



**Aerospace Medicine  
and Biology**  
1988 Cumulative  
Index

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January, 1989

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

**AEROSPACE MEDICINE  
AND BIOLOGY**

This Cumulative Index supersedes the indexes contained in supplements [SP-7011(307) through SP-7011(318)] published by NASA during 1988.



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# INTRODUCTION

## WHAT THIS CUMULATIVE INDEX IS

This publication is a cumulative index to the abstracts contained in NASA SP-7011(307) through NASA SP-7011(318) 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 (N88-10000).
2. AIAA entries by their *IAA* accession numbers (A88-10000 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:

CHINA, PEOPLE'S REPUBLIC OF

## 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 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 138 will be found in Supplement 311

## 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*.

## 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.

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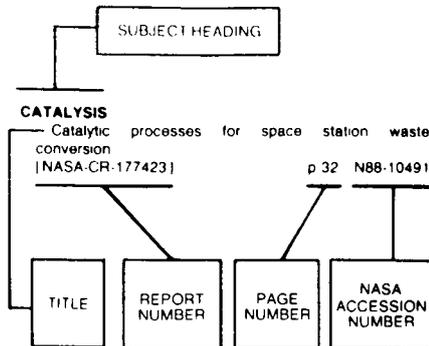
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In order to provide the general public with greater access to U.S. government publications, Congress established the Federal Depository Library Program under the Government Printing Office (GPO), with 50 regional depositories responsible for permanent 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 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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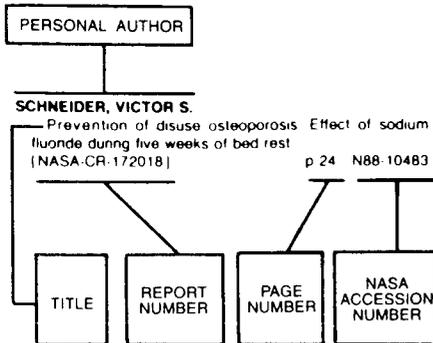
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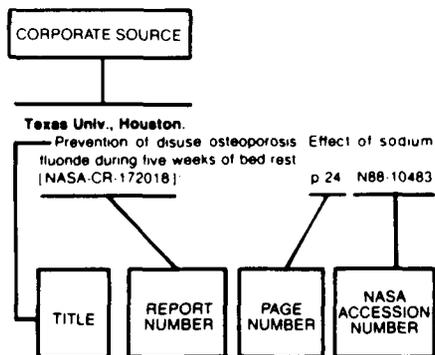
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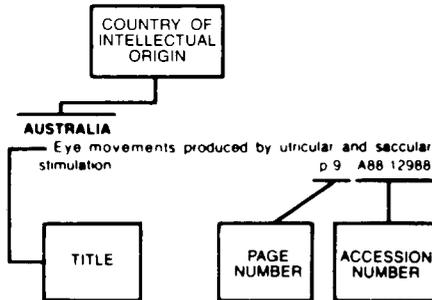
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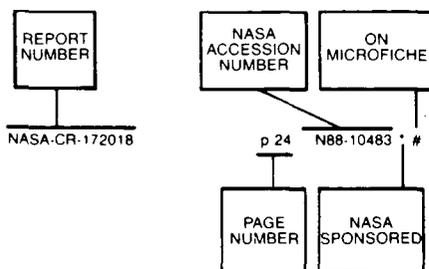
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AD-A185397	p 169	N88-17199 #	AD-A186818	p 155	N88-17181 #	AD-A189765	p 265	N88-22520 #
			AD-A186830	p 169	N88-17200 #	AD-A189771	p 265	N88-22521 #
			AD-A186834	p 164	N88-17188 #	AD-A189782	p 265	N88-22523 #
			AD-A186914	p 155	N88-17182 #	AD-A190114	p 270	N88-22533 #
			AD-A186931	p 165	N88-17189 #	AD-A190118	p 260	N88-22512 #
			AD-A186934	p 169	N88-17201 #	AD-A190218	p 266	N88-22524 #
			AD-A187013	p 165	N88-17190 #	AD-A190228	p 266	N88-22525 #
			AD-A187015	p 156	N88-17183 #	AD-A190233	p 266	N88-22526 #
			AD-A187059	p 156	N88-17184 #	AD-A190272	p 266	N88-22527 #
			AD-A187061	p 156	N88-17185 #	AD-A190337	p 270	N88-22534 #
			AD-A187072	p 165	N88-17191 #	AD-A190351	p 271	N88-22535 #
			AD-A187118	p 165	N88-17192 #	AD-A190508	p 266	N88-22528 #
			AD-A187245	p 193	N88-19068 #	AD-A190528	p 266	N88-22529 #
			AD-A187290	p 309	N88-25149 #	AD-A190529	p 267	N88-22530 #
			AD-A187355	p 208	N88-19087 #	AD-A190641	p 276	N88-22538 #
			AD-A187397	p 161	N88-18184 #	AD-A190642	p 267	N88-22531 #
			AD-A187444	p 167	N88-18188 #	AD-A190670	p 277	N88-22539 #
			AD-A187468	p 167	N88-18189 #	AD-A190788	p 302	N88-25142 #
			AD-A187531	p 213	N88-19095 #	AD-A190809	p 289	N88-25135 #
			AD-A187697	p 208	N88-19088 #	AD-A190876	p 278	N88-23403 #
			AD-A187703	p 179	N88-19061 #	AD-A190923	p 261	N88-23364 #
			AD-A187715	p 208	N88-19089 #	AD-A191041	p 278	N88-23404 #
			AD-A187732	p 193	N88-19089 #	AD-A191052	p 302	N88-25143 #
			AD-A187743	p 213	N88-19096 #	AD-A191070	p 274	N88-23398 #
			AD-A187887	p 208	N88-19090 #	AD-A191071	p 302	N88-25144 #
			AD-A187897	p 193	N88-19070 #	AD-A191116	p 310	N88-25151 #
			AD-A187942	p 193	N88-19071 #	AD-A191179	p 310	N88-25152 #
			AD-A187949	p 193	N88-19072 #	AD-A191180	p 274	N88-23399 #
			AD-A187966	p 161	N88-18185 #	AD-A191194	p 102	A88-24537 #
			AD-A187977	p 208	N88-19091 #	AD-A191209	p 334	N88-26101 #
			AD-A188008	p 194	N88-19073 #	AD-A191244	p 275	N88-23400 #

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AD-A191332	p 275	N88-23401	#	AD-A194753	p 389	N88-29286	#	AFOSR-88-0344TR	p 385	N88-29278	#
AD-A191448	p 302	N88-25145	#	AD-A194777	p 385	N88-29274	#	AFOSR-88-0345TR	p 355	N88-28624	#
AD-A191559	p 303	N88-25146	#	AD-A194835	p 387	N88-30286	#	AFOSR-88-0375TR	p 384	N88-29273	#
AD-A191584	p 365	N88-27751	#	AD-A194856	p 130	A88-24544	#	AFOSR-88-0376TR	p 352	N88-27740	#
AD-A191597	p 303	N88-25147	#	AD-A194945	p 387	N88-30283	#	AFOSR-88-0384TR	p 351	N88-27734	#
AD-A191601	p 46	N88-12923	#	AD-A194947	p 387	N88-30284	#	AFOSR-88-0440TR	p 358	N88-27743	#
AD-A191605	p 327	N88-26099	#	AD-A194967	p 386	N88-30278	#	AFOSR-88-0461TR	p 385	N88-29275	#
AD-A191634	p 327	N88-26100	#	AD-A195265	p 339	N88-27683	#	AFOSR-88-0485TR	p 359	N88-27744	#
AD-A191644	p 324	N88-26097	#	AD-A195331	p 390	N88-30288	#	AFOSR-88-0547TR	p 390	N88-30290	#
AD-A191653	p 310	N88-25153	#	AD-A195465	p 205	A88-29565	#	AFOSR-88-0551TR	p 389	N88-29288	#
AD-A191871	p 310	N88-25154	#	AD-A195482	p 378	N88-30277	#	AFOSR-88-0567TR	p 318	N88-26794	#
AD-A191977	p 383	N88-29268	#	AD-A195496	p 390	N88-30290	#				
AD-A192026	p 303	N88-25148	#	AD-A195590	p 397	N88-30295	#	AFWAL-TR-3043-VOL-1	p 254	N88-20827	#
AD-A192095	p 289	N88-25136	#	AD-A195628	p 386	N88-30279	#	AFWAL-TR-87-1139	p 210	N88-19999	#
AD-A192199	p 284	N88-25128	#	AD-A195697	p 386	N88-30280	#	AFWAL-TR-87-3043-VOL-2	p 334	N88-26101	#
AD-A192231	p 328	N88-26801	#	AD-A195735	p 387	N88-30287	#	AFWAL-TR-87-3047	p 254	N88-20824	#
AD-A192242	p 328	N88-26802	#	AD-A195787	p 398	N88-30300	#	AFWAL-TR-87-3055-VOL-1	p 335	N88-26809	#
AD-A192359	p 328	N88-26803	#	AD-A195805	p 390	N88-30291	#	AFWAL-TR-87-3055-VOL-3	p 398	N88-30300	#
AD-A192379	p 102	A88-24546	#	AD-A195870	p 397	N88-30296	#	AFWAL-TR-87-3108	p 365	N88-27753	#
AD-A192445	p 365	N88-27752	#	AD-A195962	p 387	N88-30285	#	AFWAL-TR-88-3009	p 334	N88-26808	#
AD-A192597	p 350	N88-27727	#	AD-A195981	p 223	A88-33588	#				
AD-A192598	p 350	N88-27728	#	AD-A196026	p 397	N88-30294	#	AGARD-AG-270(E)	p 24	N88-11366	#
AD-A192599	p 353	N88-28608	#	AD-A196171	p 129	A88-24538	#	AGARD-AG-312	p 46	N88-12923	#
AD-A192600	p 350	N88-27729	#	AD-A196191	p 387	N88-30282	#				
AD-A192601	p 351	N88-27730	#	AD-A196291	p 396	N88-30292	#	AGARD-CP-432	p 339	N88-27683	#
AD-A192602	p 351	N88-27731	#					AGARD-LS-156	p 393	N88-29291	#
AD-A192603	p 353	N88-28609	#	AD-B119230L	p 255	N88-21639	#				
AD-A192604	p 384	N88-29270	#	AD-B121337L	p 268	N88-23367	#	AI-M-970	p 194	N88-19076	#
AD-A192605	p 384	N88-29271	#					AI-TR-942	p 116	N88-15438	#
AD-A192606	p 351	N88-27732	#	AD-E500947	p 271	N88-22535	#	AI-TR-980	p 165	N88-17191	#
AD-A192613	p 328	N88-26804	#	AD-E951149	p 396	N88-30292	#				
AD-A192635	p 85	A88-20861	#					AIAA PAPER 87-2797	p 30	A88-12547	#
AD-A192650	p 353	N88-28610	#	AD-F000114	p 103	N88-15383	#	AIAA PAPER 88-0172	p 127	A88-22122	#
AD-A192651	p 353	N88-28611	#	AD-F000114	p 115	N88-15436	#	AIAA PAPER 88-0444	p 114	A88-22330	#
AD-A192653	p 353	N88-28612	#					AIAA PAPER 88-0445	p 114	A88-22331	#
AD-A192654	p 353	N88-28613	#	AFHRL-TP-87-36	p 211	N88-20003	#	AIAA PAPER 88-0445	p 269	A88-37951	#
AD-A192655	p 354	N88-28614	#	AFHRL-TP-87-49	p 277	N88-22539	#	AIAA PAPER 88-2065	p 269	A88-38716	#
AD-A192656	p 340	N88-28606	#	AFHRL-TP-87-55	p 278	N88-23404	#	AIAA PAPER 88-2105	p 276	A88-40715	#
AD-A192657	p 354	N88-28615	#	AFHRL-TP-87-61	p 389	N88-29286	#	AIAA PAPER 88-4095	p 361	A88-50200	#
AD-A192659	p 354	N88-28616	#	AFHRL-TP-87-62	p 359	N88-27746	#	AIAA PAPER 88-4121	p 361	A88-50223	#
AD-A192660	p 354	N88-28617	#					AIAA PAPER 88-4186	p 356	A88-50276	#
AD-A192667	p 85	A88-20857	#	AFHRL-TR-87-16	p 167	N88-18188	#	AIAA PAPER 88-4187	p 356	A88-50277	#
AD-A192671	p 152	A88-26718	#	AFHRL-TR-87-21	p 210	N88-20000	#	AIAA PAPER 88-4325	p 361	A88-50577	#
AD-A192675	p 354	N88-28618	#	AFHRL-TR-87-22	p 165	N88-17190	#	AIAA PAPER 88-4326	p 361	A88-50578	#
AD-A192676	p 384	N88-29272	#	AFHRL-TR-87-26	p 208	N88-19089	#	AIAA PAPER 88-4575	p 390	A88-53627	#
AD-A192677	p 354	N88-28619	#	AFHRL-TR-87-53	p 390	N88-30291	#	AIAA PAPER 88-4585	p 388	A88-53672	#
AD-A192687	p 339	N88-27722	#					AIAA PAPER 88-4614	p 391	A88-53655	#
AD-A192697	p 351	N88-27733	#	AFIT/CI/NR-87-105T	p 130	N88-15440	#	AIAA PAPER 88-4617	p 391	A88-53656	#
AD-A192715	p 351	N88-27734	#	AFIT/CI/NR-87-126D	p 131	N88-15444	#	AIAA PAPER 88-4621	p 391	A88-53660	#
AD-A192721	p 328	N88-26805	#	AFIT/CI/NR-87-127D	p 131	N88-15443	#	AIAA PAPER 88-4622	p 391	A88-53661	#
AD-A192840	p 358	N88-27743	#	AFIT/CI/NR-87-138D	p 208	N88-19091	#	AIAA PAPER 88-4623	p 391	A88-53662	#
AD-A192852	p 351	N88-27735	#	AFIT/CI/NR-87-42T	p 155	N88-17181	#	AIAA PAPER 88-4626	p 388	A88-53663	#
AD-A192897	p 325	N88-26798	#	AFIT/CI/NR-87-88T	p 116	N88-16343	#	AIAA PAPER 88-4636	p 391	A88-53668	#
AD-A192898	p 318	N88-26794	#	AFIT/CI/NR-88-126	p 396	N88-30292	#				
AD-A192972	p 334	N88-26808	#	AFIT/CI/NR-88-23	p 387	N88-30282	#	ARC-TR-8782	p 309	N88-25149	#
AD-A192973	p 335	N88-26809	#					ARI-RN-87-43	p 209	N88-19092	#
AD-A193061	p 359	N88-27744	#	AFIT/GE/ENG/87D-16	p 232	N88-20812	#	ARI-RN-87-51	p 254	N88-20826	#
AD-A193076	p 359	N88-27745	#	AFIT/GE/ENG/87D-18	p 265	N88-22518	#	ARI-RN-87-64	p 302	N88-25144	#
AD-A193102	p 359	N88-27746	#	AFIT/GE/ENG/87D-20	p 204	N88-19995	#	ARI-RN-87-71	p 274	N88-23399	#
AD-A193104	p 352	N88-27736	#	AFIT/GE/ENG/87D-45	p 256	N88-21645	#	ARI-RN-87-72	p 310	N88-25152	#
AD-A193237	p 352	N88-27737	#	AFIT/GE/ENG/87D-25				ARI-RN-87-73	p 211	N88-20002	#
AD-A193289	p 365	N88-27753	#	AFIT/GEP/ENP/87D-6	p 232	N88-20811	#	ARI-RN-87-78	p 278	N88-23403	#
AD-A193305	p 352	N88-27738	#					ARI-RN-87-80	p 219	N88-20010	#
AD-A193392	p 359	N88-27747	#	AFIT/GSM/LSR/87S-32	p 116	N88-16345	#	ARI-RN-87-82	p 275	N88-23401	#
AD-A193419	p 352	N88-27739	#					ARI-RN-87-84	p 302	N88-25142	#
AD-A193421	p 352	N88-27740	#	AFOSR-87-1191TR	p 131	N88-15445	#	ARI-RN-88-05	p 303	N88-25146	#
AD-A193430	p 394	N88-29300	#	AFOSR-87-1312TR	p 115	N88-15437	#	ARI-RN-88-06	p 303	N88-25147	#
AD-A193440	p 353	N88-27741	#	AFOSR-87-1360TR	p 104	N88-15385	#	ARI-RN-88-13	p 389	N88-29287	#
AD-A193449	p 384	N88-29273	#	AFOSR-87-1366TR	p 104	N88-15387	#	ARL-SYS-TM-93	p 214	N88-19097	#
AD-A193558	p 389	N88-29287	#	AFOSR-87-1463TR	p 156	N88-17185	#	ARO-21059.6-LS	p 302	N88-25145	#
AD-A193620	p 385	N88-29276	#	AFOSR-87-1477TR	p 164	N88-17188	#	ARO-22000.9-LS	p 327	N88-26100	#
AD-A193627	p 385	N88-29277	#	AFOSR-87-1496TR	p 156	N88-17184	#	ARO-22256.4-LS	p 81	N88-13856	#
AD-A193633	p 377	N88-29265	#	AFOSR-87-1534TR	p 165	N88-17193	#	B-222195	p 200	N88-19965	#
AD-A193640	p 389	N88-29288	#	AFOSR-87-1563TR	p 289	N88-25136	#	BAC-37	p 82	N88-14626	#
AD-A193641	p 355	N88-28623	#	AFOSR-87-1565TR	p 193	N88-19068	#	BAE-TP-8268	p 31	N88-10489	#
AD-A193692	p 398	N88-30299	#	AFOSR-87-1593TR	p 210	N88-19998	#	BBN-6636	p 208	N88-19087	#
AD-A193779	p 389	N88-29289	#	AFOSR-87-1636TR	p 265	N88-22520	#	BBN-6728	p 328	N88-26802	#
AD-A193793	p 394	N88-29302	#	AFOSR-87-1657TR	p 195	N88-19078	#	BF-RP-ER-015-VOL-1	p 282	N88-24144	#
AD-A193811	p 385	N88-29278	#	AFOSR-87-1663TR	p 209	N88-19093	#	BF-RP-ER-015-VOL-2	p 282	N88-24130	#
AD-A193813	p 355	N88-28624	#	AFOSR-87-1681TR	p 208	N88-19088	#	BIO-1	p 285	N88-25134	#
AD-A193814	p 360	N88-28627	#	AFOSR-87-1687TR	p 193	N88-19070	#	BNL-40073	p 44	N88-12241	#
AD-A193827	p 385	N88-29279	#	AFOSR-87-1710TR	p 359	N88-27747	#	BNL-41186	p 325	N88-26797	#
AD-A193829	p 360	N88-28628	#	AFOSR-87-1728TR	p 265	N88-22522	#	BRL-MR-3647	p 310	N88-25154	#
AD-A193873	p 389	N88-29290	#	AFOSR-87-1772TR	p 266	N88-22529	#				
AD-A193943	p 385	N88-29280	#	AFOSR-87-1773TR	p 267	N88-22530	#				
AD-A194025	p 385	N88-29281	#	AFOSR-87-1775TR	p 270	N88-22534	#				
AD-A194065	p 377	N88-29266	#	AFOSR-87-1781TR	p 266	N88-22524	#				
AD-A194102	p 377	N88-29267	#	AFOSR-87-1789TR	p 270	N88-22533	#				
AD-A194184	p 355	N88-28621	#	AFOSR-87-1831TR	p 193	N88-19071	#				
AD-A194237	p 385	N88-29275	#	AFOSR-87-1931TR	p 265	N88-22523	#				
AD-A194243	p 360	N88-28625	#	AFOSR-88-0215TR	p 303	N88-25148	#				
AD-A194302	p 390	N88-30289	#	AFOSR-88-0265TR	p 328	N88-26803	#				
AD-A194313	p 360	N88-28626	#	AFOSR-88-0282TR	p 325	N88-26798	#				
AD-A194363	p 389	N88-29284	#	AFOSR-88-0288TR	p 359	N88-27745	#				
AD-A194506	p 389	N88-29285	#	AFOSR-88-0316TR	p 275	N88-23400	#				
AD-A194595	p 394	N88-29301	#	AFOSR-88-0343TR	p 360	N88-28627	#				

BR102762	p 28	N88-10487	#	DE88-900129	p 144	N88-18120	#	ETN-88-90747	p 73	N88-14617	#
BR102763	p 28	N88-10486	#	DFVLR-FB-86-58	p 166	N88-17197	#	ETN-88-90860	p 75	N88-13851	#
BR102901	p 233	N88-21635	#	DFVLR-FB-86-61	p 166	N88-17195	#	ETN-88-90942	p 166	N88-17195	#
BR102902	p 256	N88-21644	#	DFVLR-FB-87-11	p 24	N88-10482	#	ETN-88-91110	p 89	N88-15363	#
B8703782	p 27	N88-10484	#	DFVLR-FB-87-34	p 166	N88-17196	#	ETN-88-91306	p 170	N88-17202	#
B8709267	p 73	N88-14618	#	DFVLR-FB-87-38	p 255	N88-21642	#	ETN-88-91307	p 132	N88-15448	#
B8711402	p 75	N88-14624	#	DFVLR-FB-87-45	p 242	N88-21637	#	ETN-88-91355	p 73	N88-14618	#
B8716249	p 242	N88-21636	#	DFVLR-FB-87-47	p 268	N88-23367	#	ETN-88-91368	p 75	N88-14624	#
B8733272	p 268	N88-23368	#	DFVLR-FB-88-14	p 359	N88-27748	#	ETN-88-91409	p 116	N88-16344	#
B8733282	p 277	N88-23402	#	DFVLR-MITT-85-16	p 89	N88-15363	#	ETN-88-91440	p 254	N88-20828	#
CAA-PAPER-87007	p 59	N88-12274	#	DFVLR-MITT-86-01	p 48	N88-12247	#	ETN-88-91694	p 166	N88-17196	#
CERMA-87-31	p 328	N88-26806	#	DFVLR-MITT-87-01	p 11	N88-10469	#	ETN-88-91714	p 166	N88-17197	#
COINS-TR-87-29	p 208	N88-19088	#	DNA-TR-87-159	p 377	N88-29267	#	ETN-88-91716	p 81	N88-13857	#
CONF-841041	p 318	N88-26792	#	DODA-AR-004-554	p 214	N88-19097	#	ETN-88-91838	p 242	N88-21636	#
CONF-8603229	p 195	N88-19082	#	DOE/CH-10198/T1	p 89	N88-15362	#	ETN-88-91904	p 233	N88-21633	#
CONF-861240-18	p 73	N88-14615	#	DOE/ER-10590/2	p 339	N88-27724	#	ETN-88-91905	p 233	N88-21634	#
CONF-870302-249	p 60	N88-12278	#	DOE/ER-10903/8	p 315	N88-26067	#	ETN-88-91911	p 255	N88-21641	#
CONF-8705193-2	p 73	N88-14614	#	DOE/ER-13261/2	p 377	N88-29264	#	ETN-88-91958	p 282	N88-24130	#
CONF-870701-3	p 23	N88-10479	#	DOE/ER-60281/3	p 261	N88-22514	#	ETN-88-91970	p 181	N88-19893	#
CONF-8707103-1	p 44	N88-12241	#	DOE/ER-60344/1	p 264	N88-22516	#	ETN-88-91985	p 284	N88-25130	#
CONF-8707110-3	p 166	N88-17198	#	DOE/ER-60503/295	p 12	N88-11365	#	ETN-88-92052	p 233	N88-21635	#
CONF-8708121-1	p 46	N88-12918	#	DOE/EV-03140/10	p 46	N88-12921	#	ETN-88-92053	p 256	N88-21644	#
CONF-8708121-2	p 46	N88-12919	#	DOT-HS-807-158-VOL-2	p 276	N88-22536	#	ETN-88-92110	p 255	N88-21642	#
CONF-870822-8	p 214	N88-19098	#	DOT-HS-807-159-VOL-1	p 255	N88-21640	#	ETN-88-92114	p 242	N88-21637	#
CONF-8708224-1	p 284	N88-25132	#	DOT-TSC-FAA-87-4	p 365	N88-27752	#	ETN-88-92136	p 325	N88-26799	#
CONF-871043-1	p 32	N88-10492	#	DOT-TSC-NHTSA-86-5-VOL-1	p 255	N88-21640	#	ETN-88-92229	p 267	N88-22532	#
CONF-8711103-1	p 171	N88-18190	#	DOT-TSC-NHTSA-86-6-VOL-2	p 276	N88-22536	#	ETN-88-92243	p 267	N88-23366	#
CONF-8711149-1	p 260	N88-22513	#	DOT/FAA/AM-88/1	p 276	N88-22538	#	ETN-88-92454	p 268	N88-23367	#
CONF-871163-2	p 60	N88-12277	#	DOT/FAA/AM-88/2	p 267	N88-22531	#	ETN-88-92464	p 277	N88-23402	#
CONF-880181-1	p 318	N88-26793	#	DOT/FAA/PM-87/15	p 31	N88-10488	#	ETN-88-92464	p 288	N88-23368	#
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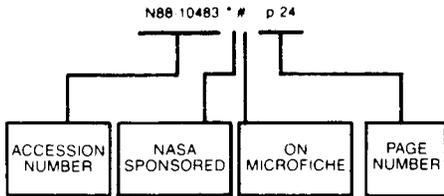
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A88-35448	p 238	A88-39528	p 258	A88-42959 #	p 294	A88-45360	p 288	A88-50651	p 338
A88-35449	p 238	A88-39529	p 258	A88-42960 #	p 294	A88-45361	p 288	A88-50652	p 338
A88-35450	p 238	A88-39530	p 258	A88-42961 #	p 294	A88-45362	p 288	A88-50701	p 357
A88-35451	p 238	A88-39874	p 258	A88-42962 #	p 295	A88-45414	p 282	A88-50762	p 357
A88-35452	p 249	A88-39920	p 262	A88-42963 #	p 295	A88-45415	p 288	A88-50945	p 361
A88-35453 *	p 249	A88-39921	p 262	A88-42964 #	p 295	A88-45628	p 308	A88-50968	p 362
A88-35454	p 249	A88-39922	p 258	A88-42965 #	p 295	A88-46201	p 318	A88-50969	p 362
A88-35455	p 249	A88-39923	p 263	A88-42966 #	p 295	A88-46202	p 319	A88-50998	p 362
A88-35456 *	p 249	A88-39924	p 263	A88-42967 #	p 295	A88-46203	p 319	A88-50999	p 362
A88-35457 *	p 250	A88-39925	p 263	A88-42968 #	p 295	A88-46204	p 319	A88-51000	p 362
A88-35458 *	p 238	A88-39926	p 258	A88-42969 #	p 295	A88-46205	p 329	A88-51001	p 362
A88-35459	p 239	A88-39927	p 263	A88-42970 #	p 296	A88-46206	p 329	A88-51002 *	p 362
A88-35460	p 239	A88-40000	p 269	A88-42971 #	p 296	A88-46207	p 329	A88-51003	p 363
A88-35461 *	p 239	A88-400371 #	p 275	A88-42972 *	p 296	A88-46208	p 319	A88-51004 #	p 363
A88-35462	p 250	A88-40493 *	p 275	A88-42973 #	p 296	A88-46209	p 319	A88-51005 #	p 363
A88-35463	p 250	A88-40500	p 263	A88-42974 #	p 296	A88-46210	p 319	A88-51006	p 363
A88-35464	p 239	A88-40521	p 270	A88-42975 #	p 296	A88-46211	p 319	A88-51007	p 363
A88-35465 *	p 239	A88-40525	p 276	A88-42976 #	p 296	A88-46212	p 319	A88-51008 #	p 363
A88-35466	p 239	A88-40682	p 259	A88-42977 #	p 297	A88-46213	p 319	A88-51009 #	p 343
A88-35470	p 250	A88-40715 #	p 276	A88-42978 #	p 297	A88-46214	p 326	A88-51010 #	p 363
A88-35471	p 250	A88-40772	p 259	A88-42979 #	p 297	A88-46215	p 326	A88-51011 #	p 343
A88-35472	p 250	A88-40788	p 259	A88-42980 #	p 297	A88-46216	p 326	A88-51012 #	p 343
A88-35473	p 240	A88-40789	p 259	A88-42981 #	p 297	A88-46217	p 326	A88-51013 #	p 364
A88-35474	p 240	A88-40853	p 259	A88-42982 #	p 297	A88-46432	p 326	A88-51014 #	p 364
A88-35475	p 250	A88-40854	p 259	A88-42983 #	p 297	A88-46444	p 326	A88-51046	p 364
A88-35476	p 251	A88-40855	p 260	A88-42984 #	p 297	A88-46573 #	p 326	A88-51047	p 364
A88-35477	p 251	A88-40856	p 260	A88-42985 #	p 297	A88-46574 #	p 320	A88-51048	p 364
A88-35478	p 240	A88-40857 #	p 263	A88-42986 #	p 298	A88-46919	p 313	A88-51134	p 367
A88-35479	p 251	A88-40948 *	p 260	A88-42987 #	p 298	A88-46975	p 326	A88-51496	p 357
A88-35480	p 251	A88-40985	p 270	A88-42988 #	p 298	A88-46976	p 326	A88-51497	p 357
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A88-35482	p 251	A88-40987	p 263	A88-42990 #	p 298	A88-47226	p 329	A88-52590	p 369
A88-35485	p 240	A88-40988	p 264	A88-42991 #	p 306	A88-47227	p 329	A88-52596 *	p 369
A88-35486	p 240	A88-40989	p 264	A88-42992 *	p 298	A88-47228	p 329	A88-52597	p 369
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		A88-41362	p 270	A88-43000 #	p 299	A88-47324	p 320	A88-52722	p 369
		A88-41363	p 270			A88-47325 *	p 313	A88-52854	p 378
						A88-47338 *	p 330	A88-52855	p 369

A88-53292

A88-53292	#	p 378	A88-55172	*	p 376	N88-12266	*	#	p 58	N88-15379	#	p 92	N88-16332	*	p 111
A88-53293	#	p 379	A88-55173		p 377	N88-12267	*	#	p 58	N88-15380	#	p 92	N88-16333	#	p 111
A88-53294	#	p 379	A88-55174		p 377	N88-12268	*	#	p 58	N88-15381	#	p 92	N88-16334	#	p 111
A88-53295	#	p 379	A88-55175		p 383	N88-12269	*	#	p 58	N88-15382	#	p 103	N88-16335	#	p 111
A88-53296	#	p 379	A88-55202	*	p 399	N88-12270	*	#	p 59	N88-15383	#	p 103	N88-16336	#	p 112
A88-53297	#	p 379	A88-55203		p 399	N88-12271	*	#	p 59	N88-15384	#	p 103	N88-16337	#	p 112
A88-53298	#	p 379	A88-55204	*	p 400	N88-12272	*	#	p 59	N88-15385	#	p 104	N88-16338	#	p 112
A88-53299	#	p 379	A88-55205		p 400	N88-12273	*	#	p 59	N88-15386	#	p 104	N88-16339	#	p 112
A88-53300	#	p 379	A88-55207		p 400	N88-12274	*	#	p 59	N88-15387	#	p 104	N88-16340	#	p 112
A88-53627	*	p 390	A88-55219	*	p 400	N88-12275	#	p 59	N88-15388	#	p 104	N88-16341	#	p 112	
A88-53655	#	p 391	A88-55220		p 400	N88-12276	#	p 60	N88-15389	#	p 104	N88-16342	#	p 116	
A88-53656	#	p 391	A88-55221		p 400	N88-12277	#	p 60	N88-15390	#	p 104	N88-16343	#	p 116	
A88-53660	#	p 391	A88-55222		p 400	N88-12278	#	p 60	N88-15391	#	p 105	N88-16344	#	p 116	
A88-53661	#	p 391	A88-55223		p 400	N88-12279	#	p 60	N88-15392	#	p 105	N88-16345	#	p 116	
A88-53662	#	p 391	A88-55224		p 400	N88-12510	#	p 45	N88-15393	#	p 105	N88-16346	#	p 117	
A88-53663	#	p 388	A88-55225		p 401	N88-12525	*	#	p 45	N88-15394	#	p 105	N88-16347	#	p 117
A88-53668	#	p 391	A88-55319	#	p 392	N88-12915	#	p 39	N88-15395	#	p 105	N88-16348	#	p 117	
A88-53672	#	p 388	A88-55323	*	#	p 392	N88-12916	#	p 39	N88-15396	#	p 93	N88-16349	#	p 117
A88-53849	#	p 388	A88-55334	#	p 383	A88-12917	#	p 40	N88-15397	#	p 105	N88-16350	#	p 117	
A88-53993	#	p 370	A88-55335	#	p 392	N88-12918	#	p 46	N88-15398	#	p 106	N88-16351	#	p 117	
A88-54005	#	p 370	A88-55336	#	p 388	N88-12919	#	p 46	N88-15399	#	p 106	N88-16352	#	p 132	
A88-54006	#	p 370	A88-55392	#	p 392	N88-12920	#	p 46	N88-15400	#	p 106	N88-16353	#	p 133	
A88-54007	#	p 379	A88-55429	#	p 383	N88-12921	#	p 46	N88-15401	#	p 106	N88-16644	*	p 169	
A88-54008	#	p 370	A88-55430	*	p 383	N88-12922	*	p 46	N88-15402	#	p 106	N88-16653	#	p 169	
A88-54009	#	p 370	A88-55431	#	p 383	N88-12923	#	p 46	N88-15403	#	p 93	N88-16757	#	p 155	
A88-54010	*	p 370	A88-55432	#	p 377	N88-12924	*	p 48	N88-15404	#	p 93	N88-17168	*	p 142	
A88-54011	#	p 380	A88-55433	*	p 383	N88-12925	*	p 60	N88-15405	#	p 106	N88-17169	#	p 142	
A88-54012	#	p 380	A88-55434	#	p 383	N88-12926	*	p 60	N88-15406	#	p 107	N88-17170	#	p 142	
A88-54013	#	p 380	A88-55436	#	p 393	N88-12927	*	p 60	N88-15407	#	p 130	N88-17171	#	p 142	
A88-54014	#	p 380	A88-55485	#	p 389	N88-13845	#	p 68	N88-15408	#	p 107	N88-17172	*	p 142	
A88-54015	#	p 380				N88-13846	#	p 68	N88-15409	#	p 107	N88-17173	*	p 143	
A88-54016	#	p 380	N88-10469	#	p 11	N88-13847	#	p 68	N88-15410	#	p 107	N88-17174	*	p 143	
A88-54017	#	p 381	N88-10470	#	p 11	N88-13848	#	p 71	N88-15411	#	p 93	N88-17175	*	p 143	
A88-54018	*	p 370	N88-10471	#	p 11	N88-13849	#	p 71	N88-15412	#	p 107	N88-17176	*	p 143	
A88-54019	#	p 381	N88-10472	#	p 11	N88-13850	#	p 72	N88-15413	#	p 107	N88-17177	*	p 143	
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A88-54022	#	p 381	N88-10475	#	p 12	N88-13853	*	#	N88-15416	#	p 108	N88-17180	*	p 144	
A88-54023	#	p 391	N88-10476	#	p 12	N88-13854	*	#	N88-15417	#	p 94	N88-17181	#	p 155	
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A88-54025	#	p 371	N88-10478	#	p 23	N88-13856	#	p 81	N88-15419	#	p 108	N88-17183	#	p 156	
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A88-54032	#	p 372	N88-10485	#	p 27	N88-14605	#	p 72	N88-15426	#	p 108	N88-17190	#	p 165	
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A88-54034	#	p 372	N88-10487	#	p 28	N88-14607	#	p 72	N88-15428	#	p 109	N88-17192	#	p 165	
A88-54035	#	p 372	N88-10488	#	p 31	N88-14608	#	p 69	N88-15429	#	p 109	N88-17193	#	p 165	
A88-54036	#	p 373	N88-10489	#	p 31	N88-14609	#	p 72	N88-15430	#	p 94	N88-17194	#	p 165	
A88-54037	#	p 373	N88-10490	#	p 32	N88-14610	#	p 72	N88-15431	#	p 109	N88-17195	#	p 166	
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A88-54039	#	p 381	N88-10492	#	p 32	N88-14612	#	p 69	N88-15433	#	p 115	N88-17197	#	p 166	
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A88-54043	#	p 381	N88-10879	*	p 28	N88-14616	*	p 73	N88-15437	#	p 115	N88-17201	#	p 169	
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A88-54047	#	p 392	N88-11367	*	p 24	N88-14620	#	p 74	N88-15441	#	p 130	N88-17205	*	p 171	
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A88-54051	#	p 374	N88-11371	#	p 32	N88-14624	#	p 75	N88-15445	#	p 131	N88-17209	#	p 171	
A88-54052	#	p 374	N88-11668	#	p 55	N88-14625	*	#	N88-15446	#	p 131	N88-17210	#	p 171	
A88-54053	#	p 374	N88-12238	#	p 44	N88-14626	#	p 82	N88-15447	#	p 132	N88-17706	*	p 144	
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A88-54057	#	p 382	N88-12242	#	p 45	N88-14867	#	p 83	N88-16096	#	p 95	N88-18122	#	p 144	
A88-54058	#	p 375	N88-12243	#	p 45	N88-14868	#	p 69	N88-16097	#	p 95	N88-18123	#	p 156	
A88-54059	#	p 375	N88-12244	#	p 45	N88-14882	*	#	N88-16098	#	p 95	N88-18124	#	p 144	
A88-54060	#	p 375	N88-12245	#	p 45	N88-14889	*	#	N88-16262	#	p 95	N88-18125	#	p 145	
A88-54061	#	p 375	N88-12246	*	p 47	N88-15353	#	p 89	N88-16263	#	p 95	N88-18126	#	p 145	
A88-54062	#	p 375	N88-12247	#	p 48	N88-15354	*	#	N88-16264	#	p 95	N88-18127	#	p 145	
A88-54063	*	p 375	N88-12248	#	p 48	N88-15360	#	p 89	N88-16265	#	p 95	N88-18128	#	p 145	
A88-54064	#	p 375	N88-12249	#	p 48	N88-15361	#	p 89	N88-16266	#	p 109	N88-18129	#	p 145	
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A88-54066	#	p 382	N88-12251	*	p 55	N88-15363	#	p 89	N88-16317	#	p 96	N88-18131	#	p 156	
A88-54067	#	p 375	N88-12252	*	p 56	N88-15364	#	p 89	N88-16318	#	p 96	N88-18132	#	p 157	
A88-54538	*	p 376	N88-12253	#	p 56	N88-15365	#	p 90	N88-16319	#	p 96	N88-18133	#	p 157	
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A88-55047	#	p 392	N88-12255	#	p 56	N88-15367	#	p 90	N88-16321	#	p 96	N88-18135	#	p 171	
A88-55048	*	p 388	N88-12256	#	p 56	N88-15368	#	p 90	N88-16322	#	p 97	N88-18136	#	p 157	
A88-55049	#	p 392	N88-12257	*	p 56	N88-15369	#	p 90	N88-16323	#	p 97	N88-18137	#	p 157	
A88-55050	*	p 388	N88-12258	*	p 57	N88-15370	#	p 90	N88-16324	#	p 109	N88-18138	#	p 157	
A88-55165	#	p 376	N88-12259												



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N88-26799 #	p 325	N88-28607 * #	p 340	N88-30288 #	p 390
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N88-26801 #	p 328	N88-28609 #	p 353	N88-30290 #	p 390
N88-26802 #	p 328	N88-28610 #	p 353	N88-30291 #	p 390
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N88-26804 #	p 328	N88-28612 #	p 353	N88-30293 #	p 397
N88-26805 #	p 328	N88-28613 #	p 353	N88-30294 #	p 397
N88-26806 #	p 328	N88-28614 #	p 354	N88-30295 #	p 397
N88-26807 * #	p 334	N88-28615 #	p 354	N88-30296 #	p 397
N88-26808 #	p 334	N88-28616 #	p 354	N88-30297 * #	p 397
N88-26809 #	p 335	N88-28617 #	p 354	N88-30298 #	p 397
N88-26810 #	p 335	N88-28618 #	p 354	N88-30299 #	p 398
N88-27356 #	p 338	N88-28619 #	p 354	N88-30300 #	p 398
N88-27357 #	p 339	N88-28620 #	p 355	N88-30301 * #	p 398
N88-27360 #	p 357	N88-28621 #	p 355	N88-30346 * #	p 398
N88-27361 #	p 343	N88-28622 * #	p 355	N88-30357 * #	p 398
N88-27362 #	p 357	N88-28623 #	p 355		
N88-27363 #	p 343	N88-28624 #	p 355		
N88-27368 #	p 344	N88-28625 #	p 360		
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N88-27387 #	p 344	N88-28627 #	p 360		
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N88-27685 #	p 344	N88-28630 #	p 366		
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N88-27688 #	p 345	N88-28633 * #	p 366		
N88-27689 #	p 345	N88-28634 * #	p 367		
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