



# Aerospace Medicine and Biology

## 1986 Cumulative Index

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Space Administration[illegible]

**A CUMULATIVE INDEX  
TO  
A CONTINUING BIBLIOGRAPHY ON**

**AEROSPACE MEDICINE  
AND BIOLOGY**

This Cumulative Index supersedes the indexes contained in supplements [SP-7011(281) through SP-7011(292)] published by NASA during 1986.



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# INTRODUCTION

## WHAT THIS CUMULATIVE INDEX IS

This publication is a cumulative index to the abstracts contained in NASA SP-7011(281) through NASA SP-7011(292) 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 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 (N86-10000).
2. AIAA entries by their *IAA* accession numbers (A86-10000 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 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 239 will be found in Supplement 287

## AVAILABILITY OF DOCUMENTS

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

## PUBLIC COLLECTIONS OF NASA DOCUMENTS

**DOMESTIC:** NASA and NASA-sponsored documents and a large number of aerospace publications are available to the public for reference purposes at the library maintained by the American Institute of Aeronautics and Astronautics, Technical Information Service, 555 West 57th Street, 12th Floor, New York, New York 10019.

**EUROPEAN:** An extensive collection of NASA and NASA-sponsored publications is maintained by the British Library Lending Division, Boston Spa, Wetherby, Yorkshire, England for public access. The British Library Lending Division also has available many of the non-NASA publications cited in *STAR*. European requesters may purchase facsimile copy or microfiche of NASA and NASA-sponsored documents, those identified by both the symbols # and \* from ESA — Information Retrieval Service European Space Agency, 8-10 rue Mario-Nikis, 75738 CEDEX 15, France.

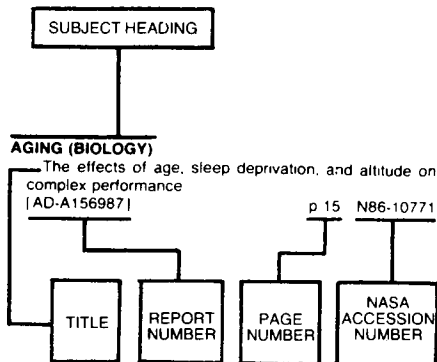
## FEDERAL DEPOSITORY LIBRARY PROGRAM

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 50 regional depositories responsible for permanent retention of material, inter-library loan, and reference services. Over 1,300 other depositories also exist. A list of the regional GPO libraries appears on the inside back cover.

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## Typical Subject Index Listing



The subject heading is a key to the subject content of the document. The title is used to provide a description of the subject matter. When the title is insufficiently descriptive of the document content, the title extension is added, separated from the title by three hyphens. The (NASA or AIAA) accession number and the page number are included in each entry to assist the user in locating the abstract in the abstract section. If applicable, a report number is also included as an aid in identifying the document. Under any one subject heading, the accession numbers are arranged in sequence with the AIAA accession numbers appearing first.

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**CONFERENCES**

Planetary ecology; Proceedings of the Sixth International  
Symposium on Environmental Biogeochemistry, Santa Fe,  
NM, October 10-14, 1983 p 50 A86-18026

Human Factors Society, Annual Meeting, 28th, San  
Antonio, TX, October 22-26, 1984, Proceedings. Volumes  
1 & 2 p 141 A86-23701

Aerospace Behavioral Engineering Technology  
Conference, 3rd, Long Beach, CA, October 15-18, 1984,  
Proceedings  
[SAE P-151] p 145 A86-26001

European Annual Conference on Human Decision  
Making and Manual Control, 4th, Zeist, Netherlands, May  
28-30, 1984, Proceedings p 183 A86-28285

Symposium on Aviation Psychology, 3rd, Columbus, OH,  
April 22-25, 1985, Proceedings p 226 A86-29851

International Union of Physiological Sciences,  
Commission on Gravitational, Physiology, Annual Meeting,  
7th, Niagara Falls, NY, October 13-18, 1985,  
Proceedings p 191 A86-30376

Human Factors Society, Annual Meeting, 29th,  
Baltimore, MD, September 29-October 3, 1985,  
Proceedings. Volumes 1 & 2 p 259 A86-33776

Aerospace Behavioral Engineering Technology  
Conference, 4th, Long Beach, CA, October 14-17, 1985,  
Proceedings  
[SAE P-168] p 269 A86-35426

Simulators; Proceedings of the Conference, Norfolk, VA,  
March 3-8, 1985 p 381 A86-40476

SAFE Association, Annual Symposium, 23rd, Las Vegas,  
NV, December 1-5, 1985, Proceedings p 429 A86-47726

Evaluation of man-machine systems: Methods and  
problems; Symposium, November 14, 15, 1985, Cologne,  
West Germany, Reports  
[DGLR-BERICHT 85-04] p 432 A86-47766

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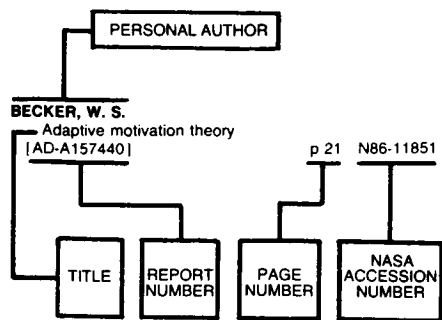
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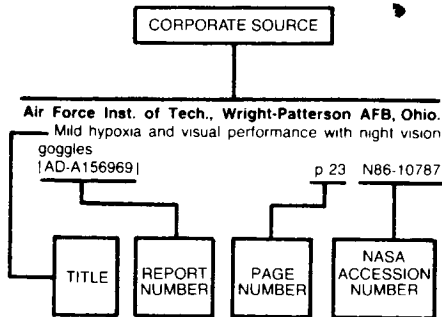
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## C

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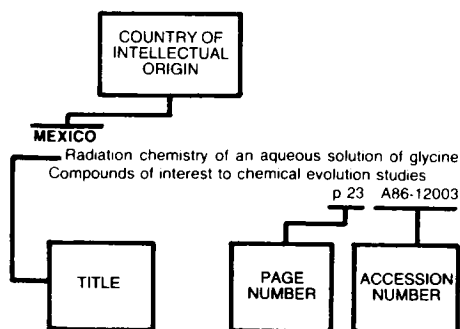
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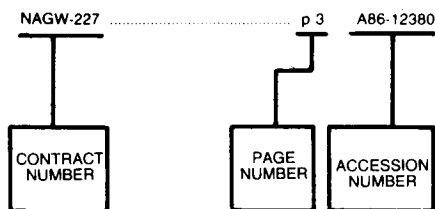
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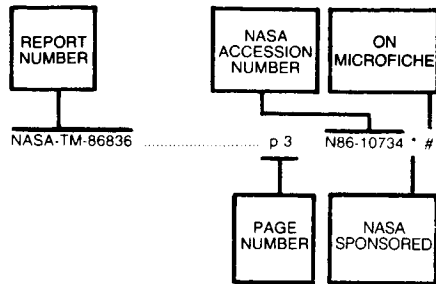
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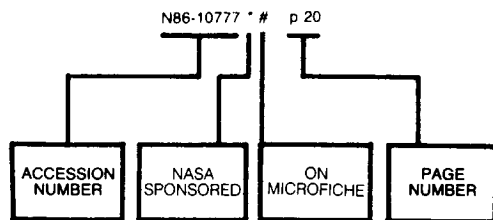
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