, wave range set
[NASA-CR-159192] p0121 N80-14131

UNIVERSITE DES SCIENCES ET TECHNIQUES DE LILLE (FRENCH).
Initial study of the response of an aircraft to lateral gusts
[AD-A08979-03] p0181 N80-17084

UNIVERSITE LAVAL (QUEBEC).
Combustion modelling within gas turbine engines, some applications and limitations

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES.
Transonic swept-wing analysis using asymptotic and other numerical methods
[AD-A0990-0342] p0156 N80-22751

Analysis of transonic swept wings using asymptotic and other numerical methods
[AD-A0990-0342] p0156 N80-22751
CORPORATE SOURCE INDEX

station of a remotely piloted helicopter system
[AD-A075322] p0112 A80-14038
A qualitative discussion of dynamic stall
[AD-A0801962] p0563 A80-33366
Unsteady flows associated with helicopter rotors
[AD-A0980-33370] p0643 A80-33372
Application of identical aerodynamic functions
[AD-A0801962] p0643 A80-33372
WASHINGTON STATE UNIV., RAINS.
Wind tunnel force and pressure tests of a 21%
thick general aviation airfoil with 20%ailerons, 25% slotted flap and 10% slot-lip
spoiler
WISCONSIN UNIV. - MADISON.
Structures in aeronautical phraseology: From
English to Spanish
[AD-A0801962] p0257 A80-19978
WISCONSIN UNIV. - MILWAUKEE.
Unsteady flow and dynamic response analyses for
helicopter rotor blades [NASA-CR-159190] p0123 A80-14355
WOODS HOLE OCEANOGRAPHIC INSTITUTION, RAINS.
Air deployment of satellite-tracked drifters
[p0344 A80-36291
WRIGHT STATE UNIV., DAYTON, OHIO.
An approximate analysis of wing unsteady
aerodynamics
[AD-A075322] p0289 A80-20239
Wyle Labs., Inc., El Segundo, Calif.
Correction procedures for aircraft noise data.
Volume 1: Pseudotones
[AD-A087516] p0595 A80-31325
X

Xytek Information Corp., Canoga Park, Calif.
Aircraft Maintenance Effectiveness Simulation
(AMES) model
[AD-A075322] p0595 A80-31325

Y

Yang (Mai C.) and Associates, New York, N.Y.
Nondestructive evaluation of airport pavements.
Volume 1: Program references
[AD-A075322] p0226 A80-18051
Nondestructive evaluation of airport pavements.
Volume 3: Operation manual for NDEP AV program
at TCC
[AD-A075951] p0843 A80-26331
CONTRACT NUMBER INDEX
AERONAUTICAL ENGINEERING//! Continuing Bibliography

JANUARY 1981

1981 "Cumulative Index
Typical Contract Number Index Listing

AF PBOJ. 2403
p0235 880-19064
p0241 S80-1910T
p0310 H80-21357
p0422 880-24328
p0487 880-27290
pOS37 880-28375
p0591 880-30314
p0601 880-31379
p0647 880-33402

p0629 880-32353

CONTRACT
NUMBER

PAGE
NUMBER

NASA ACCESSION
NUMBER

AF PBOJ. 2104

Listings in this index are arranged atphanumerically by contract number. Under
each contract number, the accession numbers denoting documents that have
been produced as a result of research done under that contract are arranged in
ascending order with the IAA accession numbers appearing first. Preceding the
accession number is the page number where the citation may be found.

AF OBDEB T77-847
p0152 A80-21H29
AF PBOJ. 139A

AF PBOJ. 2306
p0545 H80-29290
AF PHOJ. 2307

p0237 H80-19070
AF PBOJ. 329A
PQ127 880-15055

P0025 880-10139
P0025 R80-10143
p0031 880-10229
p0041 H80-11092
P0042 880-11100
P0068 H80-12070
p0069 S80-12073
p0071 H80-12095
p0137 880-15136
p0175 B80-17033
p0180 H80-17075
p0221 080-18001
p0221 H80-18002
p0237 H80-19075
p0244 H80-19120
p0252 H80-19569
p0288 H80-20236
p0289 880-20239
p0293 H80-20277
p0294 N80-20282
p0310 880-21510
p0359 '880-23257
p0419 S80-24307
p0419 H80-24308
p0421 880-24326
p0426 880-24582
p0478 880-26277
p0530 H80-28316
p0530 N80-28319
p0551 880-29334
p0593 S80-30697
p0636 880-32400
p0651 880-33499
AF PSOJ. 2308

AF PBOJ.

1850

p0607 H80-31535

AF PBOJ. 486B

AF
AF
AF

AF
AF

AF
AF
AF

p0044 880-11513
p0252 880-19567
p0418 880-24299
.pOU99 880-27486
p0607 880-31535
PBOJ. 921E
p029<» 880-20283
PBOJ. 0173
p0311 880-21627
PBOJ. 1123
p0031 H80-10233
p0032 880-10237
p0144 880-15180
p0367 880-23334
p0368 N80-23336
p0484 H80-26335
p0649 880-33421
PBOJ. 1900
p0231 N80-18587
p0295 880-20287
PEOJ. 2003
p0037 880-11061
P0071 880-12089
p0290 880-20255
p0296 880-20459
PBOJ. 2051
P0647 880-33405
PSOJ. 2090
P0245 880-19128
PBOJ. 2092
p0534 H80-28350

AF PBOJ.

2103

P0649 880-33420

AF PBOJ. 2104

p0027 880-10199
p0423 H80-24338
P0637 880-32407

AF PBOJ. 2114

p0083 880-13336
AF PBOJ. 2187
P0601 H80-31379
AF PBOJ. 2202
p0238 S80-19082
AF PEOJ. 2257

p0420 880-24312
AF PHOJ. 2301
p0433 880-25322
AF PHOJ. 2303
p0424 M80-24450
p0650 880-33423
AF PBOJ. 2304

p0176 H80-17044
p0436 880-25346
AF PBOJ. 2305
p0032 H80-10420
pOSOO H80-27573

p0178 H80-17063
p0233 880-19044
p0237 880-19076
p0288 880-20234
p0359 880-23255
p0360 N80-23260
p0533 880-28344
p0533 880-28345
p0537 H80-28380
p0610 880-31765
AF PBOJ. 2418
p0424 S80-24378
p0552 880-29339
p0591 880-30312
AF PBOJ. 2420

p0536 880-28365
AF PBOJ. 2421
p0651 880-33573
AF PBOJ. 3006
p0243 880-19117
AF PBOJ. 3012

p0542 880-29257
AF PBOJ. 3048
p0030 S80-10223
p0074 880-12416
p0183 H80-17227
p0183 880-1.7242
p0243 880-19119
p0296 880-20405
p0369 880-23474
p0440 880-25662
pOSOO N80-27512
p0539 880-28725
p0592 880-30536
p0611 880-31802
P0634 880-32388
AF PBOJ. 3066
p0225 880-18044
p0239 880-19088
p0242 H80-19109
p0243 880-19115
P0243 880-19116
p0243 880-19118
P0353 H80-22352
p0366 880-23323
p0435 880-25336
p0435 880-25341
P0480 880-26303
p0551 880-29336
P0648 880-33411
P0648 H80-33413
p0648 880-33414
AF PBOJ. 3145
p0032 880-10439
p0079 880-13030
p0185 H80-17366
p0228 880-18311
p0238 880-19079
P0244 880-19125
p02«9 880-19429
P0535 880-28358
p0605 880-31403
p0608 880-31734 .
AF PBOJ. 3207

p0296 880-20410
p0497 H80-27367
p0499 880-27456
AF PBOJ. 2313
p0234 H80-19051
p0239 H80-19086
p0294 880-20281
p0537 880-28379
p0627 880-32326
AF PBOJ. 2338

pOBOO 880-27562
p0590 880-30309
AP PBOJ. 2101
p0027 880-10197
p0027 880-10198
p0175 880-17034
p0178 880-17064
p0236 H80-1906S
p0495 880-27353
p0654 880-33801
AF PBOJ. 2402
p0037
p0176
p0223
p0223
p0236
p0359
p0423
p0601

p0031 880-10227
AF PBOJ. 3763
p0370 880-23536
AF PBOJ. 4600
p0044 H80-11309
AF PBOJ. 6065
p0233 880-19041
AF PBOJ. 6190

880-11054
880-17045
880-18033
880-18035
H80-19066
880-23258
»80-2»337
880-31372

p0235 H80-19064

D-1

AF PBOJ. 6670
p0289 880-20244
P0428 880-24953
p0612 880-32030
iF PBOJ. 7184
P0028 880-10200
p0290 880-20255
p0364 880-23306
AF PHOJ. 7231
P0037 880-11055
p0304 880-21296
P0427 880-24883
P0502 880-27837
p0630 880-32357
p0639 880-33182
p0639 880-33183
p0640 880-33184
AF PBOJ. 7312
p0044 880-11474
p0535 B80-28362
AF PBOJ. 7351
p0074 880-12423
AF PSOJ. 7629
p0291 880-20263
AF PBOJ. 7930
p0543 880-29268
P0600 880-31371
AF PBOJ. 8219
p0591 880-30315
p0592 N80-30316
p0592 880-30317
AF PBOJ. 8556
p0636 880-32399
AF PBOJ. 8809
p0028 880-10201
AF PHOJ. 9991
p0654 880-34156
AF PBOJECT ESD-9-0864
p0152 A80-21429
AF PBOJECT 14710130
p0094 A80-18304
AF-AFOSB-76-2954G
p0615 A80-51416
AF-AFOSB-77-3233
p0331 A80-35037
AF-AFOSB-77-3303
p0390 A80-38100
AF-AFOSB-77-3305
p0456 A80-42055
AF-AFOSB-77-3355
p0214 A80-28018
AF-JFOSB-77-3412
p0198 A80-26934
AF-AFOSB-77-3423D
p0334 A80-35077
AF-AFOSR-78-3523
p0217 A80-28851
AF-AFOSB-80-0072
p0397 A80-38917
AF-AFOSB-0111-79
p0627 880-32326
AF-AFOSB-2824-79
p0137 N80-15136
AF-AFOSB-2968-76
p0436 880-25346
AF-AFOSB-3005-76
p0030 H80-10226
AF-AFOSB-3282-77
p0025 880-10143
AF-AFOSB-3355-77
p0421 880-24326
AF-AFOSH-3487-78
p0294 880-20282
AF-AFOSB-3523-78
p0069 880-12073
AF-AFOSB-3543-78
p0025 N80-10139
AF-AFOSB-3569-78
p0433 880-25322
AF-AFOSB-3604-78
p0499 880-27456
AF-AFOSB-3640-78
p0651 880-33499
AFOSB ISSA 79-0007
p0296 880-20410


<table>
<thead>
<tr>
<th>CONTRACT NUMBER INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>517-53-03-01</td>
</tr>
<tr>
<td>p0028 #80-10135</td>
</tr>
<tr>
<td>517-53-03-03</td>
</tr>
<tr>
<td>p0022 #80-10102</td>
</tr>
<tr>
<td>517-50-01</td>
</tr>
<tr>
<td>p0365 #80-23317</td>
</tr>
<tr>
<td>523-03-19</td>
</tr>
<tr>
<td>p0653 #80-33777</td>
</tr>
<tr>
<td>530-02-11</td>
</tr>
<tr>
<td>p0417 #80-24293</td>
</tr>
<tr>
<td>530-03-13-02</td>
</tr>
<tr>
<td>p0232 #80-19028</td>
</tr>
<tr>
<td>p0305 #80-21316</td>
</tr>
<tr>
<td>530-04-13-01</td>
</tr>
<tr>
<td>p0037 #80-11053</td>
</tr>
<tr>
<td>p0065 #80-12076</td>
</tr>
<tr>
<td>p0171 #80-16068</td>
</tr>
<tr>
<td>p0221 #80-18011</td>
</tr>
<tr>
<td>p0223 #80-18032</td>
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<tr>
<td>p0287 #80-20223</td>
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<td>p0288 #80-20231</td>
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<td>p0291 #80-20260</td>
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<td>p0362 #80-23283</td>
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<td>p0167 #80-16024</td>
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<td>p0231 #80-19022</td>
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<td>p0358 #80-23249</td>
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<td>p0536 #80-28373</td>
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<td>p0628 #80-32338</td>
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<tr>
<td>p0417 #80-24294</td>
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<tr>
<td>p0167 #80-16030</td>
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<td>p0529 #80-28303</td>
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<td>533-01-43-01</td>
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<td>p0287 #80-20228</td>
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<td>p0538 #80-28353</td>
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<td>p0641 #80-33348</td>
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<td>533-01-43-02</td>
</tr>
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<td>533-03-18</td>
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<td>p0287 #80-20228</td>
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<td>534-04-13-56</td>
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<td>534-04-13-57</td>
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<tr>
<td>p0224 #80-18037</td>
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<td>534-04-13-62</td>
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<td>p0222 #80-18021</td>
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<tr>
<td>p0350 #80-22321</td>
</tr>
<tr>
<td>535-01-12</td>
</tr>
<tr>
<td>p0468 #80-33408</td>
</tr>
<tr>
<td>535-03-18</td>
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<tr>
<td>p0125 #80-15028</td>
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<tr>
<td>540-03-13-01</td>
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<tr>
<td>p0461 #80-26198</td>
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<td>740-01-01</td>
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<tr>
<td>760-04-60-01</td>
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<tr>
<td>p0067 #80-12054</td>
</tr>
<tr>
<td>769-02</td>
</tr>
<tr>
<td>p0119 #80-14121</td>
</tr>
</tbody>
</table>
### Typical Report/Accession Number Index Listing

Listings in this index are arranged alphabetically by report number. The issue number and page number indicate the actual Supplement and page where the citation may be located. The accession number denotes the number by which the citation is identified. An asterisk (*) indicates that the item is a NASA report. A pound sign ($) indicates that the item is available on microfiche.

<table>
<thead>
<tr>
<th>Report Number</th>
<th>Accession Number</th>
<th>Page Number</th>
<th>Issue Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-6035</td>
<td>p0302</td>
<td>80-2126**</td>
<td>1981-10107</td>
</tr>
<tr>
<td>A-6061</td>
<td>p0137</td>
<td>80-15129**</td>
<td>1981-10107</td>
</tr>
<tr>
<td>A-6071</td>
<td>p0221</td>
<td>80-18010</td>
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</tr>
<tr>
<td>A-7336</td>
<td>p0038</td>
<td>80-11068**</td>
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<tr>
<td>A-7352</td>
<td>p0129</td>
<td>80-15067**</td>
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<tr>
<td>A-7737</td>
<td>p0042</td>
<td>80-31709**</td>
<td>1981-02269</td>
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<tr>
<td>A-7875</td>
<td>p0129</td>
<td>80-15069**</td>
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<tr>
<td>A-7887</td>
<td>p0033</td>
<td>80-15138**</td>
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<tr>
<td>A-7891</td>
<td>p0244</td>
<td>80-19126**</td>
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<tr>
<td>A-7896</td>
<td>p0225</td>
<td>80-18047**</td>
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<tr>
<td>A-7897</td>
<td>p0022</td>
<td>80-10107**</td>
<td>1981-01107</td>
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<tr>
<td>A-7901</td>
<td>p0180</td>
<td>80-17081**</td>
<td>1981-01107</td>
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<tr>
<td>A-7904</td>
<td>p0221</td>
<td>80-18047**</td>
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</tr>
<tr>
<td>A-7913</td>
<td>p0137</td>
<td>80-15138**</td>
<td>1981-02269</td>
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<tr>
<td>A-7915</td>
<td>p0137</td>
<td>80-15138**</td>
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<td>A-7917</td>
<td>p0244</td>
<td>80-19126**</td>
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<td>A-7918</td>
<td>p0225</td>
<td>80-18047**</td>
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<td>A-7920</td>
<td>p0022</td>
<td>80-10107**</td>
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<td>A-7925</td>
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# AERONAUTICAL ENGINEERING

A Special Bibliography

Abstracts
January – December 1980

## TABLE OF CONTENTS

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