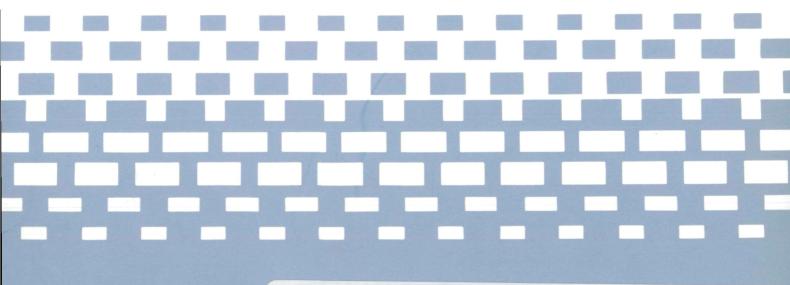
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NASA SP-7011 (371) January 1993

AEROSPACE MEDICINE AND BIOLOGY

1992 CUMULATIVE INDEX



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National Aeronautics and Space Administration Scientific and Technical Information Program Washington DO Washington, DC

INTRODUCTION

WHAT THIS CUMULATIVE INDEX IS

This publication is a cumulative index to the abstracts contained in NASA SP-7011(359) through NASA SP-7011(370) of *Aerospace Medicine and Biology: A Continuing Bibliography*, NASA SP-7011, and by means of supplements, serves as a current abstracting and announcement journal for references on bioscience and biotechnology. It has been compiled through the cooperative efforts of the American Institute of Aeronautics and Astronuatics (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 (N92-10000).
- 2. AIAA entries by their IAA accession numbers (A92-10000 series).

HOW THIS CUMULATIVE INDEX IS ORGANIZED

This Cumulative Index includes a subject, personal author, corporate source, foreign technology, contract number, report number, and 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 that the following term or terms are used instead. For example:

DOSE

U DOSAGE

AIRLINERS

- U COMMERCIAL AIRCRAFT
- U PASSENGER AIRCRAFT
- 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:

FATIGUE (BIOLOGY)

- NT AUDITORY FATIGUE
- NT FLIGHT FATIGUE
- NT MUSCULAR FATIGUE

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 may include documents on different aspects of the same subject term. For example:

BIOLOGICAL EFFECT

Vibratory force effect upon biological systems, particularly human organism. Biological effect of cosmic and solar radiations on human body at high altitudes.

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 translation schemes may require multiple searching on 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 FOREIGN TECHNOLOGY INDEX

The foreign technology index identifies research performed outside of the United States. Listings in this index are arranged alphabetically by country of intellectual origin. For example:

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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 NUMBER INDEX

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

TP-924 ONERA-TP-924

HOW TO USE THE ACCESSION NUMBER INDEX

All documents that were acquired, indexed, and announced in *STAR* during the year which have been assigned a unique identification number appear in this index. For example:

N92-10001 N92-10002

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 248 will be found in Supplement 365

AVAILABILITY OF DOCUMENTS

Information concerning the availability of documents announced in *Aerospace Medicine & Biology* is found in the Introduction to the most currently issued *Supplement*.

FEDERAL DEPOSITORY LIBRARY PROGRAM

In order to provide the general public with greater access to U.S. Government publications, Congress established the Federal Depository Library Program under the Government Printing Office (GPO), with 53 regional depositories responsible for permanent retention of material, inter-library loan, and reference services. At least one copy of nearly every NASA and NASA-sponsored publication, either in printed or microfiche format, is received and retained by the 53 regional depositories. A list of the regional GPO libraries, arranged alphabetically by state, appears on the inside back cover. These libraries are *not* sales outlets. A local library can contact a Regional Depository to help locate specific reports, or direct contact may be made by an individual.

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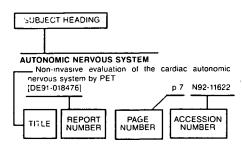
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January 1993

Typical Subject Index Listing



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Training transfer - Can we trust flight simulation?; Proceedings of the Conference, London, England, Nov. 13, 1991 p 42 A92-16075

Life sciences and space research XXIV(1) - Gravitational biology: Proceedings of Symposia 10 and 13 of the Topical Meeting of the Interdisciplinary Scientific Commission F (Meetings F1 and F2) of the COSPAR 28th Plenary Meeting, The Hague, Netherlands, June 25-July 6, 1990 p 93 A92-20827

Life sciences and space research XXIV(2) - Radiation biology; Proceedings of the Topical Meeting of the Interdisciplinary Scientific Commission F (Meetings F3, F4, F5, F6 and F1) of the COSPAR 28th Plenary Meeting, The Hague, Netherlands, June 25-July 6, 1990 p 99 A92-20879

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International Symposium on Aviation Psychology, 6th, Columbus, OH, Apr. 29-May 2, 1991, Proceedings. Vols p 339 A92-44901 182 Aerospace crew station design

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Medical imaging VI - Image processing; Proceedings of the Meeting, Newport Beach, CA, Feb. 24-27, 1992 [SPIE-1652] p 364 A92-46276

Living and working in space; IAA Man in Space Symposium, 9th, Cologne, Federal Republic of Germany, June 17-21, 1991, Selection of Papers

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[NASA-TP-3153]

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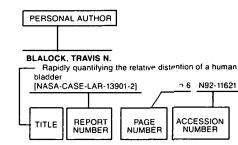
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AWE, CYNTHIA A.

AWRAMIK, S. M.

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rotating clinostat

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AZAROVA, M. V.

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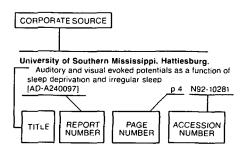
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Centre d'Etude de l'Energie Nucleaire, Mol (Belgium).

Centre d'Etudes et de Recherches Bio-Physiologiques

Appliquees a la Marine, Toulon (France). Development of an electromyography

Centre d'Etudes et de Recherches de Medecine

Centre d'Etudes et de Recherches de Medecine

Does the future lie in binocular helmet display?

Ceskoslovenska Vedeckotechnicka Spolecnost,

Charles River Associates, Inc., Cambridge, MA. Pilot/vehicle model analysis of visually guided flight

Centre Medical de Psychologie Clinique de l'Armee de

Programme and abstracts of contributions presented at

accelerometry ambulatory recording system

Aerospatiale, Bretigny sur Orge (France).

sulfur-recycling in microbial ecosystems designed for

G-LOC. Gz and brain hypoxia. Gz/s and intracranial

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[REPT-9/CEV/SE/LAMAS]

CELSS and space purposes

Aerospatiale, Paris (France),

of psychomotor performances

The pilot flight surgeon bond

the National Radiobiology Conference

(CERMA-90-44(LCBA))

l'Air, Paris (France).

Fear of flying

[DE91-641203]

Prague.

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Chicago Univ.

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- Cumulative frequency distribution of past species p 62 N92-13645 extinctions Geography of cretaceous extinctions: Data base p 63 N92-13646 development
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- Transcapillary fluid shifts in tissues of the head and neck during and after simulated microgravity
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activities			
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[DE92-000016]	p 32	N92-12401
Primer on molecular genetics	-	
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Department of the Navy, Washington, DC. Carbon monoxide conversion device

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- Architectural studies relating to human body motion p 305 N92-27011 morphology in microgravity Deutsche Forschungs- und Versuchsanstalt fuer Luft-und Raumfahrt, Cologne (Germany):

Life sciences and space research XXIV(1) - Gravitational biology; Proceedings of Symposia 10 and 13 of the Topical Meeting of the Interdisciplinary Scientific Commission F (Meetings F1 and F2) of the COSPAR 28th Plenary Meeting, The Hague, Netherlands, June 25-July 6, 1990 p 93 A92-20827

Deutsche Forschungsanstalt fuer Luft- und Raumfahrt, Cologne (Germany).

Life sciences and space research XXIV(4) - Natural and artificial ecosystems; Proceedings of the Topical Meeting of the Interdisciplinary Scientific Commission F (Meetings F10, F11, F1 and F12) of the COSPAR 28th Plenary Meeting, The Hague, Netherlands, June 25-July 6, 1990

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Deutsche Forschungsanstalt fuer Luft- und Raumfahrt, Hamburg (Germany).

The construction of personality questionnaires for lection of aviation personnel

[DLR-FB-91-18] p 176 N92-19410 Deutsche Versuchsanstalt fuer Luft- und Raumfahrt, Cologne (Germany).

- Shiftwork in space Bright light as a chronobiologic countermeasure
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Du Pont de Nemours (E. I.) and Co., Wilmington, DE.

Draegerwerk A.G., Luebeck (Germany).

studies with positive pressure breathing

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Ē

- Eagle Technology, Inc., Winter Park, FL.
- Development of quantitative specifications for simulating the stress environment
- [AD-A250669] p 401 N92-31321 Ecole Nationale Superieure des Telecommunications, Paris (France).
- Mathematical morphology and active contour model: A cooperative approach of lung contours in CT [TELECOM-PARIS-91-C-004] p 37
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- technology [DE92-018032] p 446 N92-33987 Eidgenoessische Technische Hochschule, Zurich
- (Switzerland).

Life sciences and space research XXIV(1) - Gravitational biology; Proceedings of Symposia 10 and 13 of the Topical Meeting of the Interdisciplinary Scientific Commission F (Meetings F1 and F2) of the COSPAR 28th Plenary Meeting, The Hague, Netherlands, June 25-July 6, 1990 p 93 A92-20827

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- [SAE PAPER 911562] p 117 A92-21877 **Environmental Protection Agency, Research Triangle** Park. NC.
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- p 174 N92-19956 [PB91-243246] Erno Raumfahrttechnik G.m.b.H., Bremen (Germany). Trace Gas Contamination Control (TGCC) analysis software for Columbus p 291 N92-25895 Progress in the development of the Hermes p 319 N92-26984 evaporators
- Essex Corp., Orlando, FL.

Correlating visual scene elements with simulator sickness incidence: Hardware and software development p 430 N92-32434 [AD-A252235] European Space Agency, Paris (France).

Life sciences and space research XXIV(1) - Gravitational biology; Proceedings of Symposia 10 and 13 of the Topical Meeting of the Interdisciplinary Scientific Commission F (Meetings F1 and F2) of the COSPAR 28th Plenary

Meeting, The Hague, Netherlands, June 25-July 6, 1990 p 93 A92-20827 Fourth European Symposium on Space Environment Control Systems, volume 2

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- Federal Aviation Administration, Atlantic City, NJ. Technical training for national simulator evaluation specialist
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- Galaxy Scientific Corp., Atlanta, GA. Using intelligent simulation to enhance human performance in aircraft maintenance p 372 N92-30126 Galaxy Scientific Corp., Mays Landing, NJ. Human factors in aviation maintenance, phase 1 [AD-A243844] p 184 N92-19808 General Electric Co., Moffett Field, CA. Concepts of bioisolation for life sciences research on Space Station Freedom [SAE PAPER 911475] p 105 A92-21795 General Research Corp., Vienna, VA. Technology for increased human productivity and safety on orbit [IAF PAPER 91-107] p 25 A92-12510 Genetech, Inc., San Francisco, CA. Center for Cell Research, Pennsvivania State University p 226 N92-23653 Geo-Centers, Inc., Newton, MA. User evaluation of laser ballistic sun, wind and dust goggle lenses (dye technology) [AD-A243245] p 146 N92-17143 Geological Survey, Flagstaff, AZ. Martian paleolakes and waterways - Exobiological implications p 153 A92-22110 George Mason Univ., Fairfax, VA. A window in time for the first evolutionary radiation p 59 N92-13625 George Washington Univ., Washington, DC. Publications of the exobiology program for 1990: A special bibliography [NASA-TM-4364] p 251 N92-23429 Publications of the environmental health program: 1980-1990 [NASA-CR-4455] p 338 N92-29341 Publications of the space physiology and countermeasures program, regulatory physiology physiology and discipline: 1980 - 1990 [NASA-CR-4469] p 432 N92-33657 Georgia Inst. of Tech., Atlanta. Acquisition and production of skilled behavior in dynamic decision-making tasks: Modeling strategic behavior in human-automation interaction: Why and aid can (and should) go unused [NASA-CR-188962] p 44 N92-13576 Intelligent tutoring for diagnostic problem solving in complex dynamic systems [AD-A242619] p 89 N92-15546 Acquisition and production of skilled behavior in dynamic decision-making tasks [NASA-CR-189846] p 145 N92-17132 Requirements for psychological models to support design: Towards ecological task analysis [NASA-CR-190334] p 2 p 280 N92-25732 Acquisition and production of skilled behavior in dynamic decision-making tasks [NASA-CR-190614] p 401 N92-31341 Georgia State Univ., Atlanta. Cerebral specialization p 35 A92-16090 Human behavior and human performance: Psychomotor demands [NASA-CR-190112] p 186 N92-20422 Georgia Tech Research Inst., Atlanta. Biophysical techniques for examining metabolic, proliferative, and genetic effects of microwave radiation [AD-A241903] p 109 N92-17288 Gordon Research Conferences, Inc., Kingston, RI. Gordon research conference on Barrier Function of
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н

Hahnemann Medical Coll. and Hospital, Philadelphia, PA

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- p 287 N92-25839 exploration Harvard Coll. Observatory, Cambridge, MA.
- The energetics and mechanics of load carrying [AD-A248441] p 371 N92 p 371 N92-29227
- Harvard Univ., Cambridge, MA. Corrosion consequences of microfouling in water reclamation systems
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BIS Aerosystems Ltd., Sharnbrook (England).

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- Idaho Univ., Moscow. Exercise/recreation facility for a Lunar or Mars analog [NASA-CR-189993] p 287 N92-25161 Illinois Univ., Savoy.
- ASKILLAN II Pilot strategies for workload anagement p 8 A92-11138 Map display design p 18 A92-11142 management Display formatting techniques for improving situation
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- Differentiation on genus of aquatic macrophytes through remote sensing in the Tucurui Reservoir, Para State, Brazil
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International Atomic Energy Agency, Vienna (Austria). Facts about food irradiation: Scientific and technical torme (DE92-613573) p 213 N92-21554 Facts about food irradiation: Food irradiation and radioactivity [DE92-613574] p 214 N92-21555 Facts about food irradiation: Chemical changes in irradiated foods (DE92-613575) p 214 N92-21556 Facts about food irradiation: Nutritional guality of irradiated foods [DE92-613576] p 214 N92-21557 Facts about food irradiation: Genetic studies p 214 N92-21558 [DE92-613577] Facts about food irradiation: Microbiological safety of irradiated food (DE92-613578) p 214 N92-21559 Facts about food irradiation: Irradiation and food safetv [DE92-613579] p 214 N92-21560 Facts about food irradiation: Irradiation and food additives and residues [DE92-613580] p 214 N92-21561 Facts about food irradiation: Packaging of irradiated foods [DE92-613581] p 214 N92-21562 Facts about food irradiation: Food irradiation costs [DE92-613582] p 214 N92-21563 Facts about food irradiation: Irradiated foods and the consumer [DE92-613583] p 214 N92-21564 Facts about food irradiation: Safety of irradiation facilities p 215 N92-21590 [DE92-613601] Facts about food irradiation: Controlling the process DE92-614091] p 215 N92-21591 [DE92-614091] Irradiation of spices, herbs, and other vegetable seasonings: A compilation of technical data for its authorization and control [DE92-619064] p 250 N92-24022 International Center for Genetic Engineering and Biotechnology, Trieste (Italy). Microgravitational effects on chromosome behavior p 223 N92-23604 (7-IML-1) International Centre for Theoretical Physics, Trieste (Italy). The effect of ultrasound on arterial blood flow. Part 1: Steady fully developed flow [DE91-635323] p 81 N92-14585 On correlations of neuronal spike discharges [DE91-625187] p 72 N92-15522 Fluctuation in tissue temperature due to environmental variation. Part 1: Effect of free convection currents [DE91-641475] p 72 N92-15523 Fluctuation in tissue temperature due to environmental variation. Part 2: Effect of body thermal radiation [DE91-641476] p 73 N92-15524 Fluctuation in tissue temperature due to environmental variation. Part 3: Effect of external thermal radiation [DE91-641477] p 73 N92-15525 Mathematics and biology [DE92-611247] p 110 N92-17815 Evolution as a molecular cooperative phenomenon [DE92-609575] p 110 N92-17877 Global models for the biomechanics of green plants, nart 1 [DE91-641478] p 110 N92-17946 Comments on a novel approach to the role of chirality in the origin of life p 110 N92-17970 (DE92-609034) On the transition period from chemical to biological evolution [DE92-6090491 p 159 N92-18132 Global models for the biomechanics of green plants, p 160 N92-18757 [DE92-603590] Global models for the biomechanics of green plants, Dart 3 [DE92-603591] p 160 N92-18758 Deep heat muscle treatment: A mathematical model, 1 [DE92-634084] p 433 N92-34103 Deep heat muscle treatment: A mathematical model, 2 p 433 N92-34104 [DE92-634085] Iowa State Univ. of Science and Technology, Ames. Space life support engineering program [NASA-CR-190448] p 369 N92-28671 Iowa Univ., Iowa City.

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J Japan Atomic Energy Research Inst., Tokyo. DEEP code to calculate dose equivalents in human phantom for external photon exposure by Monte Carlo method [DE91-780319] p 120 N92-16549 Jet Propulsion Lab., California Inst. of Tech., Pasadena. Performance evaluation of a six-axis generalized p 24 A92-12333 force-reflecting teleoperator Human life support during interplanetary travel and domicile. IV - Mars expedition technology trade study [SAE PAPER 911324] p 135 A92-21755 The NASA Radiation Health Program [SAE PAPER 911371] p 116 A92-21784 Using VAPEPS for noise control on Space Station Freedom p 137 A92-21798 [SAE PAPER 911478] Advanced teleoperation - Progress and problems p 139 A92-21821 SAE PAPER 9113931 Hardware scaleup procedures for P/C life support systems (SAE PAPER 911396) p 139 A92-21823 Highlights of NASA research in telerobotics p 143 A92-23662 Anthropomorphic dual-arm space telemanipulation system p 143 A92-23665 Supervisory telerobotics testbed for unstructured p 178 A92-26660 environments Designing minimal space telerobotics systems for maximum performance [AIAA PAPER 92-1015] p 240 A92-33201 Teleoperator performance in simulated Solar Maximum Satellite repair (AIAA PAPER 92-1574) p 284 A92-38667 Redundant arm control in a supervisory and shared control system [AIAA PAPER 92-1578] p 284 A92-38669 Dual-arm supervisory and shared control space servicing task experiments [AIAA PAPER 92-1677] p 285 A92-38735 Force-reflection and shared compliant control in operating telemanipulators with time delay p 286 A92-40369 vision for space Operator-coached machine p 406 A92-51729 telerobotics Role of computer graphics in space telerobotics p 407 A92-51733 Preview and predictive displays Catalysis and biocatalysis program [NASA-CR-189452] p 31 N92-12392 Quantification of UV stimulated ice chemistry: CO and CO2 p 52 N92-13593 p 53 N92-13596 Intact capture of cosmic dust NASA SETI microwave observing project: Sky Survey p 64 N92-13651 element Polyphase-discrete Fourier transform spectrum analysis for the Search for Extraterrestrial Intelligence sky survey p 91 N92-14251 p 146 N92-17357 ECLSS predictive monitoring polysaccharides: A Structural modification of biochemical-genetic approach p 222 N92-22729 Genetic and molecular dosimetry of HZE radiation p 234 N92-23603 (7-IML-1) Using single buffers and data reorganization to implement a multi-megasample fast Fourier transform p 292 N92-24323 Method and apparatus for predicting the direction of movement in machine vision [NASA-CASE-NPO-17552-1-CU] p 370 N92-29129 Jewish Hospital of Brooklyn, NY. Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with overt circadian rhythms p 338 N92-28886 [AD-A247172] Johann-Wolfgang-Goethe-Univ., Frankfurt am Main (Germany). Growth and sporulation of Bacillus subtilis under p 224 N92-23612 microgravity (7-IML-1) Total Dose Effects (TDE) of heavy ionizing radiation in fungus spores and plant seeds: Preliminary investigations p 299 N92-27124

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- Joint FAO/WHO Codex Alimentarius Commission, Rome (Italy).
- Codex general standard for irradiated foods and recommended international code of practice for the operation of radiation facilities used for the treatment of foods [DE91-632213] p 89 N92-14596

Joint Food and Agriculture Organization - International Atomic Energy Agency, Vienna (Austria). Analytical detection methods for irradiated foods [DE91-625550] p 89 N92-15544

Food Irradiation Newsletter, volume 15, number 2 [DE92-614951] p 250 N92-23218

Joint Publications Research Service, Arlington, VA. JPRS report: Science and technology. USSR: Life sciences

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- JPRS report: Science and technology. USSR: Life sciences
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- Toxicity assessment of combustion products in simulated space cabins p 6 N92-11619 Results from plant growth experiments aboard orbital
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- [JPRS report: Science and technology. USSR: Life
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L

- Laboratoire d'Automatique et d'Analyse des Systemes, Toulouse (France).
- On physical systems qualitative approach: Real time help for fermentation process control
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- DC. Antarctic analogs as a testbed for regenerative life
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- USSR Space Life Sciences Digest, issue 32 [NASA-CR-3922(38)] p 187 M p 187 N92-22024 Lockheed Missiles and Space Co., Sunnyvale, CA.
- Evolutionary development of a lunar CELSS [IAF PAPER 91-572] p 87 A92-18562
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- Lovelace Foundation for Medical Education and Research, Albuquerque, NM.
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CORPORATE SOURCE

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- Medical Research Council, Cambridge (England). The central executive component of working memory
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- Designing an advanced instructional design advisor: Incorporating visual materials and other research issues, volume 4
- [AD-A245107] p 193 N92-20694 Mei Associates, Inc., San Antonio, TX. Characterization of Air Force
- training and computer-based training systems p 176 N92-19364 [AD-A243781]
- Memorial Heart Inst., Long Beach, CA. Optimal ECG electrode sites and criteria for detection
- of asymptomatic coronary artery disease, update 1990. Multilead ECG changes at rest, with exercise, and with coronary angioplasty [AD-A2486131
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- Messerschmitt-Boelkow-Blohm G.m.b.H., Munich (Germany).
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Immunological and biochemical effects of 60 Hz electric

Survey on possibility to utilize effectively underground

Age and the elderly internal clock - Further evidence

Simplified air change effectiveness modeling

Mining and Metallurgical Inst., Hokkaido (Japan).

Midwest Research Inst., Kansas City, MO.

and magnetic fields in humans

Minnesota Univ., Minneapolis.

for a fundamentally slowed CNS

other biotechnological innovations enabled by higher solar

Midwest Research Inst., Golden, CO.

Microbial diversity: Course report 1991

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[DE92-010577]

[DE90-012547]

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Michigan Univ., Ann Arbor.

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Mitre Corp., Houston, TX. A failure diagnosis and recovery prototype for Space Station Freedom

[AIAA PAPER 91-3790] p 85 A92-17646 Molecular Research Inst., Palo Alto, CA. Theoretical studies of the extraterrestrial chemistry of

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Montclair State Coll., Upper Montclair, NJ. An initial test of a normative Figure Of Merit for the quality of overall task performance p8 A92-11141

Mount Sinai School of Medicine, New York, NY. Molecular mechanisms in radiation damage to DNA [DE92-008799] p 275 N92-24899 Murcia Univ. (Spain).

The 4th International Workshop on Membrane Biotechnology and Membrane Diomaterials p 2 N92-11614 [AD-A240481]

Ν

Nagoya Univ, (Japan).

p 420 N92-33863 Result of aircraft experiments National Academy of Sciences - National Research Council, Washington, DC.

Biological contamination of Mars: Issues recommendations [NASA-CR-190819]

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Washington, DC.

Technology for increased human productivity and safety on orbit

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- Bay Saint Louis, MS. Bioluminescence in the western Alboran Sea in April
- 1991
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- Navy Clothing and Textile Research Facility, Natick, MÁ
- Effectiveness of a selected microclimate cooling system in increasing tolerance time to work in the beat Application to Navy Physiological Heat Exposure Limits (PHEL) curve
- [AD-A246529] n 304 N92-26470 Navy Experimental Diving Unit, Panama City, FL. Evaluation of BAUER high pressure breathing air P-2
- ourification system [AD-A243535] p 145 N92-17014 Unmanned evaluation of BAUER high pressure breathing air P-5 purification system
- [AD-A243486] p 146 N92-17331 Navy Personnel Research and Development Center,
- San Diego, CA. A comparison of four types of feedback during
- Computer-Based Training (CBT) [AD-A241626] p 45 N92-13579
- Empirical comparison of alternative video teletraining technologies
- [AD-A2422001 p 127 N92-16556 Nebraska Univ., Lincoln.
- LET analyses of biological damage during solar particle events
- [SAE PAPER 911355] p 105 A92-21771 Electrochemical and optical studies of model
- photosynthetic systems (DE92-0106571 p.385 N92-30829
- Nelson Space Services Ltd., London (England).
 - ESA PSS-03-406: Life support and habitability manual p 288 N92-25843
- Concept for a European Space Station: Habitability, life p 322 N92-27023
- support, and laboratory facilities p 322 N92-27023 Netherlands Aerospace Medical Centre, Soesterberg. G-tolerance and spatial disorientation: Can simulation p 337 N92-28534 help us?
- Nevada Univ., Reno. Antarctic analogs as a testbed for regenerative life upport technologies
- [IAF PAPER 91-631] p 88 A92-20586 History of water on Mars - A biological perspective
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- Biological versus physical contributions p 152 A92-21498

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space habitat: Purification of the oxidized liquor for human

Development of European sublimator technology for

Advances in the design of military aircrew breathing

systems with respect to high altitude and high acceleration

North Atlantic Treaty Organization, Brussels (Belgium).

The study on a directory of human performance models for system design (Defence Research Group Panel 8 on

the defence applications of human and bio-medical

Automated protocol analysis: Tools and methodology

Electronic expansion of human perception

ECLSS experiments at manned lunar surface sites

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p 321 N92-27018

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New Orleans Univ., LA. mounted systems

[AD-A240133]

[AD-A240364]

boundaries

investigation

[AD-A243859]

[AD-A244720]

Niigata Univ. (Japan).

Frankfort (Germany).

drinking

EVA

conditions

sciences)

[AD-A247346]

[AD-A242028]

[AD-A242040]

North Carolina Univ., Chapel Hill.

New York Univ., New York.

Biogeochemical

Visual motion perception

Perception and memory of pictures

High order mechanism of color vision

Nicolaus Copernicus Univ., Torun (Poland).

Nippon Electric Co. Ltd., Tokyo (Japan).

Normalair-Garrett Ltd., Yeovil (England).

Nord-Micro Elektronic Feinmechanik G.m.b.H.,

plant growth hormone is attained

CORPORATE SOURCE

Effects of 4 percent and 6 percent	nt carboxyhemoolobin
on arrhythmia production in patient	
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orthwestern Univ., Chicago, IL.	

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p 385 N92-31302 [AD-A249795] Northwestern Univ., Evanston, IL.

- Program and abstracts of the 2nd Meeting of the Society for Research on Biological Rhythms
- p 4 N92-10280 [AD-A240007] Norwegian Defence Research Establishment, Kjeller. Amino acid neurotransmitters; mechanisms of their uptake into synaptic vesicles [NDRE/PUBL-91/1003]
- p 190 N92-21186 The toxic effect of soman on the respiratory system [NDRE/PUBL-91/1001] p 191 N92-21359 The properties of the uptake system for glycine in naptic vesicles
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- [NDRE/PUBL-92/1002] p 421 N92-34138 Nottingham Univ. (England). **Biology and telescience** p 419 N92-33465
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- NTI, Inc., San Antonio, TX. Performance assessment in complex individual and
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- Nuevas Tecnologias Espaciales S.A., Llissa d'Amunt (Spain). Study on the requirements for the installation of a CES
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- Labor market trends for health physicists p 124 N92-17800 [DE92-004770] Radiation exposure of air carrier crewmembers 2 [PB92-140037] p 234 N92-23139
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- One thousand days non-stop at sea: Lessons for a ssion to Mars
- [TABES PAPER 92-462] p 402 N92-32020 **Oesterreichische Raumfahrt- und Systemtechnik,** Vienna (Austria).
- Carbon dioxide reduction system as part of an air p 289 N92-25887 revitalization system

- **Oesterreichisches Forschungszentrum Seibersdorf** G.m.b.H., Vienna,
- Examination of nitrogen fixation by leguminoses and its secondary effect on grains using N-15
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- Developed for Students (SEEDS) P-0004-2 p 299 N92-27322 Old Dominion Univ., Norfolk, VA.
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- Oregon Health Sciences Univ., Portland.
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- human motor integration? [AD-A250223] p 356 N92-29119
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- Preliminary development of a protocol for determining heat stress caused by clothing
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- Proton NMR studies on human blood plasma: An application to cancer research p 5 N92-10545 Oxford Univ. (England).
- Pulse oximetry: Theoretical and experimental models [OUEL-1885/91] p 168 N92-18339

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Pacific Northwest Lab., Richland, WA. Improving in vivo calibration phantoms

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- [DE92-015218] p 386 N92-31711

- Pacific-Sierra Research Corp., Los Angeles, CA. Biological effects of protracted exposure to ionizing radiation: Review, analysis, and model development [AD-A242981] p 123 N92-17476 Palo Alto Coll., San Antonio, TX. Forgetting a task: Strategies for enhancing the pilot's memory p 197 N92-21506 Paris VI Univ. (France). Transmission of gravistimulus in the statocyte of the p 225 N92-23617 lentil root (7-IML-1) Park (George W.) Seed Co., Inc., Greenwood, SC. p 298 N92-27120 Seeds in space experiment Park Seed Co., Inc., Greenwood, SC. Continued results of the seeds in space experiment p 299 N92-27323 Pathology Associates, Inc., Frederick, MD. Animal models of ionizing radiation damage [AD-A245268] p 186 N92-20813 Pennsylvania State Univ., Hershey. Serial averaging in the construction and validation of performance tests [AD-A240313] p 15 N92-11632 Effects of CSF hormones and ionic composition on alt/water metabolism [NASA-CR-190693] p 431 N92-32539 Pennsyivania State Univ., University Park. Is CO2 capable to keeping early Mars warm? p 62 N92-13640 Analysis of simulated image sequences from sensors for restricted-visibility operations p 51 N92-13845 Effects of spaceflight on rat pituitary cell function: Preflight and flight experiment for pituitary gland study on COSMOS, 1989 [NASA-CR-189799] p 108 N92-16544 Noninvasive determination of respiratory ozone absorption: Development of a fast-responding ozone analyzer [PB91-243220] p 173 N92-19952 Voltammetric measurement of oxygen in single neurons using platinized carbon ring electrodes p 385 N92-30531 [AD-A252191] Pennsylvania Univ., Philadelphia. Computational and neural network models for the analysis of visual texture p 110 N92-17504 [AD-A243717] Multidimensional signal coding in the visual system p 179 N92-18816 [AD-A244281] Pathophysiology of spontaneous venous gas embolism [NASA-CR-189915] p 173 N92-19761 Effect of increased axial field of view on the performance of a volume PET scanner [DE92-004424] p 173 N92-19877 Biochemical, endocrine, and hematological factors in human oxygen tolerance extension: Predictive studies 6 [NASA-CR-190341] p 304 N92-26263 Biologically-based neural network model of color constancy and color contrast [AD-A248128] p 357 N92-29398 Object discrimination based on depth-from-occlusion [AD-A248104] p 358 N92-29560 Characterization of glucose microsensors small enough for intracellular measurements p 419 N92-33301 [AD-A252954] Philadelphia Coll. of Pharmacy and Science, PA. Noninvasive pH-telemetric measurement gastrointestinal function p 191 N92-21312 Pittsburgh Univ., PA. A systems theoretic investigation of neuronal network
- properties of the hippocampal formation p 357 N92-29334 [AD-A250246]
- Organization of the human circadian system [AD-A247498] p 397 N92-31905
- Polish Academy of Sciences, Warsaw.
 - Bone as a liquid-filled diphase porous medium p 431 N92-32663

Prairie View Agricultural and Mechanical Coll., TX. Mars habitat

- [NASA-CR-189985] p 211 N92-20430 Princeton Univ., NJ.
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- RAND Corp., Santa Monica, CA. Human support issues and systems for the space exploration initiative: Results from Project Outreach [NASA-CR-190320] p 315 N92-26193 Reading Univ. (England).
- Theory and test of stress resistance [AD-A250741] p 400 N92-31291
- Rensselaer Polytechnic Inst., Troy, NY. Determination of the critical parameters for remote microscope control
- [IAF PAPER 91-026] p 24 A92-12447 Photochemical reactions of cyanoacetylene and processes in Titan's dicyanoacetylene: Possible p 55 N92-13609 atmosphere relationships subsurface Phylogenetic among microorganisms
- p 159 N92-18113 [DE92-004421] Research Inst. for Advanced Computer Science,
- Moffett Field, CA. Human performance measurement: Validation procedures applicable to advanced manned telescience
- systems p 14 N92-10282 [NASA-CR-185447] Research Triangle Inst., Research Triangle Park, NC. Engineering derivatives from biological systems for
- advanced aerospace applications [NASA-CR-177594] o 74 N92-15533 Noninvasive ambulatory assessment of cardiac function
- and myocardial ischemia in healthy subjects exposed to carbon monoxide [AD-A252264] p 397 N92-32107
- Rochester Univ., NY. Reference frames in vision [AD-A248743] p 306 N92-27968
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- Function of panel M pathways in primates [AD-A250275] p 401 Function of P and M pathways in primates p 401 N92-31758
- p 386 N92-31778 [AD-A250055] Rockwell International Corp., Houston, TX.
- Radiation exposure and risk assessment for critical female body organs [SAE PAPER 911352] p 115 A92-21768
- Roswell Park Memorial Inst., Buffalo, NY. Macromolecular recognition: Structural aspects of the
- origin of the genetic system p 57 N92-13616 Macromolecular recognition: Structural aspects of the p 66 N92-13668 origin of the genetic system
- Royal Aerospace Establishment, Farnborough (England).
- Integrating machine intelligence into the cockpit to aid p 49 the pilot N92-12533 Royal Air Force Inst. of Aviation Medicine,
- Famborough (England).
- Pulmonary effects of high-G and positive pressure p 169 N92-18978 breathing The optimisation of a positive pressure breathing system p 171 N92-18986 for enhanced G protection Physiological requirements for partial pressure assemblies for altitude protection p 179 N92-18993
- The experimental assessment of new partial pressure assemblies p 180 N92-18995 High altitude high acceleration and NBC warfare
- protective system for advanced fighter aircraft: Design p 181 N92-19000 considerations The RAF Institute of Aviation Medicine proposed helmet p 181 N92-19013 fitting/retention system
- Royal Aircraft Establishment, Farnborough (England). The design and development of a full-cover partial pressure assembly for protection against high altitude and
- p 180 N92-18998 The design and evaluation of fast-jet helmet mounted p 181 N92-19010 displays
- Helmet mounted displays: Human factors and fidelity p 183 N92-19021 Royal Netherlands Air Force, Soesterberg.
- The Valsalva maneuver and its limited value in predicting p 170 N92-18981 + Gz-tolerance
 - S
- Saarland Univ., Saarbrucken (Germany).
- Life sciences and space research XXIV(1) Gravitational biology; Proceedings of Symposia 10 and 13 of the Topical Meeting of the Interdisciplinary Scientific Commission F (Meetings F1 and F2) of the COSPAR 28th Plenary Meeting, The Hague, Netherlands, June 25-July 6, 1990 p 93 A92-20827
- Saint Louis Univ., MO.
- Evaluation of cutaneous blood flow during lower body negative pressure to prevent orthostatic intolerance of p 191 N92-21307 bedrest

- Salk Inst. for Biological Studies, San Diego, CA. Template polymerization of nucleotide analogues
- p 58 N92-13617 Carbohydrates as a source of energy and matter for p 58 N92-13619 the origin of life
- San Francisco State Univ., CA.
- Midinfrared spectral investigations of carbonates: p 54 N92-13604 Analysis of remotely sensed data San Jose State Univ., CA.
- A testbed for the evaluation of computer aids for enroute ght path planning p 21 A92-11175 Kaolinite-catalyzed air oxidation of hydrazine: flight path planning
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- COSMOS 2044. Experiment K-7-19. Pineal physiology in microgravity: Relation to rat gonadal function p 187 N92-21376
- [NASA-CR-190066] Sandia National Labs., Albuquerque, NM.
- Solar detoxification of water containing chlorinated solvents and heavy metals via TiO2 photocatalysis p 211 N92-20046 [DE91-018396]
- School of Aerospace Medicine, Brooks AFB, TX. Late cataractogenesis in primates and lagomorphs after
- exposure to particulate radiations p 103 A92-20923 A study of lens opacification for a Mars mission [SAE PAPER 911354] p 105 A92-21770
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- A 99 percent purity molecular sieve oxygen generator p 249 N92-22483
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- p 56 N92-13610 Scripps Institution of Oceanography, La Jolla, CA.
- Oxygen supersaturation in ice-covered Antarctic lakes Biological versus physical contributions
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- Sextant Avionique, Saint Medard en Jalles (France). Design methodology for a helmet display: Ergonomic aspects p 183 N92-19023
- Slovak Technical Univ., Bratislava (Czechoslovakia). Programme and abstracts of contributions presented at the National Radiobiology Conference
- [DE91-641203] p 121 N92-16551 Smith-Kettlewell Inst. of Visual Sciences, San
- Francisco, CA.

Visual processing of object velocity and acceleration p 193 N92-20895 [AD-A244658] Southeastern Center for Electrical Engineering

Education, Inc., Saint Cloud, FL

Optimal ECG electrode sites and criteria for detection of asymptomatic coronary artery disease, update 1990. Multilead ECG changes at rest, with exercise, and with coronary angioplasty [AD-A248613]

- p 393 N92-30523 Southwest Research Inst., San Antonio, TX.
- Investigation of possible causes for human-performance degradation during microgravity flight [NASA-CR-190114] p 213 N92-21345
- Southwest Texas State Univ., San Marcos. The effects of student-instructor interaction and

paired/individual study on achievement in computer-based training

- [AD-A248518] p 358 N92-29503 Space and Naval Warfare Systems Command,
- Washington, DC.
- Effects of microwave radiation on humans: Monkeys exposed to 1.25 GHz pulsed microwaves p 395 N92-31127 [AD-A249997]
- Spectra Research Systems, Inc., Huntsville, AL. Initial assessments of life support technology evolution and advanced sensor requirements, volume 2, appendix
- [NASA-CR-184248] p.88 N92-14591

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- [NASA-CR-177593] p 371 N92-29413 Sterling Federal Systems, Inc., Palo Alto, CA.
- Analysis of an initial lunar outpost life support system preliminary design [SAE PAPER 911395] p 139 A92-21822
- Army-NASA aircrew/aircraft integration program. Phase 5: A3I Man-Machine Integration Design and Analysis System (MIDAS) software concept document [NASA-CR-177596] p 446 N92-34022

Т

Takenaka Works, Osaka (Japan).

- Fundamental experiments of shower development for p 445 N92-33758 space use Technion - Israel Inst. of Tech., Haifa.
- Tracking and letter classification under dichoptic and binocular viewing conditions p 12 A92-11205 Evaluation of perspective displays on pilot spatial
- awareness in low visibility curved approaches p 84 A92-17595 (AIAA PAPER 91-37271 Technische Univ., Berlin (Germany).

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- Technische Univ., Delft (Netherlands).
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- Development of models for prediction of optimal lifting motion
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- stress [AD-A252317] p 394 N92-30719

- Texas Univ., Houston.
- Analysis and synthesis of adaptive neural elements and assembles
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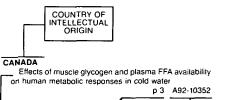
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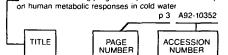
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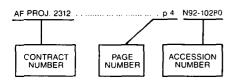
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	p 343	A92-44948
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	p 343	A92-44951
	D 343	A92-44952
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	p 365	A92-48396
	p 365	A92-48397
	p 366	A92-48398
NCC2-327	р 328 р 360	A92-48399 A92-44924
NO02-327	p 360	A92-44925
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NCC2-370		A92-26549
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NCC2-387		N92-10282
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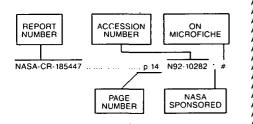
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AD-A247004		p 307	N92-28135	#
AD-A247014		p 354	N92-28396	#
AD-A247032 AD-A247048		p 308 p 310	N92-27337 N92-27825	#
AD-A247048 AD-A247049		p 355	N92-28877	#
AD-A247096		p 310	N92-27839	#
AD-A247103		p 306	N92-27844	#
AD-A247138 AD-A247142		р 386 р 395	N92-31980 N92-31491	#
AD-A247153		p 368	N92-28518	#
AD-A247159		p 337	N92-28397	#
AD-A247167		p 336	N92-28242	#

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AD-A247172 p 338 N92-28886 AD-A247173 p 312 AD-A247174 p 310 AD-A247182 p 371 N92-28176 # # N92-27538 N92-29538 AD-A247185 p 397 AD-A247197 p 311 N92-31963 # # N92-28094 AD-A247198 p 311 N92-27989 AD-A247196 p 401 AD-A247228 p 400 AD-A247290 p 402 AD-A247298 p 324 AD-A247304 p 401 N92-30613 # N92-32105 # N92-27990 N92-31444 AD-A247346 p 323 AD-A247429 p 436 AD-A247456 p 418 N92-27179 # N92-32569 N92-32571 # AD-A247470 p 370 AD-A247488 p 329 AD-A247498 p 397 N92-28944 # N92-28247 ## N92-31905 AD-A247669 p 356 N92-28940 AD-A247823 p 310 AD-A247830 p 310 AD-A247860 p 309 N92-27910 # N92-27863 # N92-27512 AD-A247860 p 309 AD-A247862 p 356 AD-A247872 p 306 AD-A248104 p 358 AD-A248104 p 357 AD-A248199 p 329 AD-A248283 p 339 AD-A248284 p 371 AD-A248344 p 357 AD-A248283 p 339 AD-A248284 p 371 AD-A248344 p 357 AD-A2483451 p 357 AD-A248411 p 314 N92-28957 N92-27371 # N92-29560 N92-29398 N92-29410 N92-29347 N92-29348 N92-29930 N92-29420 N92-27991 AD-A248411 p 311 AD-A248441 p 371 AD-A248460 p 311 N92-28050 N92-29227 N92-28142 AD-A248466 p 393 AD-A248467 p 400 AD-A248494 p 400 N92-30319 N92-30320 N92-30325 AD-A248518 p 358 AD-A248556 p 339 AD-A248560 p 400 AD-A248578 p 312 N92-29503 N92-29577 N92-30336 N92-28170 AD-A248586 p 312 AD-A248613 p 393 AD-A248728 p 356 N92-28179 N92-30523 N92-29142 AD-A248743 p 306 AD-A248752 p 430 N92-27968 # # N92-32492 AD-A248761 p 311 N92-27969 N92-30615 # N92-27971 # N92-29620 AD-A248963 p 393 AD-A249287 p 355 N92-30328 N92-28880 # AD-A249772 p 396 N92-31492 AD-A249795 p 385 AD-A249904 p 394 N92-31302 N92-30745 AD-A249976 p 396 N92-31554 AD-A249990 p 401 AD-A249997 p 395 N92-31392 N92-31127 AD-A250016 p 329 N92-29089 AD-A250055 p 386 AD-A250056 p 402 N92-31778 N92-31779 AD-A250069 p 385 N92-31465 AD-A250173 p 338 AD-A250200 p 356 N92-28920 N92-29144 # AD-A250203 p 356 N92-29146 AD-A250223 p 356 AD-A250233 p 338 AD-A250246 p 357 N92-29119 N92-29179 N92-29334 N92-31758 N92-29121 N92-29123 AD-A250348 p 396 AD-A250401 p 409 AD-A250442 p 395 N92-31558 N92-31330 N92-31143 AD-A250442 p 395 AD-A250579 p 358 AD-A250580 p 358 AD-A250640 p 393 AD-A250640 p 393 AD-A250650 p 393 AD-A250651 p 394 AD-A250651 p 394 AD-A250659 p 401 AD-A250749 p 410 N92-29591 N92-29592 N92-30376 N92-30216 N92-30603 N92-30644 N92-31321 N92-32023 # AD-A250741 p 400 AD-A250786 p 436 N92-31291 N92-32660 N92-32504 # N92-31974 # N92-32344 AD-A250881 p 418 AD-A251053 p 399 AD-A252176 p 402 N92-32345 # N92-30254 # N92-32063 AD-A252191 p 385 N92-30531 # N92-31590 AD-A252192 p 386 # # AD-A252234 p 444 N92-32433 AD-A252235 p 430 N92-32434 # AD-A252264p 397 N92-32107 AD-A252265p 408 N92-30592 #

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AD-A252317		р	394	N92-30719	#
		p	408	N92-30844	#
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AD-A252371			407	N92-32990	
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			409	N92-31294	#
AD-A252532		P	397	N92-31962	#
AD-A252609		ρ	432	N92-33254	#
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				N92-32942	#
AD-A252801		P	437	N92-33390	#
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			437	N92-33433	#
AD-A253387		р	438	N92-34184	#
AD-D015097		n	144	N92-16558	
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AD-D015244		Ρ	323	1192-21312	
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DE92-005530		p 266	N92-25423	#
DE92-005539		p 235	N92-24033	#
DE92-005588		p 265	N92-24683	#
DE92-006478 DE92-006486		p 190 p 212	N92-20987 N92-21002	# #
DE92-006597		p 276	N92-25508	#
DE92-006979		p 223	N92-23518	#
DE92-007143		p 275	N92-25481	#
DE92-007239		p 316	N92-26494	#
DE92-007270		p 193	N92-21322	#
DE92-007547 DE92-007633	•••••••••	p 276 p 276	N92-25743 N92-25989	# #
DE92-007681		p 316	N92-26375	#
DE92-007757		p 297	N92-26850	#
DE92-008291		p 287	N92-24293	#
DE92-008446	•••••	p 276	N92-25993	#
DE92-008799 DE92-009459	••••••••••••••••••••••••••••••	p 275 p 337	N92-24899 N92-28685	# #
DE92-003439		p 296	N92-26203	# #
DE92-010265		p 336	N92-28278	#
DE92-010477		p 305	N92-27349	#
DE92-010577		p 409	N92-31309	#
DE92-010657		p 385	N92-30829	#
DE92-010680 DE92-010953		p 329 p 297	N92-28382 N92-26938	# #
DE92-011545		p 291	N92-26025	π #
DE92-011839		p 355	N92-28775	#
DE92-011974		p 396	N92-31608	#
DE92-013036		p 396	N92-31589	#
DE92-013472 DE92-013674	•••••	p 384	N92-30368	#
DE92-013674 DE92-014032		p 386 p 419	N92-31747 N92-33181	# #
DE92-014416		p 395	N92-31409	#
DE92-014728		p 386	N92-32120	#
DE92-015092		p 394	N92-31011	#
DE92-015218		p 386	N92-31711	#
DE92-016530 DE92-017080		p 420	N92-33978 N92-34076	#
DE92-017080 DE92-018032		p 438 p 446	N92-34076 N92-33987	# #
DE92-603590		p 160	N92-18757	#
DE92-603591		p 160	N92-18758	#
DE92-609034		p 110	N92-17970	#
DE92-609049		p 159	N92-18132	#
DE92-609575		p 110	N92-17877	#
DE92-611247 DE92-613573		p 110 p 213	N92-17815 N92-21554	# #
DE92-613573 DE92-613574		p 213	N92-21554	# #
DE92-613575		p 214	N92-21556	#
DE92-613576		p 214	N92-21557	#
DE92-613577		p 214	N92-21558	#
DE92-613578 DE92-613579	••••••	p 214	N92-21559	#
DE92-613579 DE92-613580		p 214 p 214	N92-21560 N92-21561	# #
DE92-613581		p 214	N92-21562	#
DE92-613582		p 214	N92-21563	#

DE92-613582

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DE92-613583

DE92-613583 DE92-613601			
	p 214	N92-21564	#
	p 215	N92-21590	#
	p 215	N92-21591	#
	p 250	N92-23218	#
DE92-614951	p 315	N92-26186	#
DE92-614952	p 250	N92-24022	#
DE92-619064	p 433	N92-34103	#
DE92-634084	p 433	N92-34103	π #
DE92-634085	p 48	N92-12417	#
DE92-703044 DE92-704335	p 125	N92-17802	#
DE92-704335	p 125	1102-11002	"
DHHS/PUB/FDA-91-4246	p 230	N92-22127	#
	p 200		"
DHHS/PUB/NIOSH-91-111	p 275	N92-25435	#
DLR-FB-90-14		N92-33995	#
DLR-FB-91-18	p 176	N92-19410	#
DNA-TR-90-157		N92-17476	#
DNA-TR-91-111	p 186	N92-20813	#
DOE-92007757	p 297	N92-26850	#
006-92007737	p 207	1102-20000	"
DOE/CE-76246/T5	p 36	N92-12402	#
DOE/CE-76246/T6	p 36	N92-12403	#
DOE/CS-66001-14	p 31	N92-12392	*#
DOE/ER-0511P	p 32	N92-12401	#
DOE/ER-13257/T2	p 107	N92-16543	#
DOE/ER-13261/6	p 385	N92-30829	#
DOE/ER-13461/6	p 266	N92-25047	#
DOE/ER-13691/T2	p 297	N92-26938	#
DOE/ER-13716/2	p 2	N92-11612	#
DOE/ER-13742/5	p 186	N92-21044	#
DOE/ER-13791/37	p 384	N92-30368	#
DOE/ER-13828/4	p 296	N92-26493	#
DOE/ER-20011/T1	p 420	N92-33978	#
DOE/ER-20021/1	p 107	N92-16542	#
DOE/ER-60253/8	p 30	N92-12387	#
DOE/ER-60429/T1	p 167	N92-18296	#
DOE/ER-60455/5	p 168	N92-18419	#
DOE/ER-60455/6	p 167	N92-18025	#
DOE/ER-60519/T3	p 81	N92-15534	# #
DOE/ER-60522/6	р 386 р 386	N92-32120 N92-31747	# #
DOE/ER-60631/9	p 167	N92-18102	#
DOE/ER-60639/4 DOE/ER-60655/4	p 121	N92-16552	#
DOE/ER-60655/4 DOE/ER-60673/T4	p 419	N92-33181	#
DOE/ER-60675/5	p 275	N92-24899	#
DOE/ER-60693/T1	p 2	N92-10276	#
DOE/ER-60713/T1	p 265	N92-24683	#
DOE/ER-60858/2	p 266	N92-25423	#
DOE/ER-60863/3	p 276	N92-25743	#
DOE/ER-60951/2	p7	N92-11623	#
DOE/ER-60989/2	p 159	N92-18113	#
DOE/ER-61009/2	p 235	N92-24033	Ħ
DOE/ER-61091/1	р7	N92-11622	#
DOE/ER-61241/1	p 275	N92-25422	#
DOF/5V-10277/T2	n 160	N92-18887	#
DOE/EV-10277/T2	p 160	N92-18887	#
DOF/OR-00033/T453	p 168	N92-18598	# #
DOF/OR-00033/T453	p 168	N92-18598	
DOE/OR-00033/T453	p 168 p 160	N92-18598 N92-19636	#
DOF/OR-00033/T453	р 168 р 160 р 124	N92-18598 N92-19636 N92-17798	# #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T462	p 168 p 160 p 124 p 124	N92-18598 N92-19636 N92-17798 N92-17800	####
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455	p 168 p 160 p 124 p 124	N92-18598 N92-19636 N92-17798 N92-17800	# #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T452 DOE/OR-00033/T462 DOT/FAA-AM-92/2	p 168 p 160 p 124 p 124 p 234	N92-18598 N92-19636 N92-17798 N92-17800 N92-23139	# # # #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16	p 168 p 160 p 124 p 124 p 234 p 234	N92-18598 N92-19636 N92-17798 N92-17800 N92-23139 N92-19808	#### #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T462 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17	p 168 p 160 p 124 p 124 p 234 p 234 p 184 p 186	N92-18598 N92-19636 N92-17798 N92-17800 N92-23139 N92-19808 N92-21328	#### # ##
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19	p 168 p 160 p 124 p 124 p 234 p 234 p 184 p 186 p 394	N92-18598 N92-19636 N92-17798 N92-17600 N92-23139 N92-19808 N92-21328 N92-30745	#### # ###
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T462 DOT/FAA/AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/6	p 168 p 160 p 124 p 124 p 234 p 184 p 186 p 394 p 308	N92-18598 N92-19636 N92-17798 N92-17800 N92-23139 N92-19808 N92-21328 N92-21328 N92-21328 N92-21500	#### # ####
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19	p 168 p 160 p 124 p 124 p 234 p 184 p 186 p 394 p 308	N92-18598 N92-19636 N92-17798 N92-17800 N92-23139 N92-19808 N92-21328 N92-21328 N92-21328 N92-21500	#### # ###
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T462 DOT/FAA/AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/6	p 168 p 160 p 124 p 124 p 234 p 184 p 394 p 308 p 309	N92-18598 N92-19636 N92-1778 N92-17800 N92-23139 N92-19808 N92-21328 N92-21328 N92-230745 N92-27500 N92-27501	#### # ####
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T452 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19	p 168 p 160 p 124 p 124 p 234 p 234 p 184 p 304 p 308 p 309 p 400	N92-18598 N92-19636 N92-1778 N92-17800 N92-23139 N92-19808 N92-21328 N92-21328 N92-230745 N92-27500 N92-27501	#### # #####
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T452 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/9	p 168 p 160 p 124 p 124 p 234 p 234 p 184 p 304 p 308 p 309 p 400	N92-18598 N92-19636 N92-1778 N92-17800 N92-23139 N92-19808 N92-21328 N92-21328 N92-230745 N92-27500 N92-27501	#### # #####
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T452 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/6 DOT/FAA/AM-92/9 DOT/FAA/AM-92/14	p 168 p 160 p 124 p 124 p 234 p 184 p 394 p 308 p 309 p 400 p 45	N92-18598 N92-19636 N92-17788 N92-17800 N92-23139 N92-19808 N92-21328 N92-30745 N92-27500 N92-27501 N92-30488 N92-13577	#### # ##### # #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T452 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/14 DOT/FAA/CT-TN92/14 DOT/FAA/RD-91/20	p 168 p 160 p 124 p 124 p 234 p 234 p 304 p 304 p 309 p 400 p 45 p 84	N92-18598 N92-19636 N92-1778 N92-17800 N92-23139 N92-19808 N92-21328 N92-21328 N92-27501 N92-27501 N92-30488 N92-13577 N92-15541	#### # ##### # #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T452 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/6 DOT/FAA/AM-92/9 DOT/FAA/AM-92/14	p 168 p 160 p 124 p 124 p 234 p 234 p 304 p 304 p 309 p 400 p 45 p 84	N92-18598 N92-19636 N92-1778 N92-17800 N92-23139 N92-19808 N92-21328 N92-21328 N92-27501 N92-27501 N92-30488 N92-13577 N92-15541	#### # ##### # #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T452 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/14 DOT/FAA/CT-TN92/14 DOT/FAA/RD-91/20	p 168 p 160 p 124 p 124 p 234 p 184 p 308 p 309 p 400 p 45 p 84 p 84	N92-18598 N92-19636 N92-17798 N92-17780 N92-23139 N92-21328 N92-21328 N92-21328 N92-27500 N92-27501 N92-30488 N92-30488 N92-13577 N92-15541	#### # ##### # #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOT/FAA/AM-92/2 DOT/FAA/AM-92/2 DOT/FAA/AM-92/19 DOT/FAA/AM-92/6 DOT/FAA/AM-92/9 DOT/FAA/AM-92/9 DOT/FAA/CT-TN92/14 DOT/FAA/CT-TN92/14 DOT/FAA/RD-91/20 DOT/FAA/RD-91/20	p 168 p 160 p 124 p 124 p 234 p 184 p 394 p 308 p 309 p 400 p 45 p 84 p 306	N92-18598 N92-19636 N92-1778 N92-17800 N92-23139 N92-19808 N92-21328 N92-21328 N92-27501 N92-27501 N92-30488 N92-13577 N92-15541 N92-15541 N92-27702	#### # ##### # # #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOT/FAA-AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/10 DOT/FAA/RD-91/20 DOT/FAA/RD-91/20 DOTVNTSC-FAA-91-12 DREO-CR-91-646 DREO-PSD-EPS-05/89	p 168 p 160 p 124 p 124 p 234 p 234 p 304 p 308 p 309 p 400 p 45 p 84 p 84 p 306 p 410	N92-18598 N92-19636 N92-1778 N92-17780 N92-23139 N92-21328 N92-21328 N92-21328 N92-27500 N92-27500 N92-30488 N92-13577 N92-15541 N92-15541 N92-27702 N92-32031	#### # ##### # # # # # #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOT/FAA/AM-92/2 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/CT-TN92/14 DOT/FAA/RD-91/20 DOT/VNTSC-FAA-91-12 DREO-CR-91-646 DREO-PSD-EPS-05/89 DREO-TN-91-14	p 168 p 160 p 124 p 124 p 234 p 184 p 308 p 309 p 400 p 45 p 84 p 306 p 410 p 146	N92-18598 N92-19636 N92-17788 N92-17780 N92-23139 N92-21328 N92-21328 N92-21328 N92-27501 N92-30488 N92-13577 N92-15541 N92-15541 N92-27702 N92-32031 N92-17278	#### # ##### # # # # # #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOT/FAA/AM-91/16 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/6 DOT/FAA/AM-92/9 DOT/FAA/AM-92/9 DOT/FAA/AM-92/9 DOT/FAA/AM-92/14 DOT/FAA/AM-91/20 DOT/FAA/RD-91/20 DOTVNTSC-FAA-91-12 DREO-CR-91-646 DREO-TN-91-14 DREO-TN-91-14 DREO-TN-91-15	p 168 p 160 p 124 p 124 p 124 p 184 p 394 p 394 p 396 p 400 p 45 p 84 p 306 p 306 p 410 p 146 p 140	N92-18598 N92-17680 N92-17780 N92-17800 N92-23139 N92-19808 N92-21328 N92-21328 N92-27500 N92-27501 N92-30488 N92-13577 N92-15541 N92-15541 N92-27702 N92-32031 N92-17278 N92-19333	#### # ##### # # # # # # #
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOT/FAA/AM-91/16 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/6 DOT/FAA/AM-92/6 DOT/FAA/AM-92/9 DOT/FAA/AM-92/9 DOT/FAA/AM-92/14 DOT/FAA/CT-TN92/14 DOT/FAA/RD-91/20 DOTVNTSC-FAA-91-12 DREO-CR-91-646 DREO-TN-91-14 DREO-TN-91-15 DREO-TN-91-15	p 168 p 160 p 124 p 124 p 234 p 184 p 394 p 394 p 394 p 394 p 400 p 45 p 84 p 84 p 306 p 140 p 146 p 142 p 146	N92-18598 N92-19636 N92-17788 N92-17780 N92-23139 N92-21328 N92-21328 N92-21328 N92-2132750 N92-30488 N92-30488 N92-13577 N92-15541 N92-15541 N92-15541 N92-27702 N92-32031 N92-17278 N92-17278 N92-19333 N92-27664	#### # ##### # # # # # # ###
DOE/OR-00033/T453 DOE/OR-00033/T454 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOE/OR-00033/T455 DOT/FAA/AM-91/16 DOT/FAA/AM-91/16 DOT/FAA/AM-91/17 DOT/FAA/AM-92/19 DOT/FAA/AM-92/19 DOT/FAA/AM-92/6 DOT/FAA/AM-92/9 DOT/FAA/AM-92/9 DOT/FAA/AM-92/9 DOT/FAA/AM-92/14 DOT/FAA/AM-91/20 DOT/FAA/RD-91/20 DOTVNTSC-FAA-91-12 DREO-CR-91-646 DREO-TN-91-14 DREO-TN-91-14 DREO-TN-91-15	p 168 p 160 p 124 p 124 p 234 p 184 p 394 p 394 p 394 p 394 p 400 p 45 p 84 p 84 p 306 p 140 p 146 p 142 p 146	N92-18598 N92-19636 N92-17788 N92-17780 N92-23139 N92-21328 N92-21328 N92-21328 N92-2132750 N92-30488 N92-30488 N92-13577 N92-15541 N92-15541 N92-15541 N92-27702 N92-32031 N92-17278 N92-17278 N92-19333 N92-27664	#### # ##### # # # # # # #
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MCAT-92-003	p 147 p 147 p 306 p 369 p 312 p 355 p 216 p 2408 p 369 p 384 p 369 p 384 p 17 p 329 p 389 p 395 p 419 p 174 p 329 p 395 p 419 p 395 p 419 p 395 p 369 p 372 p 369 p 369 p 372 p 369 p 372 p 369 p 372 p 375 p 746 p 395 p 746 p 395 p 746 p 395 p 746 p 395 p 395 p 395 p 395 p 395 p 395 p 395 p 305 p 305	N92-17673 # N92-17432 # N92-27371 # N92-28631 # N92-28657 # N92-28557 # N92-20353 * N92-22833 * N92-20353 * N92-20353 * N92-20353 * N92-20353 * N92-20353 * N92-20354 * N92-30305 * N92-30305 * N92-30305 * N92-30305 * N92-28274 * N92-28377 * N92-28371 * N92-28371 * N92-28371 * N92-28371 * N92-28371 * N92-282420 * N92-13581 * N92-13587 * N92-13587 * N92-13587 * N92-28570 *
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p 355 p 15 p 215 p 246 p 408 p 369	N92-28164 N92-28557 N92-11629 * N92-20353 * N92-22283 * N92-30381 * N92-28521 *	## #####	NAS 1.55:3129 p 51 N92-13588 * # NAS 1.55:3146 p 291 N92-25961 * # NAS 1.60:3153 p 184 N92-19772 * # NAS 1.60:3159 p 121 N92-17022 * # NAS 1.60:3174 p 121 N92-16553 * # NAS 1.60:3175 p 121 N92-16553 * # NAS 1.60:3176 p 145 N92-16554 * # NAS 1.60:3178 p 124 N92-17645 * # NAS 1.60:3182 p 124 N92-17645 * # NAS 1.60:3185 p 230 N92-22186 * #
p 355 p 15 p 215 p 246 p 408 p 369 p 384	N92-28164 N92-28557 N92-20353 * N92-2283 * N92-2283 * N92-30381 * N92-28521 * N92-30305 *	## ######	NAS 1.55:3129 p 51 N92-13588 # NAS 1.55:3146 p 291 N92-25961 * NAS 1.60:3153 p 184 N92-19772 * NAS 1.60:3153 p 184 N92-19772 * NAS 1.60:3153 p 121 N92-17022 * NAS 1.60:3175 p 121 N92-16553 * NAS 1.60:3175 p 121 N92-16554 * NAS 1.60:3176 p 145 N92-16562 * NAS 1.60:3176 p 144 N92-16562 * NAS 1.60:3182 p 124 N92-16562 * NAS 1.60:3185 p 230 N92-22186 * NAS 1.60:3200 p 370 N92-2887 *
p 355 p 15 p 215 p 246 p 408 p 369 p 384 p 419	N92-28164 N92-28557 N92-20353 * N92-20353 * N92-22283 * N92-30381 * N92-28521 N92-30305 * N92-30303 *	## #######	NAS 1.55:3129 p 51 N92-13588 # NAS 1.55:3146 p 291 N92-25961 # NAS 1.60:3153 p 184 N92-19772 # NAS 1.60:3153 p 184 N92-19772 # NAS 1.60:3153 p 121 N92-17022 # NAS 1.60:3174 p 121 N92-16553 # NAS 1.60:3176 p 121 N92-16564 # NAS 1.60:3176 p 145 N92-16562 # NAS 1.60:3176 p 124 N92-17645 # NAS 1.60:3185 p 230 N92-28186 # NAS 1.60:3200 p 370 N92-28598 * # NAS 1.60:3206 p 316 N92-26538 * #
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p 355 p 15 p 215 p 246 p 369 p 369 p 384 p 329 p 329 p 335 p 335 p 395 p 395 p 409 p 234 p 189 p 30 p 30 p 30 p 33	N92-28164 N92-28557 N92-20353 * N92-2283 * N92-2283 * N92-28521 * N92-30305 * N92-30305 * N92-30305 * N92-30305 * N92-30305 * N92-2937 * N92-2937 * N92-2937 * N92-23424 * N92-231166 * N92-23424 * N92-20276 * N92-212388 * N92-12388 * N92-12388 *	并并 并并并并并并并并并并并并并并并并并并并	NAS 1.55:3129 p 51 N92-13588 * # NAS 1.55:3146 p 291 N92-25961 * # NAS 1.60:3153 p 184 N92-19772 * # NAS 1.60:3153 p 184 N92-19772 * # NAS 1.60:3153 p 121 N92-16762 * # NAS 1.60:3175 p 121 N92-16553 * # NAS 1.60:3175 p 121 N92-16554 * # NAS 1.60:3176 p 145 N92-16562 * # NAS 1.60:3185 p 230 N92-22186 * # NAS 1.60:3200 p 316 N92-26838 * # NAS 1.60:3205 p 433 N92-34154 * # NAS 1.60:3205 p 433 N92-24056 * # NAS 1.71:MFS-28430-1 p 250 N92-24056 * # NAS 1.71:MFS-28441-1 p 250 N92-24056 * # NAS 1.71:MFS-28441-1 p 250 N92-24056 * # NAS 1.71:MFS-263-1 p 147 N92-17866 * # NAS 1.71:MSC-21752-1 p 447 </td
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p 355 p 15 p 215 p 248 p 408 p 369 p 384 p 319 p 319 p 319 p 355 p 395 p 395 p 335 p 309 p 324 p 324	N92-28164 N92-28557 N92-11629 N92-22857 N92-2283 N92-2283 N92-30381 N92-30305 N92-30305 N92-30305 N92-30305 N92-30305 N92-20376 N92-23424 N92-23424 N92-23424 N92-23424 N92-23424 N92-21166 N92-242076 N92-23424 N92-12385 N92-12385 N92-13581 N92-13581 N92-13581 N92-13581 N92-13581 N92-28670 N92-28670 N92-28677 N92-262666 N92-29174 N92-28212 N92-28157	并并 并并并并并并并并并并并并并并并并并并并并并并并并	NAS 1.55:3129 p 51 N92-13588 # NAS 1.55:3146 p 291 N92-25961 # NAS 1.60:3153 p 184 N92-19772 # NAS 1.60:3153 p 184 N92-19772 # NAS 1.60:3153 p 184 N92-19772 # NAS 1.60:3153 p 121 N92-17022 # NAS 1.60:3175 p 121 N92-16553 # NAS 1.60:3176 p 145 N92-16562 # NAS 1.60:3176 p 124 N92-16562 # NAS 1.60:3185 p 230 N92-22186 # NAS 1.60:3200 p 370 N92-28837 # NAS 1.60:3206 p 316 N92-26538 # NAS 1.60:3205 p 433 N92-34154 # NAS 1.60:3205 p 433 N92-34154 # NAS 1.71:MFS-28481-1 p 250 N92-24056 #
p 355 p 15 p 216 p 408 p 408 p 418 p 419 p 419 p 419 p 329 p 305 p 305 p 307 p 3447	N92-28164 N92-28557 N92-11629 * N92-2053 * N92-22283 * N92-30381 * N92-30305 * N92-30305 * N92-30305 * N92-10297 * N92-29397 * N92-29397 * N92-29397 * N92-23424 * N92-31166 * N92-23424 * N92-23424 * N92-210287 * N92-21288 * N92-12388 * N92-13581 * N92-13581 * N92-28670 * N92-28670 * N92-28670 * N92-28677 * N92-28215 *	并并 并并并并并并并并并并并并并并并并并并并并并并并并并	NAS 1.55:3129 p 51 N92-13588 # NAS 1.55:3146 p 291 N92-25961 # NAS 1.60:3153 p 184 N92-19772 # NAS 1.60:3153 p 184 N92-19772 # NAS 1.60:3153 p 184 N92-19772 # NAS 1.60:3153 p 121 N92-17022 # NAS 1.60:3175 p 121 N92-16553 # NAS 1.60:3176 p 124 N92-16562 # NAS 1.60:3176 p 124 N92-16562 # NAS 1.60:3185 p 230 N92-22186 # NAS 1.60:3206 p 316 N92-26827 # NAS 1.60:3207 p 317 N92-26862 # NAS 1.60:3205 p 433 N92-24056 # NAS 1.60:3205 p 433 N92-24056 # NAS 1.71:MFS-28430-1 p 250 N92-24056 #
p 355 p 15 p 215 p 248 p 369 p 369 p 384 p 329 p 329 p 395 p 395 p 395 p 307 p 337 p 25 p 333 p 337 p 329 p 337 p 329 p 329 p 329 p 307 p 324 p 324 p 3447	N92-28164 N92-28557 N92-11629 N92-2053 N92-22283 N92-30381 N92-30305 N92-30305 N92-30305 N92-19977 N92-29397 N92-29397 N92-29397 N92-28744 N92-31166 N92-31166 N92-31166 N92-23424 N92-10287 N92-28420 N92-1288 N92-13581 N92-13587 N92-28670 N92-27877 N92-28157 N92-28157 N92-28157 N92-28157 N92-28157 N92-28157 N92-28157 N92-34209	并并 并并并并并并并并并并并并并并并并并并并并并并并并并并	NAS 1.55:3129 p 51 N92-13588 # NAS 1.55:3146 p 291 N92-25961 # NAS 1.60:3153 p 184 N92-19772 # NAS 1.60:3153 p 184 N92-19772 # NAS 1.60:3153 p 121 N92-19772 # NAS 1.60:3175 p 121 N92-16553 # NAS 1.60:3175 p 124 N92-16554 # NAS 1.60:3185 p 230 N92-28186 # NAS 1.60:3207 p 317 N92-28638 # NAS 1.60:3207 p 317 N92-28058 # NAS 1.60:3207 p 317 N92-24056 # NAS 1.71:MFS-28633-1 p 250 N92-24016 #
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NASA-CR-190112	p 186 p 213 p 276 p 192 p 315 p 280 p 304 p 304	N92-20422 * # N92-21345 * # N92-26030 * # N92-22030 * # N92-26193 * # N92-26732 * # N92-26263 * # N92-30488 #
NASA-CR-190112	p 186 p 213 p 276 p 192 p 315 p 280 p 304 p 400 p 369	N92-20422 * # N92-21345 * # N92-26030 * # N92-22030 * # N92-26193 * # N92-25732 * # N92-26263 * # N92-30488 # N92-30488 #
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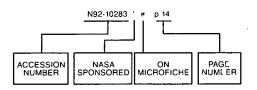
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A92-51490 * A92-51491 * A92-51492 A92-51493 A92-51493 * A92-51494 * A92-51495 * A92-51496 A92-51497 A92-51498 *	p 379 p 380 p 380 p 380 p 380 p 380 p 381 p 381 p 381 p 381 p 381 p 381	A92-54730 A92-54731 A92-54732 A92-54733 A92-54733 A92-54735 A92-54735 A92-54736 A92-54947 A92-54949	p 423 p 423 p 434 p 424 p 424 p 424 p 434 p 434 p 447 p 447 p 424	A92-57213 A92-57274 A92-57275 * A92-57276 A92-57277 * A92-57278 * A92-57278 * A92-57280 A92-57280 A92-57366 N92-10276 #	p 429 p 429 p 429 p 429 p 430 p 430 p 430 p 430 p 430 p 430 p 430 p 438	N92-12533 # p 49 N92-13083 # p 33 N92-13546 # p 33 N92-13547 # p 33 N92-13548 # p 43 N92-13549 # p 43 N92-13550 # p 43 N92-13551 # p 43 N92-13552 # p 43 N92-13553 # p 38 N92-13554 # p 43 N92-13554 # p 43	N92-13642 *# N92-13643 *# N92-13644 *# N92-13645 *# N92-13646 *# N92-13647 *# N92-13648 *# N92-13650 *# N92-13650 *#	p 62 p 62 p 62 p 63 p 63 p 63 p 63 p 63 p 64 p 64
A92-51490 * A92-51491 * A92-51492 A92-51492 A92-51493 * A92-51495 * A92-51495 A92-51495	p 379 p 380 p 380 p 380 p 380 p 380 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 381	A92-54730 A92-54731 A92-54732 A92-54733 A92-54733 A92-54735 A92-54735 A92-54736 A92-54736 A92-54949 A92-55068 A92-55070	p 423 p 423 p 434 p 434 p 434 p 424 p 434 p 434 p 434 p 434 p 434 p 424 p 424 p 434	A92-57213 A92-57274 A92-57276 A92-57276 A92-57277 A92-57277 A92-57278 A92-57279 A92-57280 A92-57366 N92-10276 # N92-10277	p 429 p 429 p 429 p 429 p 430 p 430 p 430 p 430 p 430 p 448	N92-12533 # p 49 N92-13083 # p 33 N92-13546 # p 33 N92-13547 # p 33 N92-13547 # p 33 N92-13549 # p 38 N92-13550 # p 43 N92-13551 # p 43 N92-13552 # p 43 N92-13553 # p 38	N92-13642 *# N92-13643 *# N92-13644 *# N92-13645 *# N92-13647 *# N92-13648 *# N92-13648 *# N92-13649 *# N92-13651 *# N92-13652 *#	p 62 p 62 p 62 p 63 p 63 p 63 p 63 p 63 p 64 p 64 p 64
A92-51490 * A92-51491 * A92-51492 A92-51493 A92-51493 * A92-51494 * A92-51495 * A92-51496 A92-51497 A92-51498 *	p 379 p 380 p 380 p 380 p 380 p 380 p 381 p 381 p 381 p 381 p 381 p 381	A92-54730 A92-54731 A92-54732 A92-54733 A92-54733 A92-54735 A92-54735 A92-54735 A92-54736 A92-54947 A92-55049 A92-55070 A92-55075	p 423 p 423 p 434 p 423 p 424 p 424 p 434 p 434 p 434 p 434 p 424 p 424 p 434 p 434 p 434 p 434	A92-57213 A92-57274 A92-57275 * A92-57275 * A92-57277 * A92-57278 * A92-57278 * A92-57280 A92-57280 A92-57280 A92-57260 M92-10276 # N92-10277 #	p 429 p 429 p 429 p 429 p 430 p 430 p 430 p 430 p 448 p 448 p 448	N92-12533 # p 49 N92-13083 # p 33 N92-13546 # p 33 N92-13547 # p 33 N92-13548 # p 43 N92-13550 # p 43 N92-13550 # p 43 N92-13552 # p 43 N92-13552 # p 43 N92-13553 # p 43 N92-13554 # p 43 N92-13555 # p 43 N92-13554 # p 43 N92-13555 # p 43 N92-13554 # p 43 N92-13554 # p 43 N92-13555 # p 43	N92-13642 *# N92-13643 *# N92-13645 *# N92-13645 *# N92-13646 *# N92-13648 *# N92-13648 *# N92-13650 *# N92-13652 *# N92-13652 *#	p 62 p 62 p 62 p 63 p 63 p 63 p 63 p 63 p 64 p 64 p 64 p 64
A92-51490 * A92-51491 * A92-51492 A92-51492 A92-51493 A92-51494 * A92-51495 * A92-51496 A92-51496 A92-51498 * A92-51499 A92-51499	p 379 p 380 p 380 p 380 p 380 p 380 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 381	A92-54730 A92-54731 A92-54732 A92-54732 A92-54733 A92-54735 A92-54735 A92-54735 A92-54949 A92-554949 A92-55076 A92-55075 A92-55075 A92-55155 #	p 423 p 423 p 434 p 434 p 424 p 434 p 434 p 434 p 434 p 424 p 424 p 424 p 424 p 424 p 415 p 415 p 440	A92-57213 A92-57274 A92-57276 A92-57276 A92-57277 A92-57277 A92-57278 A92-57279 A92-57280 A92-57366 N92-10276 # N92-10277	p 429 p 429 p 429 p 429 p 430 p 430 p 430 p 430 p 430 p 448	N92-12533 # p 93 N92-13643 # p 33 N92-13546 # p 33 N92-13547 # p 33 N92-13548 # p 33 N92-13549 # p 38 N92-13550 # p 43 N92-13551 # p 43 N92-13552 # p 43 N92-13552 # p 43 N92-13554 # p 38 N92-13555 # p 43 N92-13555 # p 43 N92-13555 # p 44 N92-13555 # p 44	N92-13642 *# N92-13644 *# N92-13644 *# N92-13645 *# N92-13647 *# N92-13647 *# N92-13648 *# N92-13650 *# N92-13651 *# N92-13653 *# N92-13654 *#	p 62 p 62 p 62 p 63 p 63 p 63 p 63 p 64 p 64 p 64 p 64 p 65
A92-51490 * A92-51491 * A92-51492 A92-51493 A92-51493 A92-51494 * A92-51496 A92-51496 A92-51497 A92-51498 * A92-51499 A92-51500 A92-51632	p 379 p 380 p 380 p 380 p 380 p 380 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 382 p 382 p 382 p 382	A92-54730 A92-54731 A92-54732 A92-54733 A92-54733 A92-54735 A92-54735 A92-54735 A92-54736 A92-54947 A92-55049 A92-55070 A92-55075	p 423 p 423 p 434 p 423 p 424 p 424 p 434 p 434 p 434 p 434 p 424 p 424 p 434 p 434 p 434 p 434	A92-57213 A92-57274 A92-57275 * A92-57275 * A92-57277 * A92-57278 * A92-57278 * A92-57280 A92-57280 A92-57280 A92-57260 M92-10276 # N92-10277 #	p 429 p 429 p 429 p 429 p 430 p 430 p 430 p 430 p 448 p 448 p 448	N92-12533 # p 49 N92-13646 # p 33 N92-13546 # p 33 N92-13547 # p 33 N92-13547 # p 33 N92-13549 # p 33 N92-13550 # p 43 N92-13551 # p 43 N92-13552 # p 43 N92-13552 # p 43 N92-13554 # p 38 N92-13555 # p 43 N92-13555 # p 43 N92-13555 # p 44 N92-13556 # p 44 N92-13556 # p 44	N92-13642 *# N92-13643 *# N92-13645 *# N92-13645 *# N92-13646 *# N92-13648 *# N92-13648 *# N92-13650 *# N92-13652 *# N92-13652 *#	p 62 p 62 p 62 p 63 p 63 p 63 p 63 p 63 p 64 p 64 p 64 p 64
A92-51490 * A92-51491 * A92-51492 A92-51492 A92-51493 A92-51495 * A92-51495 * A92-51495 A92-51496 A92-51498 * A92-51498 A92-51499 A92-51632 A92-51632 A92-51701	p 379 p 380 p 380 p 380 p 380 p 380 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 382 p 382 p 382 p 405 p 405	A92-54730 A92-54731 A92-54732 A92-54732 A92-54733 A92-54735 A92-54735 A92-54735 A92-54735 A92-54949 A92-55068 A92-55070 A92-55075 A92-55155 # A92-55155	p 423 p 423 p 434 p 434 p 434 p 434 p 434 p 434 p 434 p 424 p 424 p 424 p 424 p 424 p 434 p 415 p 440 p 440	A92-57213 A92-57274 A92-57275 • A92-57276 A92-57277 • A92-57278 • A92-57278 • A92-57280 A92-57280 A92-57280 A92-57280 A92-10276 # N92-10276 # N92-10276 # N92-10278 # N92-10279 #	p 429 p 429 p 429 p 429 p 430 p 430 p 430 p 430 p 430 p 430 p 430 p 448 p 4 p 4 p 4 p 4 p 4 p 4 p 4 p 4	N92-12533 # p 49 N92-13083 # p 33 N92-13546 # p 33 N92-13547 # p 33 N92-13548 # p 33 N92-13549 # p 38 N92-13550 # p 43 N92-13551 # p 43 N92-13552 # p 43 N92-13552 # p 43 N92-13554 # p 38 N92-13555 # p 43 N92-13555 # p 43 N92-13555 # p 44 N92-13555 # p 44	N92-13642 *# N92-13644 *# N92-13644 *# N92-13645 *# N92-13647 *# N92-13647 *# N92-13648 *# N92-13650 *# N92-13651 *# N92-13653 *# N92-13654 *#	p 62 p 62 p 62 p 63 p 63 p 63 p 63 p 64 p 64 p 64 p 64 p 65
A92-51490 * A92-51491 * A92-51492 A92-51492 A92-51494 * A92-51495 * A92-51496 A92-51496 A92-51496 A92-51499 A92-51499 A92-51499 A92-51500 A92-51500 A92-51701 A92-51708	p 379 p 380 p 380 p 380 p 380 p 380 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 382 p 382 p 382 p 382 p 405 p 405	A92-54730 A92-54731 A92-54732 A92-54732 A92-54733 A92-54735 A92-54735 A92-54736 A92-54736 A92-54949 A92-55068 A92-55068 A92-55068 A92-55075 A92-55155 # A92-55488 A92-555488	p 423 p 423 p 434 p 434 p 434 p 434 p 434 p 434 p 434 p 434 p 434 p 424 p 424 p 424 p 424 p 434 p 415 p 440 p 440 p 440	A92-57213 A92-57274 A92-57275 * A92-57275 * A92-57277 * A92-57278 * A92-57280 A92-57280 A92-57280 A92-57280 A92-57280 M92-10276 # N92-10276 # N92-10278 # N92-10278 # N92-10281 #	p 429 p 429 p 429 p 429 p 430 p 430 p 430 p 430 p 430 p 448 p 4 448 p 4 p 4 p 4 p 4 p 4 p 4 p 4 p 4 p 4 p 4	N92-12533 # p 49 N92-13083 # p 33 N92-13546 # p 33 N92-13547 # p 33 N92-13548 # p 43 N92-13549 # p 38 N92-13550 # p 43 N92-13551 # p 43 N92-13552 # p 43 N92-13553 # p 38 N92-13554 # p 43 N92-13555 # p 43 N92-13555 # p 44 N92-13556 # p 44 N92-13557 # p 44 N92-13558 # p 44	N92-13642 *# N92-13643 *# N92-13644 *# N92-13645 *# N92-13646 *# N92-13648 *# N92-13648 *# N92-13650 *# N92-13651 *# N92-13652 *# N92-13653 *# N92-13652 *# N92-13663 *#	p 62 p 62 p 62 p 62 p 63 p 63 p 63 p 63 p 64 p 64 p 65 p 65 p 65
A92-51490 * A92-51491 * A92-51492 A92-51492 A92-51493 A92-51495 * A92-51495 * A92-51495 A92-51496 A92-51498 * A92-51498 A92-51499 A92-51632 A92-51632 A92-51701	p 379 p 380 p 380 p 380 p 380 p 380 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 381 p 382 p 382 p 382 p 405 p 405	A92-54730 A92-54731 A92-54732 A92-54732 A92-54733 A92-54735 A92-54735 A92-54735 A92-54735 A92-54949 A92-55068 A92-55070 A92-55075 A92-55155 # A92-55155	p 423 p 423 p 434 p 434 p 434 p 434 p 434 p 434 p 434 p 424 p 424 p 424 p 424 p 424 p 434 p 415 p 440 p 440	A92-57213 A92-57274 A92-57275 • A92-57276 A92-57277 • A92-57278 • A92-57278 • A92-57280 A92-57280 A92-57280 A92-57280 A92-10276 # N92-10276 # N92-10276 # N92-10278 # N92-10279 #	p 429 p 429 p 429 p 429 p 430 p 430 p 430 p 430 p 430 p 430 p 430 p 448 p 4 p 4 p 4 p 4 p 4 p 4 p 4 p 4	N92-12533 # p 49 N92-13646 # p 33 N92-13546 # p 33 N92-13547 # p 33 N92-13547 # p 33 N92-13549 # p 33 N92-13550 # p 43 N92-13551 # p 43 N92-13552 # p 43 N92-13552 # p 43 N92-13554 # p 38 N92-13555 # p 43 N92-13555 # p 43 N92-13555 # p 44 N92-13556 # p 44 N92-13556 # p 44	N92-13642 *# N92-13644 *# N92-13644 *# N92-13645 *# N92-13645 *# N92-13647 *# N92-13648 *# N92-13650 *# N92-13650 *# N92-13652 *# N92-13654 *# N92-13662 *#	p 62 p 62 p 62 p 62 p 63 p 63 p 63 p 64 p 64 p 64 p 65 p 65

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N92-14579 # p 72	N92-17432 # p147	N92-19018 # p 182	N92-21478 * # p 196	N92-23071 # p 233
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N92-16544 * # p 108		N92-20668 * # p 189 N92-20694 # p 193	N92-22332 *# p 230 N92-22333 *# p 230 N92-22334 *# p 237	N92-25045 # p 275 N92-25046 # p 275 N92-25047 # p 266
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N92-16544 * # p 108 N92-16545 * # p 108 N92-16546 # p 108	N92-18598 # p 168 N92-18757 # p 160	N92-20668 * # p 189 N92-20694 # p 193 N92-20704 # p 186 N92-20709 # p 189	N92-22332 * # p 230 N92-22333 * # p 230 N92-22334 * p 237 N92-22335 * # p 237 N92-22338 * # p 230	N92-25045 # p 275 N92-25046 # p 275 N92-25047 # p 266 N92-25161 * p 287 N92-25304 # p 275
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