

FOR THE  
OF RELATIVE  
INDEXES

# A

# EROSPACE MEDICINE AND BIOLOGY

GPO PRICE \$ \_\_\_\_\_

CFSTI PRICE(S) \$ \_\_\_\_\_

Hard copy (HC) # 4.225  
~~5.00~~

Microfiche (MF) 8100  
~~1.00~~

# 653 July 65

## AN ANNOTATED BIBLIOGRAPHY

Science and Technology Division  
The Library of Congress  
Washington, D.C.  
1966

FACILITY FORM 602	N66 27623 <small>(ACCESSION NUMBER)</small>	_____ <small>(THRU)</small>
	194 <small>(YEAR)</small>	1 <small>(CODE)</small>
	CR-75598 <small>(NASA OR DTRC OR AD NUMBER)</small>	09 <small>(CATEGORY)</small>

Supported by the  
U. S. National Aeronautics and Space Administration  
U. S. Air Force

Science and Technology Division  
The Library of Congress

# AEROSPACE MEDICINE AND BIOLOGY

## AN ANNOTATED BIBLIOGRAPHY

CUMULATIVE INDEXES

<sup>2</sup>  
195~~8~~-1961 LITERATURE

PROJECT SUPERVISOR:  
Arnold J. Jacobius

EDITORS:  
Roman Kenk  
Elaine S. Vallière

BIBLIOGRAPHERS:  
Seraphima A. Boguslavsky  
Leroy D. Davis  
Elizabeth G. Koines  
Eugene Marrow  
Kristallo V. Pappajohn  
Paul E. Spiegler  
Ilga M. Terauds

Supported by the  
U. S. National Aeronautics and Space Administration  
U. S. Air Force

Washington, D. C.  
1966

---

For sale by the Clearinghouse for Federal Scientific and Technical Information  
Springfield, Virginia 22151 - Price \$2.25

## CONTENTS

	Page
AUTHOR INDEX .....	1
CORPORATE AUTHOR INDEX .....	51
SUBJECT INDEX .....	61

## PREFACE

This volume contains cumulative and alphabetical author, corporate author, and subject indexes for Volumes I to X of Aerospace Medicine and Biology: An Annotated Bibliography.

References from Volume I (1952) can be traced by using the key published in Volume II (1953), pages (1) to (8). It is not being republished here.

In the Corporate Author Index, subordinate agencies are listed under higher ranking organizations; e.g., Arctic Aeromedical Lab. is found under U.S. Air Force. In the Subject Index, the main headings (in capital letters) are subdivided into subordinate divisions, and cross references are provided to direct the reader to closely related topics.

Roman numerals indicate volume numbers; Arabic numerals correspond to abstract numbers. In the Author Index, Roman numerals are omitted; but both volume and abstract numbers are stated for the Subject Index and the Corporate Author Index.



AUTHOR INDEX

ALZAMORA R	3723	3739 6060 9134 10288	ASCHOFF J	2402
ALZAMORA V	2369	10289 10340 10450	2403 3746 3747 6767	2402
ALZATE R	9493	10451 10452 10929	6806 6861 8545 8546	3748
10529		10930	ASERINSKY E	3748
AMANTEA L	2730	ANTHONY G C	ASHE W C	12778
4144 4145		ANTHONY H S	ASHE W F	6704
AMASSIAN V E	7326	ANTIPOV V V	10933 10949 10969	
AMATO A	12375	ANTKOWIAK D E	10989	
AMBLER R K	0708	ANTOGNETTI P F	ASHER J W	3749
9821 1020 1021 2370		ANTONACIO F	4076 7014	
2371 2372 2421 3329		ANTONITIS J J	ASHKENAS I L	11737
3389 3608 3609 3724		AOKI S	12611	
3725 3726 3765 5124		APPAIX A	ASHWORTH M A	10644
5732 5733 6180 6214		APPLEMAN H S	ASMUSSEN E	3750
6215 6216 7665 7674		APPLEZWEIG D G	6808 7530	
7765 9717 11501 11502		APPLEZWEIG M A	ASO J	5614
11503 11504 11748		APPLEZWEIG M H	ASSALI N S	9115
AMBRÖSE A M	3727	3741 7167 9808	ASSENSI G	6340
AMDR R D	6337	ARALOV S S	ASSET G	12110
AMES S	0090	ARBEIT S R	ASSIS C M DE	0998
AMICO G V	3729	ARBORELIUS M	ASSMANN D	3751
AMMONS C H	0983	ARCHER E J	ASTALDI T	0999
2375 2376 5662		2385 2386 5663 5668	ASTBURY A K	0100
AMMONS R B	0983	ARCHER J D	ASTE SALAZAR H	5853
2374 2375 2376 3730		ARCHER J W	ASTESALAZAR H	5852
3731 5660 5661 5662		ARCHIBALD E R	ASTRAND I	10293
AMORATI A	2377	7277 12827	11062 11063 11754	
AMSTER M W	5023	10290	ASTRAND P O	1000
ANAND B K	8731	ARDASHNIKOVA L I	2404 2405 2406 2903	
8934		ARDEN G B	10293 11062 11063	
ANASTASI A	0091	11064	ASTROM A	0101
2378		ARDISSON J L	102 1106 3752 3753	
ANASTASI J N	9822	ARENDAAS J L	ASTRUP P	5316
ANDEREGG J W	12778	ARENDS R L	ASUNCIÓN C L	6026
ANDERS E	8670	AREZIO G	10820	
ANDERSEN C E	11283	ARGINTEANU M	ASVALL J E	10482
ANDERSEN H T	9015	ARGINTEANU J	ATAEV M M	9362
10740		ARGUELLES J A E	ATKINSON C J	0103
ANDERSEN K L	5987	ARGYRIS T S	104 1001 1002 1110	
6914 7403 7455 7540		ARIIZUMI S	2407 2408 2409 2410	
10709 10755 10872		ARIMOTO K	2411 3754	
ANDERSEN N	11847	ARKADEVSKII A A	ATKINSON J F	1578
ANDERSON	6281	10932	1651	
ANDERSON C W	10928	ARKHANGELSKAIA N A	ATKINSON P I	1003
ANDERSON D M	4953	ARMINGTON J C	ATKINSON W	2631
ANDERSON D T	3550	3368 5486 5487 7600	2632	
ANDERSON E H	2379	11138	ATRIA N F	0105
ANDERSON E M S	11762	ARMOUR M	ATROSHKIN N T	11506
ANDERSON G R	7867	ARMSTRONG B	ATTINGER E O	5317
12112		ARMSTRONG B W	8800 8801 8802	
ANDERSON H R	3447	3371 8799	ATTNEAVE F	3755
ANDERSON J T	3915	ARMSTRONG C R	3756 7051	
5369 6929		ARMSTRONG E D	ATWELL R J	5318
ANDERSON K A	11284	ARMSTRONG G E	AUBERT X	7589
ANDERSON L K	4263	2389	AUBERTIN M E	1004
4264 5511		ARMSTRONG H A	AUBLE D	1810
ANDERSON L L	2380	ARMSTRONG H C	AUERBACH E	2412
ANDERSON M J	12668	ARMSTRONG H G	3757	
ANDERSON N	5507	97 2391 6377 8297	AUGERSON W S	8312
ANDERSON N H	3732	10642	9814 9815 9848 9912	
6596		ARMSTRONG J A	10224	
ANDERSON N S	7088	5012	AULHORN E	1005
ANDERSON R S	11468	ARMSTRONG J B	1006	
ANDERSON W A D	11326	ARMSTRONG J G	AULL J C	7636
11327		2393	AULONJ J	7826
ANDERSON W L	12776	ARMSTRONG N A	AURUCCI A	10294
ANDERTON D A	0092	ARMSTRONG R C	AURY G	3758
ANDJUS R K	3733	ARNAL M C	AUSTIN F H	12612
5372 5373 8935		8975	AUSTIN J D	1007
ANDRE V	5820	ARNER O	AUSTIN P	3602
6339 6497 6541		ARNER R S	AUSTIN T R	0783
ANDREAS B G	0984	ARNEST R T	AUVERGNAT R	7531
985 986 987 1485 1486		ARNOLD H	AVAZBAKIEVA M F	10295
1488 2381 2382 3734		2397	AVERBACH E	6661
3735 4269 4272 5686		ARNOLD J E	AVERILL K H	8742
8191 9565		9406 9407	8756 11876 11904 11905	
ANDRESEN D C	10373	ARNOLD K	11912 11913 11926	
ANDRESEN H	7303	ARNOTT W M	0098	
ANDREWS B E	11994	ARNOULD P	398 404 993 994 2398	
ANDREWS R C	12180	2752 2825 3349 3350	3743 6061 6857	
ANDREWS T G	3132	3743 6061 6857	ARNOUT M D	0995
3394 4877 5669 6655		2399 5611 5612 5613	9186	
9649 9651		9186	ARNOV LJEVIC BRANKOVI	8938
ANDREWS W H	10100	ARNOV LJEVIC V	8938	
ANDREWS W K	6544	ARNSTRONG E D	ARNON C	2243
ANDRIIASHCHENKO A A	6920	10643	5276	
9102		ARNOVA G N	9810	
ANDRUS S B	10336	ARNONSON E	9718	
ANGELAKOS E T	8936	ARSENAULT C	11303	
8937		ARSENESCU G	10292	
ANGELINO H	3736	12261	ARSENEVA M A	9811
ANGELUSCHEFF Z D	3737	ARSLAN M	3744	
5546		ARTZ C P	6400	
ANGIBOUST R	7924	7893	ARUNACHALAM R	2400
8422 8612		ARUNACHALAM R	ARUTUNOV G A	9812
ANGRISANI G	5332	9813	ASCH L	10643
5954 6093		ASCHAN G	0099	
ANKERMANN H	6354	996 997 2401 3745 7719	7719	
ANNEGERS J	6440			
ANNEGERS J H	12154			
ANNENSKII F D	9807			
ANNETT J	7089			
ANSALDI J	2966			
ANSON B J	0093			
ANSTIS S M	9465			
ANTHONY A	3738			

B

BAAR J	8298
8418 12846	
BABCOCK E R	2649
BABCOCK S	10929
BABINEAU L M	3277
3280 4747 5968	
BABINSKY A D	11292
BABSKII E B	1010

AUTHOR INDEX

BABUSHKIN V I	10002	BALLENTINE D	3770	6021 6135 6136 6137
10003 10004		BALLIN H M	2788	6811 7617 8805 8806
BACCARO P M	12074	BALLIN J C	0338	8807 8808 8809 9820
BACH L M N	2415	BALLINGER E R	0116	10300 10301 10302
BACHMAN J C	9452	475 1712 3071		10414 10648 11129
BACK K C	12115	BALOGH L	2434	11268 11269 11270
BACKENSTOE G S	11817	2435		11271 12042 12182
BACKER P S	11726	BALZER E	3771	12183 12184 12185
BACKER P W	11727	BAMBENEK R A	12746	12186 12187 12188
11728		12899 12900 12901	5998	12189 12271 12272
BACQ Z M	3762	BAMBERG P G		12620 12780
5824		7405		BARTLETT W
BACZEWSKI J Z	0262	BAMFORD H E	3562	4780
BADAWI H M	10886	8228 12454 12553	12701	BARTLEY S H
BADEER H	5375	BAN T	11191	1051
8939		BANCROFT R W	1033	3206 5641 9352
BADGER D W	7276	1754 3772 3773 3774		BARTON J A
BADRE	4162	5862 6445 7975 8439		11290
BADRE R	1507	8455 8456 8853		BARTON J R
BAER C A	2416	BANDIERA G	10484	12692
BAEVSKII R M	12649	BANG G	7450	BARUCH J J
BAGGALEY A R	1011	BANKS R	9476	7525
BAGLEY W P	10934	11140		BARWOOD A J
BAGUENIER DESORMEAUX	0403	BANNISTER R G	1034	1052
BAHN R C	1012	1035 2436 2437		BARRETT R S
2417		BARACH A L	0131	BARRETT W C
BAHNSON H T	1013	BARAFF A A	3782	7382
1979 1980 2418		6139 11288		BARRICELLI N A
BAHRICK H P	0110	BARAN C	7168	8671
1014 1015 3763 3764		BARANOV V T	7885	BARRINGTON P C
5671 5680 5696 7100		BARANSKI L J	7005	8270
7101 8196		BARANSKI S	8386	BARRON C I
BAIER G W	2419	BARASH I M	4996	2443 3780 3781 3782
BAILEY A W	8235	BARBASHOVA Z I	1036	6139 6705 7827 10299
12613		3775 3776 7329 10485		11288 11630
BAILEY O	2786	10486 10487 10488		BARRON D H
3095 3822 4204		10489		10490
BAILEY W B	2420	BARCH A M	0117	BARRON E
BAIR F H	1016	1037 2438		BARRON F
BAIR J T	0111	BARDALES A	7807	3783 3784 6197 7145
112 113 493 494 1017		BARDALEZ VEGA A	3777	7668 11507 11563
1018 1019 1020 1021		BARDAVIT J	5050	BARRON R D
1022 1023 1590 2118		BARDOS G	7532	11289
2370 2372 2421 2422		7533		BARROWS C
2423 2942 3608 3765		BARE J K	8547	2586
5124 5723 5732 5733		BARE R H	1038	BARRUETTO R B
6181 6214 6215 6216		BARER A S	10005	9119
6217 6263 6274 7665		10006		BARRY J O
7674 7675 7765 9702		BARGER D M	1039	7261 7265 10346 10347
9717 9719 11501 11504		BARGETON D	2439	BARRY J R
11747 11748		2440 3778 3779		1043
BAIRD E E	10631	BARGIEL Z	6906	1043 2077 2078 2444
BAIRD W C	11884	BARILAT G	5466	2445 3845 4936 5717
BAISINGER L F	3766	BARKER C C	11629	5718 6182 6204 6374
9282 12583		BARKER E S	6927	BARRY M E
BAJOG M	2424	BARKER J	2873	3330
BAJWA P	7328	2874		BARTALENA G
BAKAN P	1024	BARKER J N	5912	3785
1025 1026 3767 9720		BARKER J P	1040	1044
BAKER C A	1027	BARKLA D	12779	BARTALS H
2425 2426 4938 5484		BARLOW G	5371	1045 3786 5180
6629 9187 9344 9466		5377 8932 9094		BARTER J T
9467		BARLOW H B	6986	7769
BAKER C H	4931	9189		BASAN L
9721 9775 9776 9777		BARNAL E	11311	12621
9778 12551		BARNARD G W	10243	3789
BAKER D F	12614	BARNES C M	8419	BASCOM W
12615 12616 12617		11287		3046
12637		BARNES G H	3034	BASGAL W
BAKER D G	6138	BARNES J R	11080	3790
10644 10645 10646		11081		BASKERVILLE F W
BAKER D J	10935	BARNETT P W	10647	8270
BAKER G W	1028	12181		BASOWITZ H
1029		BARNETT S M	12898	1053
BAKER H D	1030	BARNETT T B	8804	BASS B M
1031 3768 9188		BARNUM C P	5274	9722
BAKER J	10602	8548		BASS D E
BAKER P T	3769	BARON A	11186	3347 3792 4468 5374
5376 10691		BARON J	2441	5969 6009 6054 6771
BAKER R A	9754	BARON S H	1585	7412 7413 7639 9031
9779		3384		9119 9897 10771 10774
BAKER R C	1388	BARR N L	1207	10790 10919 11065
4141 8249 12552		2442 6675 8157 8312		BASSHAM J A
BAKER S P	6809	9818 9819 12618 12619		3793
BALAKHOVSKII I S	7787	12847		BASSI M
BALANINA N V	7868	BARR P O	10007	3794
BALDES E J	0114	10008 10009		BASTIEN J
BALDI G	2427	BARRATT BOYES B G	8743	1119
BALDINI L	5319	BARRE N	10514	BASU A K
6355 6359 6360 6361		BARTH CH	8764	2453
BALDRIDGE H D	12111	BARTHELEMY R	8073	BATES D V
BALDUCCI D	2428	BARTHOL R P	1046	8826
BALDWIN A	1255	BARTLESS R G	3787	10010
BALDWIN A W	1163	BARTLETT D J	0119	BATES J H
BALINT P	10483	1047		12781
BALKE B	0115	BARTLETT F	1048	BATES M E
1032 2429 2430 2431		1049 5747		12781
2432 2433 4540 5320		BARTLETT N R	2446	BATH D W
5327 5363 5825 5889		9190		8907
5890 6117 6546 6810		BARTLETT P V	1050	BATHIAS
7552 8438 8803 8910		BARTLETT R C	5349	7643
9816 9817 10244 10245		BARTLETT R G	5767	2454
10297 11693 11694		2447		BATTAGLIA F C
BALLANTYNE R M	12864	2448 2449 2450 2451		10490
BALLARD F B	10578	2452 3361 3788 5748		BATTERMAN R C
BALLARD J W	4348			BATTERSBY W S
				9191
				BATTEY L L
				3292
				BATTIG W F
				2456
				3795 3796 5664 7091
				BATTILANA G
				2369
				10287 11875
				BATTISTA A F
				8940
				BATTS A A
				5896
				BATUEV A S
				9464
				BAUER A C
				7534
				BAUER L H
				0120
				BAUER M
				7953
				BAUER M H
				3797
				BAUER R
				8896
				BAUER R O
				0121
				122 6356 6365 6370
				7116 7354
				BAUERSCHMIDT D K
				12622
				12668
				BAUGE M
				3798
				BAUGH C W
				3897
				10491 10649
				BAUMANN E S
				11877
				11958 11959



AUTHOR INDEX

BAUMGARTNER G	10492	BEKESY G VON	0134	BERENDSOHN S	7246
BAUS R	11369	3814 5547 9657		BERENS C	6948
BAXTER C	3799	BEKETAEV A M	1065	9193	
BAXTER J R	12564	BELDAM F E M	8192	BERESFORD T	12555
BAYROFF A G	7657	BELDING H S	3815	BEREST N	6597
BAZ R	5378	10652		6598 11508 12556	
BAZARNIK K	0886	BELLEHRADEK J	7383	BEREST N L	12013
BAZYKINE V	8672	BELIAEV I S	12043	BERG F H	6379
BEACH A M	0415	BELIAEV N P	10303	BERG H H	7882
BEACH R K	9603	BELIAEVA T I	7635	BERG P	0144
BEALE R H	11186	11434		BERGAMINI V	2469
BEALS L S	0123	BELKINA L I	1510	BERGAUST E	6575
124		BELKNAP R W	8978	8673	
BEAN J W	0125	BELL A H	9567	BERGER B B	12867
126 127 884 1054 4971		BELL A L L	1055	BERGER C	2470
5328 8896		1056 1057 1066 2465		BERGER D G	1814
BEAR S H	11698	3816		BERGER R M	2926
11878		BELL E	7478	BERGERET P	0145
BEARD E F	0128	10931		1075 3826 6707 8074	
129 1055 1056 1057		BELL F C	7417	12376	
BEARD M G	0130	8987 8988 10695		BERGIN K G	1076
BEARD R B	6706	BELL H	4876	1077 1078 6425 7808	
BEATON J R	8941	7092		9823	
BEATTIE J	2457	BELLECCI P	2466	BERGLUND E	2048
BEAUCHAMP	7925	3817		BERGMAN R	4221
BEAUCHAMP G T	12455	BELLER N N	7245	BERGMANN F	9526
12554		10304 10494		9527	
BEAUJON O	3800	BELLER W	6575	BERGSTRAND A	2471
BEAUPRE F J	15555	8131		2982	
BEAUPRE M A	12643	BELLET S	12044	BERGSTROM O	6357
BEAVERS W R	5379	BELLEVILLE R E	9546	BERGUM B	12506
5380		9568 9673 9706		BERING E A	5385
5405 6862 6869		BELLMAN D R	12472	5443 8951	
6870 7768 7869 8942		BELLUSCHI A	12134	BERITASHVILI I S	1079
8943 8944 8980 8981		BELLVILLE J W	8810	3827	
10650		BELOSTOTSKII E M	1067	BERITOV I S	7052
BEBERAN N	7203	1068		9470	
BECHTEAN LABROUSSE Y	11079	BELTRAN L	0135	BERKELEY M H	0146
BECHTOLDT H P	1038	BEMAN F	0530	2472	
1059 1726 1727 3823		1652 1654 2998		BERKLEY C	12644
BECK A I	9821	BEMBENEK R A	12881	BERKOWITZ L	0147
BECK C	10453	BENCOENY C	10801	1080 3828 5719 6264	
BECK E M	6035	BENCHIMOL A	12052	BERKSHIRE J R	0737
BECK G J	0131	BENCHIMOL R	0136	1081 6218 6219 6220	
BECK J	3801	137 138 139 140 141		6228 6547 8075 8123	
BECK L V	2458	770 3818		8367 11502	
3802		BENDA L	2467	BERLIN N I	0356
BECKER B	8945	BENDER M B	5631	1938 2473 3364 3478	
BECKER E L	1060	BENDING G C	9468	BERMAN M L	9824
3803 3804 5826 5827		BENEDICT W L	6143	9825 10016 10077	
5890 5913 7244		BENEKE J K	8946	BERNAL E	11313
BECKER FREYSENG H	3805	BENELLI C	10495	BERNAL J D	8674
BECKER H	2459	BENEPE O J	1183	BERNARD S	8539
BECKH H J VON	2460	2468		BERNARD S	0999
3806 3807 5816 10011		BENFORD R J	1069	BERNARDELLI E	10153
10012 10013 10223		3819 3820		BERNARDINI A T	10153
11879 12190 12191		BENGULESCU D	12558	BERNBERG R E	12625
BECKLAKE M R	8869	12624		BERNE R M	2474
BECKMAN E	12362	BENITTE A	6015	2475 5386 7330 8952	
BECKMAN E L	0307	6016 6323		BERNELL ZAZZERA A	3794
308 309 1061 1062 1063		BENITTE A C	0142	BERNER R	12782
1332 2461 3808 3809		143 8549		BERNHARD W F	4198
4081 8005 10014 10224		BENJAMIN F	12870	5385 5387 5443	
10225 10226 10230		BENJAMIN F B	3821	BERNHARDI K	7775
12214 12253 12315		3822 6173 9822		BERNICCHI L	6961
12316 12317		BENJAMIN H B	5383	BERNICK S	5286
BECKMANN A	11066	BENNETT A M H	11187	8650 8651 8652	
BEACQUEREL P	2462	BENNETT C A	5665	BERNIER J L	11001
BEDEREDE J L	0156	BENNETT E M	7169	BERNSTEIN A	12165
BEDFORD R E	9192	12775		BERNSTEIN B B	7732
BEDFORD T	2463	BENNETT G	10305	BERNSTEIN L	1082
10651		BENNETT L R	10725	BERNSTEIN L M	5345
BEDFORD T H B	11435	BENNETT M F	3894	BERNSTEIN P	10648
BEDROSSIAN E H	2464	3895 8552		BERNSTEIN S H	7829
BEDWELL M E	0132	BENNETT W F	3763	BERREDO J B DE	1083
133		5680 7093		BERTONI R	4514
BEDWELL T C	11796	BENOIT O	5384	BERTONI T	3832
12112		BENOIT R J	8509	BERTRAM G C L	2477
BEEBE G W	1145	8544		BERTRAND FONTAINE	11880
BEEM J R	1064	BENSEN S B	7188	BERRIAN J H	8312
BEENKEN H G	12623	BENSON A J	9469	BERRIEN F K	1084
BEER M	12311	10015 11067 11068		1085	
BEER W A	4369	11818		BERRY C A	3829
BEETHAM W P	7639	BENSON O O	0178	6380 8271 9490 9826	
BEHAN R A	9566	883 1071 1072 1073		9827 9828 10306 11509	
9579		2515 8299 8490		11589 11797 11819	
BEHAR I	9672	BENSON R E	8425	11820 11821 11822	
BEHMAN F W	5381	9943 11364		11980 12014 12045	
5382		BENSON R W	6415	BERRY F B	6548
BEHN H A R	6848	BENSON V G	10224	8076 12377 12405	
BEHNKE A R	3810	10225 10226 12672		BERRY L J	0148
BEHNKE R H	6899	BENSON W M	6148	149 150 2476 3830 3831	
BEHR K	3811	BENTE D	11755	5829 6338 7247 7248	
BEHREND R C H	10637	BENTLKE K	6917	7974 10307 10308 10360	
BEICKERT A	5367	BENTON A L	3823	10553	
6855		BENTON M C	8362	BERSH P J	5710
BEICKERT P	5603	BENTOR V	7474	7094 7131 7146	
10493		BENZI G	10496	BERSIN R	12113
BEIER E G	9658	BENZINGER T H	5368	BESCO R O	10017
BEISCHER D E	3812	6902 8947 8948 8949		BESNARD G	6221
3813 5749 5828 7193		8950		BESNARD G G	0151
7828 8312 8727 9593		BERANEK L L	0176	BESON E E	12312
10141 11830 11848		1074 2027 3309 3824		BESSEY E G	8193
12164		8173 8174		BEST W	5485
BEISCHER G D	7193	BERARD E L	3979	6949 6950	
BEITSCHER H R	3620	BERBERT J H	3825	BETHURUM J L	0689
6493				BETZIEN G	10497

AUTHOR INDEX

BEUMER H M	11069	496 1104 3031 3845	7332
BEVACQUA R B	6896	5758	BOERI E
BEVAN W	1086	BITTINI M	3577 5104 5964
7170		BITTMAN E	7479
BEVERLY R F	1087	BITTNER J J	BOGAERT E
BEXTON W H	2478	5274 6770 8561	2506 5447 6369 7720
11244		BIZCARRONDO ECHEVARR	12882
BEYER D H	7641	BJERNER B	BOGATKOV P I
11756		BJERVER K	12784
BEYNE J	0152	BJUGGREN B	BOGDANOVICH L I
153 2479		BJURSTEDT H	7560
BHATIA B	3833	1105 1106 1107 1693	BOHM M
5521 6951		2494 6756 10007 10008	7561
BHATTACHARYA M N	6589	10009 10019	BOHNNEN K
BHONSLAY S	4051	BLACK D O	6949 6950
BIALECKI A	8509	6561 8070	BOHR V C
BIANCA W	3834	BLACK J E	2449 2451 3788 6136
BIANCHI M	9066	BLACK J W	6137
BIBER D	12165	455 1108 1109 1110	BOICEFF T
BIBER T	7249	1111 2495 2496 2497	11510
BICKERTON J H	6948	2498 3557 3847 3848	BOISBOURDIN C
BICKLE A J	2002	3849 3850 3851 3852	3323 11631
BIDDULPH C	7378	3853 9135 9148 9363	BOIT C K
8914 9829 10464 10498		10937	7248
10499 10500		BLACK SCHAFFER B	BOITEAU H
BIEDLER J L	8675	BLACK SHAFFER B	4602 5947 8539 10240
BIEL W C	0154	BLACKBURN L I	11291
BIERMAN E O	11881	BLACKMON J R	BOITEN G G
BIERSDORF W R	3227	BLACKSTOCK D T	BOJANOVSKY I
3835 5486 5487		12238 12270	BOK S T
BIESELE R L	12192	BLACKWELL H R	6867
BIETTI G B	1088	9196 9197	BOKONJIC N
1089 2480 3836		BLACKWELL O M	12133
BIGBEE L W	1413	BLADIER B	BOLAND C
BIGELOW W C	8953	BLAGONRAVOV A A	BOLES CARENINI B
BIGET P	155	BLAIR D	192 339
156 820 822 2481 2846		BLAIR D A	BOLGER A
BIGGS M W	11433	8954 11070	6554
BIGIO A	3837	BLAIR E	BOLIKOWSKI S
BIGLAND B	0939	5388 8955	3178
BIJOUT R	0157	BLAIR J T	BOLT R H
BILGER R C	2482	BLAISDELL C T	1116 2027 2135 2507
3838 4360 5706		BLAKE D O	4800
BILLEWICZ STANKIEWIC	6863	BLAKE R R	BOLT W
BILLINGHAM J	8378	4191 6183 7652 7755	7252 7581
10653 10654 12193		BLAKE W D	BOLTE A
12194 12195 12318		BLANC E	BONARETTI T
12783		173	BONAVENTURA E
BILLINGS C E	9771	BLANC P	BOND A C
10327		9419	BOND A F
BILLINGS M S	10725	BLANCHARD C L	BOND D D
BILLITTERI A	10501	7918	BOND H J
BILLS W E	2483	BLANCHARD W G	6622
BILODEAU E A	0158	10023 10024	BOND J
159 160 161 162 163		BLANCHET R	BONDARENKO M F
520 1090 1091 1092		6062	BONDURANT S
1093 1094 1095 1096		BLASIVUS W	10023 10024 10025
1631 2484 2485 2772		BLASKOVICS T L	10051 10137
3839 5666 7095 7096		BLATTEIS C M	BONFIGLIO G
BILODEAU I M	0734	9136 10656 12726	BONNARDEL R
736 1096 2484 3840		BLECK M E	3861
5667		BLEICHERT A	BONNEL P H
BILSKI R	11340	6952	BONNER R H
BINDA G	3699	BLET G	BONNET D
5920		BLETHROW J G	8972
BINDER T	2369	BLEVINS W V	BONVALLET M
BINDRA D	1097	2624	10524
BINET J L	12015	BLIDE R W	BONVALLET M
BINET L	164	BLIGH J	2513 3862 10662
165 166 167 1098 1099		6812 7384	179 1756 2514 2515
1100 2486 2487 2488		BLISS E I	3129
2489 3841 3842 5914		BLISS J D M	BORADBENT D E
10018		BLOCH E	BORDES R
BING J	1101	BLOCK J	9419
1102		11507 11563	BORG W R
BING R J	10578	BLOCKLEY W V	5087 6244 7644 9723
BINGEL A G A	2064	2501 2502 12653	BORGATTA E F
BINION J T	5351	BLODGETT H C	1560 2516 3863 4121
6815		5567 9831 12334	BORING R O
BIOJOUT R	3320	BLOETSCHER F	619 1789
3322 4805		BLOOM A	BORISOV V
BIORCK G	5277	7991	BORISOVA M K
5278		BLOOM H L	BORMAN J G
BIRATH G	5321	BLOOM W L	BORN S
BIRCHFIELD R I	8811	BLOUNT R H	BORN S
BIRD G S	3897	3859	BORN S
10649		BLOUNT S G	BORN S
BIRDSALL T G	9178	11113 11114	BORN S
BIRECKI W	5566	BLOUNT W C	BORN S
BIRGE A C	2490	BLUM R H	BORN S
BIRKHEAD N C	10655	BLUMER J	BORN S
BIRMINGHAM H P	2491	BLUMER W F C	BORN S
2492 3533 3843 3948		BLYTH C S	BORN S
6670 6676 7109 8182		10657	BORN S
12715		BOAG T J	BORN S
BIRREN J E	3844	BOATMAN J B	BORN S
3869 6283 7770		BOBA A	BORN S
BIRZIS L	6941	8959	BORN S
6942 5934		BOBER S	BORN S
BISERTE G	5900	6864 6865 6866 7535	BORN S
BISHOP D E	10936	BOBROV N I	BORN S
BISHOP H P	9194	10660 10661	BORN S
BITTEN J	12196	BOBROVNIKOFF N T	BORN S
BITTER H L	8425	8710	BORN S
8439 8455 8456 9943		BOCCA E	BORN S
BITTERMAN M E	0168	BOELES J T F	BORN S
		2505	BORN S
			BORSHCHEVSKII I IA
			7097
			BORSKY I
			10309
			BORSKY P N
			10939
			BORSOOK H
			7338
			BORSTLAP A C
			6140
			BORWN J L
			2546
			BORWN K T
			1162
			BOSSAEUS E
			7954
			BOSEE R A
			3865
			8029 8449 12401 12883
			BOSISIO E
			6096
			BOSTEM F
			12068
			BOSTIC S C
			3866
			BOSTROEM B
			3867
			BOT G
			8983
			BOTHWELL T H
			3868
			BOTTOMI A
			12134
			BOTWINICK J
			3844
			BOUCHAERT J J
			7563
			BOUCHEAU
			4642
			BOUCHER H
			1119
			2517
			BOUCOT N G
			5323
			BOUHUYS A
			6813

AUTHOR INDEX

BOUJSEET S	11436	BRANDALISE B B	9199	BROGDEN W J	1489
12457		BRANDAO G S	1138	2529 3795 3796 5705	
BOULANGE M	0993	BRANDIS S A	8814	7091	
BOUMAN M A	1120	BRANDT U	3884	BROGNOLI C	0192
1121 1122 1123 1124		5615 9472 12557		BROKAW L D	6184
1125 1126 3870 6413		BRANDT W	10132	7646 9724 11493 11511	
7721		BRANNAN P	8423	11512 11513 11606	
BOURA M	0181	BRANNON D	8424	BROMILEY R B	6576
4526 6024 6890		BRANSCOMB B V	0187	BROMLEY D B	7771
BOURASSA C	9352	BRASIL H V	3885	BRON A I	7901
BOURDARIAS J P	8837	BRASILIENSE H A Q	7830	BROOKS C E	2540
BOURDILLON T D	2518	BRASWELL L R	6311	BROOKS C J	9405
BOURDINAUD J	0705	6312 6381 6427 7883		BROOKS C M	5390
1210 1843 1942 1943		BRAUER R W	8961	5391 5472 9051	
1944 1945 1946 3324		BRAUN H A	10665	BROOKS D K	9048
3325		BRAUNGART D C	2526	BROOKS L	3159
BOURDON	2519	BRAUNWALD E	5929	BROOKS L O	4603
BOURDON J R	1127	6815		BROOKS R A	10311
7795		BRAUNWALD E W	10531	BROUHA L	7537
BOURDY C	3871	BRAY T L	1390	10667 11071 11080	
4402 4403 4404 6954		BREBBIA D R	7385	11081	
BOURGAREL C	7945	BREBBIA R	5972	BROUILLETTE J H	0896
BOURNE G	3872	BREBNER D F	5389	2275	
BOURNE L E	5633	10666 11469		BROUSSAIDES F J	12113
5668 9658		BREBNER J	11757	BROUSSARD I G	0193
BOURONCLE J	2369	12629		BROUSSOLLE B	10595
BOUSFIELD W A	5711	BRECHER G A	1139	BROWN A H	8529
BOUSHEY H A	8272	1140 1141 1142		BROWN A L	0194
BOUSQUET C	0564	BRECKENRIDGE C G	1143	195	
7924 8612 11928 11950		BRECKENRIDGE J R	6055	BROWN B E	8030
BOUTELL H M	11433	8026 12773		BROWN B P	11695
BOUTHILET L	1828	BRECKLER A	12630	BROWN C	1153
BOUVEROT P	0182	BREEN E B	10772	BROWN C R	9244
2825 2830 4247 6799		BREHM H E	12848	7151	
6828 6849 8422 8813		BREHMAN G E	7645	BROWN C R	9244
8837		BREITENBUCHER R B	2670	BROWN D E S	0196
BOUVEROT R	6827	BREITENKAMP R N	6382	BROWN E B	5392
BOVARD E W	9830	BRENDEL W	3887	1155 2902 3892 3893	
11178		5830 8732 8962 8963		5336 5393 6439 7956	
BOVARD R M	8510	8964		7957 7963 7972 8887	
12803		BRENER CUKIER J	2527	8914	
BOWE R	11273	BRENGELMANN J C	7147	BROWN E L	10227
BOWEN F D T	12041	BRENNAN B B	3574	10228	
BOWEN H M	0183	5898		BROWN E S	1355
184 1128 3873 7164		BRENNAN T N N	1144	2541 2703 2704	
8136 12458		BRENNER R	1209	BROWN F	10933
BOWEN I G	10152	5640		BROWN F A	2542
12160		BRENT H P	7194	3894 3895 5257 8552	
BOWEN J H	1129	7818 8733 11856		8553 8554	
1130 1131 5669 7098		BRESSLER B	11193	BROWN F C	1392
BOWER H R	10219	BREUNINGER H	3888	BROWN F G	2386
BOWERS N D	2520	BREWER H E	0758	BROWN F J	7538
3615 6266 6267		BREWSTER W R	9023	BROWN F R	1156
BOWLES J W	3874	BRICE D	2528	2543 2544 3896 6629	
5088 5670		BRICE R	3984	12711	
BOWMAN N J	1132	4737 4764		BROWN F W	5832
1133 3875 8250 8266		BRICKER P D	0975	10380	
12459		BRICKNER E W	1326	BROWN G M	2545
BOWMAN R O	8511	BRIDGES C	7842	3897 10649	
8512		BRIDGES W C	3626	BROWN GRANT K	5971
BOWMAN S	9024	BRIDGES W G	0878	BROWN H E	5258
BOWMAN W D	1573	BRIEGER G	10851	BROWN H N	10505
BOWRING A C	9025	BRIGGS G E	2529	12378	
BOWRING J I	12818	5671 6599 7100 7101		BROWN I D	9149
BOWYER C M	1706	8196 9602 9624		BROWN J	3899
BOX N E H	0185	BRIGGS L J	6221	6028	
BOYD J W	8960	BRIGGS M H	8728	BROWN J H U	5916
BOYER J	2521	BRILL N Q	1145	BROWN J L	0197
6426 6431		BRINDLEY G S	1146	198 199 1157 1158 1159	
BOYER J T	10663	2530 2531		2340 3900 5489 5775	
BOYER R	4411	BRINEY S R	10211	5915 6956 7196 7197	
5518 9281 9283		BRINK G VAN DEN	1123	7335 9200 9201 9473	
BOYER R L	12583	1125		9569 10026 10027 10028	
BOYES G E	12551	BRINKLEY J W	12240	10029 10064	
BOYLAN J W	6814	BRINLEY J F	7770	BROWN J R	3898
9028		BRISCOE W A	2745	11438	
BOYLE D J	1134	BRISSENDEN R F	7195	BROWN J S	1160
BOYNTON R M	1135	BRISSENDEN R P	4014	BROWN K T	0200
1136 3876 3877 6955		BRITTON J H	8744	1161	
7053 9198		BRITVAN I A M	1147	BROWN L	8439
BOYS F	5842	BROADBENT D E	0188	BROWN R A	7772
BOYSEN J E	0186	189 1148 1149 1150		BROWN R G	0258
3878		1151 2532 2533 2534		BROWN R H	1163
BOZOVIC L J	6102	2535 2536 2537 5548		1255 2547 2548 3901	
BOZZONI F	10504	6063 7482 7483 9677		3902 5490 5616 6957	
BRAATZ J H	2277	9780 10941		9202 9203 9204 9205	
BRACKMANN J F	7099	BROCK M A	8634	9206	
BRADLEY B E	9073	8635		BROWN R K	10820
BRADLEY J V	2522	BROCKETT J E	6938	BROWN T G	5394
2523 3879 3880 6455		BROCKMAN H L	4673	BROWN W F	7676
6619 6627 6628 8194		BRODIE D A	7955	11680	
8195 9675 9676 12460		BRODIE H R	7334	BROWN W L	8425
12461 12627 12628		BRODY A W	2538	9659 9679 9680 9714	
BRADLEY S E	5941	2683 11437		9831 9943 11293 11294	
6116 6118		BRODY E B	3153	11295 11296 11322	
BRADLEY W A	3881	9678		11355 11356 11357	
BRADY J S	3882	BRODY H	5970	11358 11359 11360	
BRAGG V	1110	BRODY S	2539	11361 11362 11426	
BRAILOVSKII I A Z	2524	7416		11472 12334	
BRAINARD R W	9196	BRODY S I	0190	BROWN W R J	1164
BRALEY L S	1178	1152 3891 6141 6750		BROWN W S	2549
2555		BRODY T M	10832	BROWNE M K	7198
BRAMATI C	1137	BROGAN T A	0191	7199 7200 10030 10031	
2525 3399 7250 7251		246 837 838 839 2178		BROWNE R C	1165
10310		5069 5070 6414		1166	
BRAND H	3883				

AUTHOR INDEX

BROZEK J	0201	BURG A	9207	CAIDIN M	1190
781 782 1167 2550	3903	9208		CAIN C C	1191
3915 6109		BURGEAT	4864	CAIN J	5751
BRUBACH H F	2122	BURGEAT M	10988	CALATRAVA PARAMO L	7831
BRUCE R A	0878	BURGEAT P	7520	CALDARA J D	6549
3626		7809 7928		CALDBICK G D	0772
BRUCE V G	8555	BURGEMEESTRE A J	1182	773	
BRUCER M	2155	BURGESS B F	2683	CALDERON A	7303
BRUCK A	2551	3910 9834 10033 10034		CALDWELL L S	5604
5395 5396		10035		11439 11440 11441	
BRUCK K	7426	BURGESS E	5224	12631	
BRUCKNER R	3904	6708		CALEARO C	10945
BRUELL J H	2224	BURGESS G G	7646	CALHOUN W W	0731
2238 3905		BURIAN H M	9318	1820 1992 1993 3201	
BRUNAUD M	3906	BURKE C J	1183	3202 3359	
BRUNE R L	1464	BURKE J M	12436	CALI V	2561
2811		BURKE R E	5915	10670	
BRUNER H	5750	7196 7206 7335 10029		CALKINS K	3916
9832 10506 10507 10668		10093		11300	
BRUNNER H	5260	BURKHARDT W L	0215	CALLAGHAN E E	3917
BRUNO J F	8078	733		8160	
BRUNS P D	5314	BURKHART E C	8428	CALLAWAY E	9570
BRUSCHKE G	5259	BURKS J E	1851	CALLAWAY W R	1192
BRUSTAD T	11297	BURNAP T K	9108	CALLOWAY D H	2562
11415		BURNETT L S	7659	CALVERT D N	10832
BRUYERE P T	4992	BURNHAM R W	1184	CALVERT E S	6600
BRUZHES A P	7090	1185		CALVIN M	8729
BRYAN A C	12197	BURNRIGHT T R	0216	CAMARDA V	10036
BRYAN C A	10312	BURNS H L	1204	11883	
BRYAN G L	9765	3911		CAMELIN A	7172
BRYAN J G	0834	BURNS N M	8364	CAMERON C	8197
BRYANT J H	10508	9835 11179 11188 11189		12462	
BRYCE SMITH R	8965	11190 12198 12199		CAMERON D E	11191
BUBOIS P H	0311	12200 12201 12883		CAMERON L	1097
BUCHANAN A R	0509	BURNS W	7015	CAMMACK K	11884
11298 11299		BURNUM J F	2557	CAMO R	2966
BUCHANAN D	8532	BURR H S	0217	2967 4411 5518 9283	
BUCHER O	8556	BURROWS A A	1186	CAMOU	2198
BUCHET	0075	6456 6630 8197 10943		CAMP J L	11442
BUCHTHAL F	1168	12629		11443	
12133 12403		BURRY H S	2366	CAMP R T	3918
BUCKLEY E P	0485	BURTON A C	3912	5549 10946 12632	
8152		3913 3914 5991 6876		CAMPANELLI L	2563
BUCKLEY J L	12356	7386 7399 10642		CAMPBELL B	2564
BUCKLEY J P	1169	BURTON R D	9399	3919	
BUCKNER D N	2272	BURWELL R R	7647	CAMPBELL B A	11470
BUDDER H	5180	9973		11471 11490	
BUDDENHAGEN T F	12727	BURWELL R T	11514	CAMPBELL C J	3920
BUETTNER K	0202	BUSCAGLIA R	12114	6631	
203 204 2161		BUSCH G	2558	CAMPBELL D H	6042
BUETTNER K J K	1170	BUSH S G	0686	6043 9990 10892	
8426		BUSH W R	1136	CAMPBELL D N	7884
BUGARD	0205	3876 7053		CAMPBELL D T	7148
BUGARD M P J	2552	BUSHNELL D	8301	7649 9726	
BUGARD P	2211	8302 8303 8429 9888		CAMPBELL E J M	1193
2553 6064 6086 10942		BUSIS S N	12048	1194 3921 8888 8895	
BUGARD P J	0206	BUSKIRK C VAN	9725	CAMPBELL F W	1195
1171 1172 1173 1174		BUSKIRK E	3915	1196 2565 3636 9211	
1175 1176		5369 6109		9212 9213 10208	
BUGELSKI B R	3907	BUSKIRK E R	5261	CAMPBELL H E	3922
7233		5432 5759 5972 6009		12785	
BUGGE ASPERHEIM B	7540	6771 6856 7385 7387		CAMPBELL J	10671
BUGHMAN C R	9566	7388 7412 7413 7425		CAMPBELL J S	10761
BUGROV B G	9833	7472 7473 7585 7639		10764	
BUHLER A	7539	8915 9031 10771 10774		CAMPBELL J T	1197
BUHLER W C	3865	10790 10916 11065		CAMPBELL J W	1324
BUHLMANN A	5324	BUSNENGO E	1801	CAMPBELL L E	11056
5356 6848		2559 5888 10511 10512		CAMPBELL P A	0220
BUJANOV P V	12046	10944 11072 11073		221 1198 1199 3923	
12047		11074		3924 3925 6709 6725	
BUJAS Z	6120	BUSUEL R G	1807	8159 8304 8430 8431	
BUKHMAN A I	12016	BUSYREV A	11632	8513 9836 9837 9838	
BULANOVA K N	1177	BUTLER F C	1187	10229 11301 12319	
BULATOVA N N	2554	BUTLER J	6816	12463	
BULBAN E J	7677	6817		CAMPOS F D	1200
12357		BUTLER L F	8242	CAMPOS REY DE CASTRO	5833
BULLARD R W	5397	BUTLER R A	9079	CAMPOS VALCARCEL E	10458
8966 8967 10509 10510		10565		CAMSKY J	3293
12135		BUXTON R W	10143	CANAC F	2566
BULLE P H	0106	BYARS G E	6127	CANDLAND D R	11255
107		BYCHKOVSKAIA I B	10513	CANDOLE C A DE	7253
BULLOCK D H	1178	BYER S	4664	CANEL Y	5724
2555		BYER S S	1842	CANELLA C J	5610
BULMER M G	5516	BYERS J M	4450	CANEPA A	5884
BULYGIN I A	7132	6325		CANFIELD A A	1201
BUMPUS J N	9566	BYFORD G H	9209	CANNEY H E	4740
BUN T P	8676	9210 9474 12049		CANNON J L	0222
BUNCE G E	8955	BYON Y K	8968	223	
BUNCE P L	1694	BYRNES V A	0218	CANNON P	10672
BUNDEY R E	10669	219 1188 1189 6284		CANTAROW A	4019
BUNING H	12728	BYROM R F	3769	5007 5769 6041 7442	
BUNJE H W	10470			CANTONI G	6620
BUNKER J P	9023			8113 12422	
BUNNING E	8557			CAPAIRA M	4015
8558				CAPEK D	3293
BURCH B H	0214			3926 6383	
260 1179 1652 2998				CAPLAN H	3927
BURCH G E	10032			CAPOBIANCO A	7316
BURCH N R	3908			CAPODAGLIO E	7367
4037 5720 5753 8427		CABANON A	5820	CAPONE C	7541
BURDICK R L	12198	6497 6541 6755		CAPORALE R	8357
12199		CACCIARI C	2377	9475 10036 10313 10947	
BURES J	7336	CACCIOLA A W	8690	11026 11515 11885	
7337		CACCURI S	11882	CAPPEL J	3564
BURESH IA	2556	CAHN J	5398	CAPPON D	9476
BURESOVA O	7336	5399 5917 10514		11140	
		CAHN T	2560		

AUTHOR INDEX

CAPPONE M K	11981	CAVALLERI	5319	CHERNAKOV I N	8795
CAPUTI B M	7852	CAVITT R E	6259	10460	
CAPUTO L	11510	CAWTHORNE T	5605	CHERNIGOVSKII V N	8326
CARA M	1202	7043		CHERNIKOFF R	3948
CARAPANEA M	10314	CAZORLA A	5868	5672 6676 7098 7102	
12558		CAZORLA A T	4662	7103 9574	
CARAVAGGIO L L	5453	CEAUSU V	9682	CHERNOMORDIKOV V V	11473
CARAYON A	6339	10315 12466		CHERNOV V N	9860
CARBERRY W J	8745	CECCHINI L P	11788	CHERRY C N	7671
8792 12633 12716		CELENT C	12467	CHERRY E C	1220
CARBONARA L	6372	CELIICE J	1210	CHERRY J C	10449
CAREL W	1450	CERAN S J	10084	CHERVIKOVSKII N IA	6868
CARELLA A	2749	CERF J	0227	CHETVERIKOV D A	2111
CARENINI B B	2480	CERLETTI A	0106	CHETVERIKOVA G A	9091
3929		107 3940		CHEVAT	4642
CAREY C	2058	CERNOCH M	8611	CHEVILLARD L	8974
7307		CERNOCH O	3293	5993 8975 10680	
CAREY C R	0757	CERRETELLI P	10316	CHEW H F	5555
758 3431 7965		10317 11104		CHEW W B	2170
CAREY T M	7818	CERULLI F	2578	CHEYMOL J	1221
8733 11856		CEYPEK T	5553	1793 1794 3949 3950	
CARHART R	1203	CHABOWSKI M	11302	4610 5218 5919	
1730 1731 4415 5550		CHADWICK E	9234	CHHINA G S	8731
5574 10948 12050		CHAFFA D	12321	8934	
CARHART R T	4414	CHAFFEE J W	6095	CHICHESTER C O	10171
5569 7912 9390		CHAFFEE R R J	8970	CHIFFELLE T L	7298
CARLENS E	4624	10860		8433	
CARLISLE H N	12778	CHAGOVETS N R	11773	CHIHARA Y	9214
CARLSON D C	3930	CHAINOVA L D	9737	CHIKHANI P M	7835
CARLSON L D	1204	CHALARD	0943	CHILDERHOSE R J	7680
2567 2619 3931 5400		CHALMERS E L	1211	8238	
5403 5975 6056 6878		6602		CHILDERS H E	8427
7389 8969 9029 9839		CHALOPIN H	10679	CHILDS A W	6116
10673 10674 10675		CHAMBERLAIN D M	0260	6118	
10676 10677 10678		CHAMBERS A H	5554	CHILES D	4037
11886 12634		CHAMBERS A N	0154	5753	
CARLSON W A	6285	CHAMBERS B	5225	CHILES W D	3953
CARLSTEN A	11075	CHAMBERS L A	7976	3954 7390 8563 9563	
CARMICHAEL J C	6751	CHAMBERS R A	10597	10681 11467 11474	
CARNAZZO A	2568	CHAMBERS R D	2457	11690 11691	
2569		CHAMBERS R M	9571	CHIN N B	3955
CARP A	3175	9577 10037 10038	10224	5491	
3176 3932 6225 7722		10225 10230		CHINELLATO F	9478
CARP F M	11516	CHAMBERT S	1212	CHINETTI P	4522
CARPENTER H M	6440	CHAMBLISS D J	3695	CHINN H I	0230
CARPENTER P D	1205	CHAMPIGNY O	11485	231 232 233 234 235	
CARPENTIER R	2570	CHAMPINE R A	7195	236 644 645 870 966	
CARPI A	8746	CHAMPLIN G A	8273	967 968 969 1223 1224	
CARPOUSIS A	2571	8432 12651		1225 1226 1227 1228	
CARR C D	1206	CHAMPLIN G E	8312	1241 1611 1612 2180	
11887 11958 11959		CHANDESSAIS A	11517	2582 2583 2584 2593	
CARR L	12820	CHANDLER K C	9477	2878 3294 3501 3603	
CARR R M	8425	CHANDLER M R	9296	3956 3957 3958 3959	
9659 9943 11293 11294		CHANG J J	8789	3960 3961 4450 4716	
11472		CHANG M C	8560	4936 6325 6334 6358	
CARR W J	2572	CHANG R W H	6798	6374 7821 12382	
9681		CHANNELL R C	1324	CHIODI H	0237
CARROLL D G	2602	7687		5835 6805 6836 7254	
3371		CHAPANIS A	0457	10319 11823	
CARROLL H W	8961	716 1213 1214 2579		CHIPPAUX	6385
CARSON L D	1207	2877 6577 6586 6958		CHIPPAUX C	2953
CARSON L R	5241	CHAPIN J L	2580	6384	
CARSON T R	12136	3943 4780 5834 10318		CHIRICO M	5920
CARTER C V	12320	CHAPMAN D D	12882	CHIRKOV V IA	11053
CARTER C W	12464	CHAPMAN H W	6428	CHISOLM L	8079
CARTER E T	1208	CHARDON	0228	CHISUM G T	9215
1754 2573 3088 3773		CHARDON G	0611	CHKHAIDZE L V	7255
3933 8816 10327 10515		5947 8971 8972 11801		9575 10320	
10933 10949 11970		CHARDON H	1376	CHMIEL J	6918
11971 11972 12006		CHARLAND P V	1348	CHOCOLLE R	5940
12137 12156 12465		2699 3624 3625		CHOME J	2829
CARTER R L	8816	CHARLES J P	1215	2845 4245 4281 4282	
CARTER V E	12311	CHARLESON D A	4004	4283	
CARTER W K	8258	CHASE H B	2581	CHOTIPRASIT S	2585
12828 12829		3944 6142 11303 11407		CHOW B F	2586
CARTERETTE E C	3934	CHASE R A	9572	CHOY D S J	0238
4100 5551 12559		9573		CHRENKO F A	12202
CASCINO L	11096	CHASSAING H	10617	CHRISTAL R C	11608
CASE H W	1209	CHATELAIN E	1216	CHRISTAL R E	0239
5640		CHATELIER G	9870	6185 7663 7681 7691	
CASE R B	4898	CHATFIELD P O	4575	9757	
CASENTINI S	5973	CHATHAM J D	0484	CHRISTENSEN E	5921
CASIELLO G	2574	CHATONNET J	3945	CHRISTENSEN E H	2587
2575 11888		3946 8973 9105		2588 11062 11063 11076	
CASPARI R	10787	CHATTERJEE R	4623	CHRISTENSEN H	3962
CASPERS H	8559	CHAUCHARD P	1807	CHRISTENSEN H E	12390
8628		9150 9240		CHRISTENSEN J	11262
CASSEL R	7722	CHAUDHRY A P	8561	CHRISTENSEN J M	0240
CASSELLS J S	8777	CHAVEZ R	5853	2589 3963 3964 4937	
CASSELMAN W G B	10870	5884		5496	
CASSEN B	0224	CHEATHAM D C	7195	CHRISTENSEN K R	8217
225 226 2576		CHEATHAM P G	1217	CHRISTENSEN M L	5410
CASSIN S	11759	1218		10876 10877	
CASTELFRANCO M	8882	CHEESEMAN S A	11841	CHRISTENSEN P R	0429
CASTELLUCCIO A	8882	CHELNOKOVA N A	9812	1229 2854 2926 4456	
CASTET	4642	11004		CHRISTENSON C M	1230
CASTILLO C A	9067	CHEMIN	3947	3965	
CASTLE H	5271	CHEMIN A	6550	CHRISTIAN G	6578
CASTRIO M	12004	CHENG C S	7416	8031	
CATE W TEN	7484	CHENG T O	11460	CHRISTIAN G L	3966
7485		CHENIER L P	3278	6710 7682 7683 8032	
CATHCART E S	3935	CHENZOFF A P	12538	8198 8239	
CATTELL R B	1011	CHERKOVICH G M	8562	CHRISTIAN J E	12808
3936		CHERNIACK N S	10039	CHRISTIAN J J	8605
CAUWEL G	3938	10040 10052 10179		CHRISTIANSEN E	5556
CAVALIERI V	2577	10202 10203 10221		CHRISTIANSEN G S	8544

AUTHOR INDEX

CHRISTIE R V	5347	7486	9842	12789	COLLIER D R	10299
CHRISTIE R W	7391	CLEMENTS J A	1244	COLLIER G H	0864	
CHRISTMAN H H	12786	CLEMENTS R	0258	COLLINS C C	10027	
CHRISTMAN R J	5617	1245		10064		
CHRISTNER C A	1231	CLERC N	3979	COLLINS J B	6960	
CHRISTOPHERSEN J	4819	CLEVELAND F P	3564	COLLINS K J	3985	
CHRISTY R L	0241	CLEVELAND J M	11474	3986	7407	
2590 12379		CLIFFORD J M	10666	COLLINS P E	3987	
CHRISTY R T	12580	CLIGNET R	11579	COLLINS S C	9034	
CHUN V	12787	CLINE F	3174	COLLINS T A	7724	
CHUNG S J	10041	CLINE V B	7151	12097		
CHURCH F W	10995	CLINTON A C	12560	COLLINS W E	9151	
CHURCHILL A V	3967	CLOGSTON J	12290	9481 9482 9483 9484		
3968 6632 6633		CLOGSTON J I	12299	9511		
CHURCHILL DAVIDSON H	4650	CLOONAN T F	1246	COLLINS W F	9097	
CHURCHILL E	1232	CLOSE D	8829	11235		
1280 2925 7773 7774		CLOSE P	8817	COLLISON H A	11789	
7775 9147 12219 12220		9365 10321 10322		12897		
CIANKO G M	12124	CLOUDSLEY THOMPSON J	8564	COLQUHOUN W P	9781	
CIBIS P A	0242	CLYNES M	8454	COLTART W D	0261	
243 244 245 246 247		COAKLEY J D	1247	COLVILLE P	6166	
1233 7054 7061		1248		COMALLI P E	5656	
CICALA A	6340	COATES T A	3980	7056		
12380		6287		COMBERG W	5493	
CIER J F	2591	COATS D A	3137	COMBES B	6116	
4343 5401 5922		COBB B B	0690	6118		
CIMA V	0175	2444 7711 11518 11679		COMBS J J	11841	
CIMINO J E	8843	11680		COMFORT E	262	
CINQUEMANI N	10599	COBURN K R	10014	642 1253 2605 12207		
CIRONE M	5221	10224 10225 10226		COMIGNANI L	12091	
6726		10230 12137		COMROE J H	0875	
CLAESSON S	7619	COCHRAN J R	12602	3989		
CLAMANN H G	0250	COCHRAN L B	1249	COMSTOCK C C	0263	
1234 1513 7975 8434		2599 2600 3981 4719		1254 1774 2606		
8435 8436 8438 8439		5776 6507		COMUNTZIS M G	12442	
8455 8456 8514 9841		COCKETT A T K	11845	CONDE T E	1534	
12468 12788 12849		COCQUYT P	1250	CONE T E	0231	
CLANCY R	8914	COCQUYT P P	1251	232 236 458 2582 2878		
CLARE V R	10424	CODER C H	6687	CONKLIN J E	1255	
CLARK B	0251	COE L A	2601	7057 7104 9576 12562		
252 253 254 255 407		COERMANN R	10155	CONLEY C L	4974	
1235 1236 1237 1238		COERMANN R R	10952	CONLEY M	0264	
1239 2592 3972 3973		10953 10954 10955		CONN H L	3511	
5618 6131 8080 9479		11011		5923		
9480 9508 10042 10043		COGAN D G	11304	CONN H O	2607	
10080 10246		COHEN A	9366	CONN J W	10891	
CLARK C	6268	9853 10683		CONNOR E	4606	
CLARK C C	9506	COHEN A A	8818	CONNOR E H	1964	
10044 10045 10046		COHEN A I	4617	1965		
10047 10048 10049		COHEN B D	11192	CONNERY J M	11230	
10050 10086 11889		COHEN D	9025	CONNOLLY J J	11437	
12736 12850		COHEN D B	11239	CONNOLLY K T	2608	
CLARK D M	3974	COHEN E	10138	2609		
6460		COHEN G	3982	CONNOR J A	11305	
CLARK E	6527	COHEN H B	9216	CONNOR T J	5577	
8274 8437		COHEN I S	9727	5578 6420		
CLARK F C	9673	COHEN J	0259	CONOVER D W	12636	
CLARK G	8976	2081 3453 4939 4940		CONRAD R	1256	
CLARK J	3975	8199		1257 1258 3991 5673		
12635		COHEN J D	3983	7105		
CLARK J K	6927	COHEN L A	9453	CONSOLAZIO C F	7387	
CLARK J R	0873	COHEN M	11167	7472 7473 10685		
874		COHEN M M	7948	CONSTANTINO J G	4922	
CLARK J W	7609	COHEN M S	7256	7937 11787		
CLARK K L	7902	COHEN S I	5720	CONTICELLI M	9217	
CLARK L C	1240	5777 5814 5815 7201		CONTINI R	12208	
CLARK R	8312	7223 7224 7232 9547		CONWAY S M P	6502	
CLARK R B	8438	10054 11193 11249		CONYBEARE SIR J	0265	
CLARK R E	10682	11591 11761 12288		COOK E B	11519	
10683		COHEN W	5492	COOK J E	10055	
CLARK R T	0256	7055		COOK K M	1545	
257 1241 2266 2593		COHN J E	2602	COOK L	2610	
2629 3294 3541 3976		3371		COOK R F	2019	
4012 4013 6444 6546		COHN R	8977	COOK S F	0266	
6551 8439 10363 10465		COLE B T	1252	5196 5197 5924 8978		
10499 10500 10515		COLE C C	12608	COOK T J	3781	
12157 12159		COLE C H	0260	10299		
CLARK W C	0797	COLE E L	0599	COOK T W	9639	
798 799 50004 5619		648 2603 3650 12203		COOL W S	0791	
5620 6959		COLE J	8957	COOLEY D A	4673	
CLARK W E	10950	COLE J N	12561	COOLEY J C	2611	
10951		COLE M	12559	4418		
CLARKE E W	0978	COLE W H	1538	COOMBS A H	3358	
CLARKE F R	4100	COLEHOUR J K	7338	COONAN T J	3992	
CLARKE H H	3977	10323 10517		6634		
CLARKE N P	6496	COLELLA C	3276	COONE H W	3993	
10023 10024 10051		4746		COONS D E	3994	
10052 10053 10123		COLEMAN P D	5147	COONS D O	7788	
CLARKE R S J	7392	5148 6065 6073 9367		8132 8133		
10684 10854 11077		COLERIDGE J C G	10007	COOPER D Y	1259	
CLARO J J	6386	10008 10009		1695 1697 5325 12151		
7723		COLES B C	0773	COOPER E R	2612	
CLAUSER C E	11760	COLES D R	5836	COOPER G E	5089	
CLAVIJO J	6923	5837 6800		8134		
CLAY H M	6286	COLES W D	3917	COOPER J A D	1984	
7776		8160 8161		1985 3352		
CLEARY J P	11030	COLICHMAN E L	12884	COOPER R G	3803	
CLEAVER A V	6757	COLIN	2604	COOPER W N	12643	
CLEGG D A	6557	11321		COPAIRA M	5840	
6558		COLIN A	6529	5841		
CLEGG W C	2594	COLIN J	3527	COPE F W	7173	
2595 2596		3984 4764 6799 6827		7487 8747 8748 8749		
CLEGHORN R A	1462	6828 7835 8768 8819		8750 9577 9843 10056		
3139 3233 4690 5768		9869 12204 12205 12206		10956		
CLEMEDSON C J	1242	12230 12556		COPELAND N K	10265	
1243 2597 2598 3978		COLLEY I H	8270	COPLANS R M	1260	

AUTHOR INDEX

CORABOEFUF E	5402	CRAIG A B	11444	CUBA CAPARO A	4015
5437 9782		CRAIG E A	4006	6316	
CORAZZI U	8440	CRAIG N	1112	CUCCAGNA F	6961
CORBET A A G	3995	2624 10688 11272		CUENOT A	1275
CORBIN H H	5494	CRAIG P	12748	CUGURRA F	6359
CORDIER D	0267	CRAIG R	9035	6360 6361	
1261 1262 1263 1264		CRAIG R C	7684	CULBERT S S	2633
1265 1266 1267 3996		CRAIN K	9219	10958	
5752 7257		9336 9337 12710		CULLUMBINE H	0278
CORIAT F	1100	CRAMER C	8751	5976	
CORIGLIANO J	5839	CRAMER E H	9859	CULVER G A	1276
CORKHILL DEP T	11306	CRAMER K R	12209	CULVER J F	9900
CORKINDALE K G	7009	12243		9901 11938	
9844 12462		CRAMER R	5557	CUMMING F G	12322
CORLEY R C	8602	CRAMER R L	7204	CUMMING M C	8916
CORLISS H H	0268	CRAMPTON G H	1272	CUMMING R W	6611
CORMACK R S	3997	4007 5495 9151 9485		CUMMING S E G	10920
6818 6820		9486 9487 12469		CUMMINGS F G	6630
CORNET	6385	CRANMORE D	0368	CUNHA R	0279
CORNETT R W	10491	1441 2625 3910 5778		CUNNINGHAM D	6148
CORNIA G	2613	5779 5789 10034		CUNNINGHAM D J C	1035
3288		CRANNELL C W	2589	2436 2437 3997 5407	
CORNIGLION MOLINIER	2614	3963 5496 7501 10993		6818 6819 6820 8821	
CORNISH E R	0757	CRANSTON W I	2626	8864	
758		CRAVEN C B M	4008	CURD D	6387
CORNOG R A	12790	CRAWFORD B M	9454	CURETON E E	9683
CORNSWEET J	0376	9455 10231 12614 12616		11749	
CORNSWEET T N	9218	12637		CURETON T K	7542
CORREA J	5838	CRAWFORD D G	10518	CURLEY F J	0512
10399 10455		CRAWFORD F R	1273	CURRERI J R	11009
CORREALE J V	12227	CRAWFORD W A	9220	CURRIE J C M	4016
12228		9221 9222 9223 9224		8822	
CORRELL E G	3908	9225 9226 11445		CURRY E T	5842
9547 12303 12681		CREAGER J A	9728	CURTIS H J	11307
CORSO J E	11824	11660		CURTIS J L	12563
12010		CREELMAN J A	2627	CURTISS WRIGHT CORP	12730
CORSO J F	1268	4009 4010 6222 6635		CURVEILLE J	1946
2119		6636 8221		3326 3528 3720 4807	
COSIO G	5839	CREER B Y	10057	7809 7924 11508	
COSTA F	3183	10168 12761		CUSHMAN R H	12639
COSTE E	1171	CREMA A	0275	CUTT R A	8984
1172 1173 1174 1176		2628		CUTULI F	10313
2553		CREMER B J	8988	CUYPERS Y	3762
COSTE F	2211	CREMIN B J	6502	5824 6821	
COSTILLOW R N	6696	CRESWELL A W	12210	CZARNECKI E	6871
8265		CRETCHLEY R R	6668	CZECH W	2634
COTES J E	0269	CRETON R	10412	CZERSKI P	11329
270 1269 2615 2616		10413			
2617 2618 8820 11126		CREUTZFELDT O	4011		
COTTER H	6049	4794 4795 4796 7339			
COTTERMAN T E	9578	10492			
COTTLE M	11078	CRIBORN C O	3978		
COTTLE M K	5974	CRISCUOLO D	0257		
5975		1241 2593 2629 3541			
COTTLE W	2619	3976 4012 4013 5856			
COTTLE W H	5403	6807 9845 9846 9881			
10686 10687		10499 10500			
COTTON J W	0864	CRISE J R	12135	DA COSTA F	2512
COTZIN M	3716	CRISP C E	6859	2513	
3717 3718 3998		6938		DA COSTA I A	5413
COUCH G T	12189	CRIST B	9853	DACOSTA F M	3862
COUGHLIN W J	3999	CROCCO A G	5209	DADASHOV A G	10384
COULES J	2009	CROCCO G A	5210	DAGETT JR M	0280
4000 11762		CROCKER J F	10689	DAGGS V M	0686
COULSON C K	0257	CROCKFORD G W	12211	DAGIANTI A	5954
COULSON J E	6606	CROOK D J	1274	6093	
COULTER N A	10957	CROOK M N	0276	DAGIANTI D	5332
COULTHARD W H	2620	2630 5621 8081 9194		DAGORN R	6288
COURAND A	6118	11762		DAHL E V	10387
COURNAND A	1322	CROSBIE R	4506	DAILEY J T	1277
2621 4001 4150 5929		7624		DAILY L	6143
6116 9854 12139		CROSBIE R J	5780	DALE H C A	2635
COURTICE F C	2622	5781 5782 5797 7213		9730	
3028		9506 10050 10058 10079		DALEY E A	0281
COURTNEY D	2094	10118 10122 12638		2636	
2969		12729		DALGLISH J J	4369
COURTNEY J	11195	CROSBY L A	4667	DALY M DE B	10519
COUVES C M	5404	CROSBY W H	5406	DAMARIN F L	9726
COVAS CORO R	1270	9111		DAMASIO R	0282
COVASNEANU Z	11130	CROSS C A	8240	823	
COVELL W P	0271	8677		5408 8985 8986	
2623 3482 10966		CROSS K W	7334	DAMBLY	0283
COVINO B G	4002	CROSSFELDT A S	2570	2638 4017	
4003 4004 4005 5379		8135 9920		DAMEY E	11446
5380 5405 5425 6862		CROWTIZ H F	9227	DAMJANOVICH S	9103
6869 6870 7768 7869		CROWDEN G P	11438	DAMSTE P H	4018
8942 8979 8980 8981		CROWDER N A	6226	DANDRETTA J C	6342
8982 8985 9016 10640		CROWLEY N	12212	DANFORD M B	5856
10650		CROWLEY L V	6938	DANFORTH W H	10578
COVINO R O	8986	CRUCH S	0613	DANGELO S A	4019
COWAN R F	4731	1783		5007 6041 10690	
COWLES J T	0277	CRUMLEY L M	0277	DANGELO V	2639
COWN W R	6764	2544 2631 2632 4014		DANHOF I E	10324
COX C M	7256	7003		DANHOF I E	0797
COX G E	11890	CRUMP J F	5878	798 799 5004	
COX J A	0908	CRUMPTON C W	9067	DANIEL G A	8366
909 1271 6185 11662		CRUTCHFIELD R S	3711	DANIELS F	2640
11663		9729 11563		3769 5376 5972 5977	
COX J R	6415	CRUZEN M	0775	5978 6119 10691	
COXON R V	5342	CRWEN I	4127	DANIELS G S	1232
COY R	8472	CSABA B	8983	1278 1279 1280 2925	
COY R G	6503	9103		DANILEIKO V I	9847
CRABBE J	11166	CSALAY L	7340	11447	
CRACOVANER A J	2860	7341		DANILOV V E	7885
CRAFFT W M	12425	CUBA A	5840	8823 12051	
CRAFT C E	8518	5841		DANLIN B S	7174
				DANNESKIOLD R D	2641

D

AUTHOR INDEX

4020	DANZIG E R	4956	4104 7822 7823	DEANE G E	9684	DESCHWANDEN P VON	0290
	DARCANGELO P	1281		DEANE H W	2645	DESMARIS A	2658
	DARCUS H D	1282		2646		2659 4048 4049 4050	4050
	DARCY M	6352		DEARNALEY E J	11067	4085 4197 5983 7394	7394
	7855			DEATHERAGE B H	1114	DESOILLE H	7789
	DARDANO J F	9783		4025 5706 7016		7790	
	DASGUPTA S V K	3218		DEATING D A	12805	DESOUTTER D	1299
	DASS C M	10630		DEAVERS S	9027	DESSRU L	6566
	DAVENPORT E W	4021		DEBAKEY M E	3979	DESSAUX G	1261
	DAVID A B	5497		DEBARNOT F O	5451	1262 1264 1267	
	DAVID CLARK CO INC	12213		DEBELLA G	7526	DETABEL M H	7725
	DAVID H	9184		DEBIAS D A	2647	DETERLING R A	4051
	11308 12441			7442 10325	5769	DETER H M	4189
	DAVID H M	10059		DEBIASI V	8201	DEUTSCH S	5555
	12791			DEBIJADI R	4030	DEUTSCHMAN Z	6432
	DAVID T R A	4027		DEBJADJI R	8793	DEVOE D B	1283
	DAVIDOVIC J	10520		DEBONS A	5484	6669 8081	
	9113			DEBRISSE A	9685	DEVOGT J F	4052
	DAVIDSSON A L	1283		DECALLIES R N	12470	DEVOR D	5345
	DAVIDSSON A D	12900		DECKER J L	6603	DEVRIES E	9265
	DAVIDSSON L L	10851		DECOURSEY P D	2649	DEXTER L	0291
	DAVIDSSON L L	4022		DECOURSEY J J	8565		
	DAVIDSSON W F	12430		DECROW T W	3089	DEY M K	6677
	DAVIDSSON W F	2642		3474		DHENIN G H	5176
	DAVIERSON O O	1064		DEE T E	7387	DHIRAPUTRA S	0292
	DAVIERSON R E	4023		7472 7473		6260	
	DAVIERSON R E	4024		DEERING R A	11310	DI FRANCIA G T	6999
	DAVIS C B	12442		DEESE J	0284	DI GIORGIO A M	4059
	DAVIS D D	11890		1291 1292 4033 5622		6872	
	DAVIS D D	8603		DEFARES J G	7958	DI MACCO G	1307
	DAVIS D D	11309		10521		6289	
	DAVIS D D	12381		DEFOREST R E	10224	DI MARIA G	7342
	DAVIS D H	1284		10226 10230 12214		DIAMANT H	0293
	128 1286 1287 1453			DEGAND J	2650	2395 4054	
	4022 5583 7016 9378			DEGAUGH R A	2651	DIAMANTIDES N D	4629
	10959 10960			DEHAAN R L	10522	DIAMOND A L	0199
	DAVIS H T	11339		10523		294 480 1158 1159 1300	1300
	DAVIS I J	8678		DEHAVEN H	0285	2660 4055	
	DAVIS J F	9152		286 287 288 1297 4279	11311	DIAMOND P	12121
	DAVIS J M	8082		DEICHMANN W B	11313	DIAMOND S	7726
	DAVIS J R	11195 12138		DEILY W H	4793	9229 9489 11763 11895	11895
	DAVIS R C	5910		DEISS A	3715	DICE H E	2661
	5674 5675 6066 6067	4026		DEJMAL V	7238	DICK J L	11314
	7106 7488			DEJOURS P	2652	DICKY F L	12792
	DAVIS R H A	9579		2653 6094 6823 7259		DICKIE J R	12310
	DAVIS T R A	4028		8825 10326 11079		DICKIE R D	0295
	10692 10693 10694			DEKING H M	0289	DICKINSON F	2662
	10695 10696 11475			DELAHAYE	2654	DICKINSON J	6327
	DAVIS W O	5226		DELALLA O	11892	DICKINSON T A	4056
	3652 3653	3651		DELANNE R	11071	DICKINSON T G	2680
	DAVYDIUK B F	11553		DELAUNOIS A	2655	DICKSON C D D	0296
	DAWE A R	5279		DELDOUCA M G	11292	E D D	
	DAWSON D	5476		DELFOSE J	6928	1301 1302 1303 1304	1304
	DAWSON J F	4029		DELGADO J M R	12115	2663 2664 2665 2666	2666
	DAY D J	12362		DELIA E	11943	4057 6343	
	DAY R E	11633		DELIYIANNIS S	12044	DICKSON J A	7637
	DAY R H	1288		DELL M B	12078	DIECKMANN D	6076
	1289 1290 2643 2644			DELL P	4036	10961	
	9488 12564			10524		DIETHMAN K	10506
	DAYE G T	10113		DELLOLIO G	5980	10507	
	DE ANGELIS E	11170		DELP M	11860	DIETZ W C	0297
	DE ANGELIS F	0366		DEMANGE J M	5326	DIGHAN J	1305
	DE BOIS H J	2648		5344 6857		DIGO R	4060
	DE BRISSEON A	9731		DEMAREE R G	11634	DIL A H	10574
	DE BRISSEON DE LAROCHE	11631		DEMEESTER G	4528	DILIGENSKAIA E S	1306
	DE CILLA F	7832		7563 10573		DILL B	2667
	7833 11891			DEMENT W	6943	12118	
	DE CORRAL J M	4031		DEMING N N	9867	DILLON D J	9230
	4032			DEMONGEOT C	5350	DIMMICK F L	2996
	DE COSTER A	6822		6845		6967 7004 9349	9349
	DE EDS F	3727		DEMPSEY C A	2656	DIAMOND E G	12052
	DE FRANCISCIS P	4034		4037 5753		DINA M A	6165
	10198			DEMPSEY E W	4038	DINDINGER H	6068
	DE GENNAVO L D	2151		DEMPSTER W T	4039	DINES J H	10989
	DE GRAEVE J H	1293		6167		DINGLE J	5262
	DE GROOT S G	1294		DENISON M E	2657	DINGMAN E H	12459
	DE HAVEN H	1295		4040 5980 5981 6058		DINNERSTEIN A J	8199
	1296			7409 10777		DINSMORE R A	0298
	DE JONG J R	7107		DENNIS R J	12757	DION R L	9336
	DE JONGE B R	9406		DENNIS W	1298	DIRENZI L	3586
	DE LA VEGA E	5840		4645		DIRINGSHOFFEN H VON	0299
	5841			DENOIS E	6530	1308 4061 5783 6261	6261
	DE LANGEN C D	4035		DENOIS F M	4041	6298 8382 10232 10233	10233
	10379			DENOLIN H	6822	11734 11635 11636	11636
	DE LANNE R	11080		7544		DIRKEN M N J	3366
	11081			DENOVA A A	10060	DIRKS D	11768
	DE LILLIE P	7577		DEODATO M	7342	DISHOECK H A VAN	1309
	DE LONG E	8752		DEPOCAS F	5982	DITCHBURN R W	1310
	DE NAYER	7543		5999 6003 7393 10697		DIVEN F H	10711
	DE RIVERA J	6269		10698 10699 10700		DIXON F	1311
	7149 7685			10758		DIXON M E	8826
	DE RIVERA J H	4047		DEREVIANKO E A	7590	DIXON N F	11150
	DE SOTO C B	7130		DERIVERA J	9717	DIXON W K	10890
	DE TREVILLE R T P	7941		DERIVERA J H	4046	DOANE B J	0295
	DE VALOIS R L	5498		7686 9580 9581		2668 6132 11196 11244	11244
	DE VIENNE J	6637		DERKSEN W L	7620	DOBELN W VON	0300
	DE VRIES E	5734		7886		889 1312 1313 7727	7727
	6763 7666 7729 9228			DERKSLATH S	7886	11082 11083 11764	11764
	DE WIT G	3662		DERMKSIAN G	8734	11765	
				8735 8860 11825 11893		DOBIE S I	11192
				DERSH J	11894	11239	
				DESCHWANDEN J VON	0290	DOBIE T G	11520







AUTHOR INDEX

FAWCETT H H	12223	FINKELSTEIN B	6697	FOELSCHE T	11320
FAY J C	2725	6699 7135 8261 10337		FOERSTER G E	9881
2726		11232 12854 12855		FOGEL L J	8203
FAZIOLI L	5103	12856 12857		12482 12645	
FEDOR E J	5108	FINKEN W S	7994	FOITZIK L	0346
5409 5411 6874 6875		7995		FOKKEMA S D	4167
8994 8995 8998		FINNEY W A	10025	4168 7730	
FEDOROV V I	12481	FINTAK F F	0739	FOLDI M	2742
FEDOROVA T A	9867	2016		7344 10539 10540 10541	
FEEN W O	2797	FIORENTINI A	9242	FOLEY F E	11698
FEHR R O	1390	FIORICA V	11482	FOLEY J P	0091
1391		FIORIOLO W	7262	2378	
FEIFEL H	7778	FISCHER J J	5606	FOLEY P J	6642
FEINBERG H	8833	FISHER A C	4149	6966 8204	
9006 10528		FISHER B	5409	FOLGER J K	4593
FEINSTEIN R N	0338	5411 6874 6875 8994		FOLK G E	4169
FEJFAR Z	4821	8995 8998		5283 5284 5289 8571	
FEKETE A	10483	FISHER E K	8794	8575 8625 8638 8639	
FELDHAUS J L	9240	FISHER E R	8994	11272	
FELDMANN A L	8572	FISHER G F	7791	FOLKOW B	2743
FELDMAN G L	11142	FISHER M B	4584	FOLLEY J D	3207
FELICIANO J	12068	FISHMAN A P	1060	11494 11699 11700	
FELTS J M	5989	2621 4150 5929 8755		12483	
10713		9854 10531 12139		FOLSE R	5433
FENDER D H	9241	12762		5457 6881	
FENICHEL R L	10062	FITTS P M	0110	FOLSOM W W	0347
10063 10092 10118		341 342 873 1395 1396		1414 1415	
FENN W O	1421	1397 1880 3763 3764		FOMINA Z G	10489
1978 2727 2798 2799		4152 4153 4318 4714		FONG W Y	12084
2800 4142 4214 4215		5507 5671 5680 6599		FONTAINE A B	0874
4837 5334 8384		7087 7100 7101 8184		FONTAINE M	4170
FENNING L M	11143	8196 9589 9855		FOOKS G	4660
FENNO R M	2728	FITZGERALD J B	10389	6967	
FENYES I	7340	11845 12754		FORBES A R	12326
FERGUSON F P	1392	FITZHUGH R	6986	FORBES L M	6991
4817 5843 5844 7261		FITZPATRICK R	1398	FORCHER MAYR O	0348
7265 10329 10346 10347		1399 2214 6224		1416 3569	
FERGUSON I D	5410	FITZSIMONS J T	7199	FORD A	8138
10714 10766		10030		9357	
FERGUSON J R	4143	FLACKE W	1400	FORD H K	6456
FERGUSON R B	8573	FLAGG J E	6460	FORD T R	4593
FERNANDEZ F O	10448	FLAHERTY B E	9732	FORESTIER F	7172
FERNANDEZ C	8996	11199		FORGAYS D C	2744
9459 9493 9518 9652		FLANDROIS F	8825	FORGAYS D G	0540
10529 10565		12733		1246 1417 2012 7731	
FERNANDEZ GUARDIOLA	10588	FLANDROIS R	4154	FORGIE C D	12477
FERNANDEZ L	3415	4803 5721 6799 8422		FORGY E W	7151
5886 7303		8813 8837 11598 12734		FORNARI A	4172
FERNANDEZ S	7303	FLECK H G	0246	FORTEZA BOVER J	2746
FERNANDO CANO L	8560	742 2274		FORTI L	6104
FERRARI C	2729	FLECKER J E	9856	FORTIER G	0349
FERRARI E	2730	FLEER R E	9445	2688 2747 7395	
4144 4145		FLEETWOOD P G	2734	FORREST D W	9688
FERRARI G	2731	FLEISCH A	4071	FORREST J	8258
FERRARIS DE GASPARE	0339	6825		12828 12829 12830	
1089 1393		FLEISCHHAUER O	11985	FORSTER R E	2745
FERRIS H M	2337	FLEISCHNER J R	5990	6847 8005 12253	
2709 2710 2732 9138		10716		FORSTER R P	4173
FERRIS B G	6166	FLEISHMAN E A	1401	FORSYTH O M	6958
11448		1402 1403 1404 1405		9244 9245	
FERRIS C	0808	1406 1407 2735 2736		FORWELL G D	2748
3509		2737 2738 2907 3903		FOSMOE R J	8756
FERRO C B	7248	4156 4157 4158 5681		11876	
FERRONI A	5678	5682 6186 9586 9587		FOSTER G L	2451
5926 5927		11664 11697		6137 10648	
FERWERDA T	6459	FLEISHMAN M	5996	FOSTER J F	12795
FESSENDEN E	12638	FLEKKEL A B	9243	FOULHOUX P	2827
FESSENDEN E I	11412	FLEMING E S	0916	FOURNIER E	5562
FESTINGER L	9718	FLEMING J D	11369	8416	
FESZT G	8997	FLETCHER D E	2631	FOWLER E P	0575
FESZT T	8997	2739 6965 9200 10064		FOWLER R C	4174
FICHTBAUER S	11526	FLETCHER E E	9364	FOWLER R C	4175
FIEDLER F E	2733	FLETCHER H	1408	FOWLER U S	1418
4146		FLETCHER J L	2032	FOX B H	8230
FIELD J	10522	7489 9369 9370 9371		FOX F E	1706
10523		9372 9373 12225		FOX M S	0350
FIELDS G C	4147	FLEURTOT M	2740	FOX R E	9246
FIELDS P E	0340	FLEXMAN R E	1409	11474	
FIGUR A	12224	FLICK D F	5080	FOX R H	2732
FIGUR A M	11254	5081		3328 5984 7397 10717	
FILANTE W	11266	FLICKINGER D	4159	10718 10719	
FILIP J	7536	FLICKINGER D D	8412	FOZARD J L	5524
FILIPPOVA G G	11086	8442 9857 9858 11527		FRACHE G	2749
FILIPPI A	4411	11585 12082 12385		FRADA G	2750
5518		FLINK E B	5264	2751 7398 7591 10720	
FILIPPOV B G	6778	FLINN D E	9859	10721	
8626		11199 11528 12007		FRAENKEL G	12098
FILIPPOVA V N	11278	FLINT A W	9722	FRAGOLA C F	6643
FILLEY G F	11113	FLODIN S	1410	FRANCESCO NI A	12327
11114		FLODMAN L J	1662	FRANCK C	0396
FILLIOS L C	10336	FLORENTINO A A	5271	398 399 400 401 404	
FILCAMA G	5332	FLORENTZANO R	6106	405 406 2752 2825 2826	
FIMIAN W J	11967	FLORU R	11144	2828 2830 2831 2834	
11968		FLOTTE L	4162	2835 4176 4248 6857	
FINCHER E L	6764	4163		FRANCO R J	6923
FINCK A	9565	FLOTTORP G	0343	FRANCONI E	12361
9644		344		FRANK C	1476
FINDLAY J D	4148	FLOYD W F	2741	FRANK E	6362
FINE B J	9366	FLUCKIGER E	0345	6366	
9853 10715		1411 4164 5928		FRANK G B	1419
FINEG J	11786	FLYER E S	1412	FRANK H	2753
FINERTY J C	9829	1413 6225 11529 11639		FRANK N R	11448
FINETTI P	12087	FLYNN J P	5577	FRANKE E K	0377
FINK B R	8834	5578 6420		1420 2754 4177 6071	
FINK J B	5679	FLYNN V P	4166	FRANKEL B L	4178
FINK R	1394	FOBES L M	5508	FRANKEL H	1112





AUTHOR INDEX

5422 7351 9009		4243 4983		10333 12210	
GOLLNICK P D	11089	GRAHAM A E	11498	GREEN J	7552
GOLLWITZER MEIER K	0386	GRAHAM B F	1462	8686	
GOLODOV I I	8836	2220		GREEN J H	0316
GOLTRA E R	8574	GRAHAM C H	0197	1193 1194 3921	
GOLUBOVICH K	11111	499 1157 6980 9250		GREEN M R	12656
GOLUEKE C G	8521	GRAHAM D T	7136	GREEN R F	0429
12892		GRAHAM E H	9251	984 987 1229 1283	
GOMEZ A	0820	GRAHAM F	0395	1485 1486 1487 1488	
GOMEZ G L A	8310	GRAHAM G G	2369	2235 2381 2382 2854	
GOMORI P	5930	GRAHAM M L	1662	3735 4209 4265 4266	
5931 10483 10538 10539	10539	GRAHAM N E	1475	4267 4268 4269 4270	
10540 10541		66649		4271 4272 5040 5147	
GONCHAROVA E E	1909	GRAMBERG DANIELSEN	812575	5148 5686 6648 8191	
GONTEA I	7549	GRANATH A	8758	9565	
GONTSIA IA	8919	GRANDE F	3915	GREENBAUM L J	8640
GOOD A L	5994	5362	6109 6929	GREENBERG G	11249
GOOD R		GRANDJEAN E	2823	GREENBERG G Z	10965
10738		4613 4685 5423 6097		GREENBERG L J	8573
GOOD S	2074	9252 11033		GREENBLATT M	11200
12229		GRANDJEAN J	4244	11203 11212	
GOOD R G	9096	GRANDPIERRE R	0396	GREENE E A	2606
GOODALE W T	2866	397 398 399 400 401		12128	
GOODALL M	7232	402 403 404 405 406		GREENE J W	9382
10077		1476 1477 2752 2824		10984 12060	
GOODELL H	7136	2825 2826 2827 2828		GREENE L	4506
GOODENOUGH D R	4269	2829 2830 2831 2832		GREENE L C	5797
5686		2833 2834 2835 4245		6147 6148 7137 7213	
GOODMAN B D	9689	4246 4247 4248 4249		10122 11404 11405	
GOODMAN I J	8123	5848 6827 6828 7266		11406	
GOODMAN M W	11829	7538 7907 8813 8837		GREENE N M	7352
GOODNOW J J	11175	8838 9869 9870 10241		GREENE P H	6972
GOODRICH J W	6509	11092 12230 12333		GREENE R	7353
GOODSELL M G	5264	12733 12734		GREENFIELD A D M	2841
GOODSON J E	9247	GRANGER D W	1240	4273	
9655 9736 11219 11850	11850	GRANGER G W	2836	GREENHILL L P	4274
GOODWIN J E	0360	6970 6971 9253		GREENWOOD S W	6743
GOODY R M	4244	GRANOTIER E	7924	GREER F L	8060
6780		8612 11927 11950		8061	
GOO H VAN	11090	GRANT D A	1849	GREFE G K	7551
11091		1891 3224 3262 3732		GREGG D E	4891
GOORNEY A B	1467	4250 4251 4519 4520		5053	
GORAL C	5050	4672 4725 4726 5639		GREGG L	1160
GORBOV F D	9737	5690 5697 6596 9314		GREGG L W	1489
GORDON A S	2814	GRANT J D	4252	2842 7112 9326 12391	
GORDON B L	0387	GRANT J	5818	12576	
12021		6689		GREGOIRE R	2684
GORDON D A	1468	GRANT W C	1478	2685 4083	
2201 2298 2815 12506	12506	1479 1480 1481 4253		GREGORY A H	9211
GORDON J J	5510	GRAUL E H	7623	GREGORY R	8656
8262		GRAVELINE D E	8759	GREGORY R L	9465
GORDON J N	0388	9120 10242 10243 10244		GREIDER H R	7191
GORDON M A	0389	10245 10248 10262		7267 7288 7304 7998	
390 391 1469 2816 4236	4236	GRAVENEEL D W	10973	8006 8025 12281 12296	
11534		10974		12487	
GORDON B	1470	GRAVES J B	12364	GREINER T	6364
GORDON SMITH C E	6433	GRAY E L	4254	GREINER T H	3908
GORELOV V V	7733	GRAY F E	11451	4037 5753	
GOREN S B	5335	GRAY G	1394	GREINELL R G	0413
5766		9029		GRESSLY D W	12041
GORIA A	2817	GRAY G W	4255	GRETHER W F	0200
2818 2819 2820 2821	2821	GRAY I	5799	2245 2426 4275 8089	
4237 4238 4239		5813		GREWE J	1490
GORLIN R	0568	GRAY J S	1208	GRICE G R	0414
569 1471 2822		GRAY R F	3881	4276	
GORLOV O G	8348	4256 5627 7197 9457		GRIDGEMAN N T	10762
9833 9860		9458 9505 9506 10048		GRIERSON JACKSON W	0415
GORMAN H A	12654	10049 10079 10086		GRIFFIN D R	6463
GORNY D	8863	10206 12231		GRIFFIN P E	6938
GOSHEN C E	9690	GRAYBIEL A	0251	GRIFFING V	1706
GOTTLIB J S	11161	253 407 408 409 410		GRIFFIS L E	2843
11192		411 683 684 1235 1237		7734	
GOTTSDANKER R	9248	1239 1482 1483 1876		GRIFFITHS W J	11211
9249		1877 1878 1906 2837		GRIFFO Z J	10551
GOTTSDANKER R M	1472	2838 2839 2840 3275		GRIGNOLO A	2480
1473 4240 5626 5685	5685	3973 4257 4258 4259		GRIGOREVA G I	10489
7066 9199		4260 5618 5791 6131		GRILLO G P	1032
GOTZE W	11088	6245 6268 6711 7050		GRILLO M A	5860
GOTZLINGER J	4233	7338 7642 7908 8080		GRIMALDI F	10504
GOUGEROT L	1474	8312 8313 8438 9254		GRIMALDI J V	3266
GOUGH H G	9738	9479 9480 9507 9508		10975	
11535 11563 11769	11769	9510 9557 9848 9871		GRIMM J R	1491
GOULD R A	1696	9900 9901 10042 10043		1492	
5026		10080 10114 10209		GRINDELAND R E	8575
GOULD T C	11326	10246 10926 10927		8639	
11327		11093 11465 11703		GRINGS W W	1493
GOULD W J	2859	11830 11832 11848		1494 1495	
2860		12448 12735		GRINKER R R	1053
GOURLEY N W	7997	GRAYEB G A	10829	3791	
GOURZIS J T	0121	GRAYSON J	4261	GRINSTED A D	4277
122		GREATREX F B	4262	4278	
GOVER S C	0458	GREBESHECHNIKOVA A	M11376	GRISCUOLA D	7378
1534		GRECO S	11273	GRISELL J L	11161
GOWDEY C W	4241	GREEN B F	1484	GRISHINA K F	11325
GOWENLOCK A H	11449	4263 4264 5511 5512		GRISSOM V I	8314
GRABER B	9851	9509		GRISWOLD R W	4279
GRABIAK E	7191	GREEN C D	9872	GRISWOLD S S	7976
GRABOYES S	10447	12334 12655 12797		GRIVEL F	8631
GRACHEVA R P	10534	GREEN D	12119	GRIDINS F S	1208
GRAD B	5995	GREEN D E	0412	GRODSKY M A	12488
7401 7780		GREEN D M	12478	GRODZHENSKII D E	1496
GRAEFE O	6969	GREEN D S	2134	GREEN J A	11536
GRAETTINGER J S	0392	GREEN F H	12798	GREEN J J	1497
1483 1906 3275	3275	GREEN G R	10671	2701 4104 5608 7044	
GRAF K	0393	GREEN H J	11841	GROESBECK B	2844
GRAF O	4242	GREEN I D	8839	GROFF W A	12144
GRAGG D B	0394				

AUTHOR INDEX

GROGNOT F 1477  
 2829 2832 4245 4246  
 4280 4281 4282 4283  
 5848 6829 7268 7269  
 7493 10348 10976 10977  
 GROGNOT P A 0416  
 417 418 419 1498 2845  
 2846 2847  
 GROMOVA K G 2086  
 GRONBERG B 1243  
 GRONOW D G C 0119  
 269 270 1047 2848 3638  
 GROOT S G DE 0420  
 GROSE J E 11149  
 GROSS A 0614  
 1783 3156 4601  
 GROSS A G 10081  
 GROSS F 0421  
 422  
 GROSS N B 4284  
 GROSSMAN F M 1420  
 GROTH H 12232  
 12657  
 GROTHEER M P 6008  
 6051  
 GROUSSET 7643  
 GROUSSET C 11579  
 GROVE G R 5312  
 GROVER R F 10281  
 11113 11114  
 GROW M C 1499  
 GRUBER A 12489  
 GRUBER H E 2849  
 5628  
 GRUNEBAUH M U 11200  
 11212  
 GRUNTHAL E 7611  
 GRUNZKE M E 9546  
 9568 9633 9673 9706  
 9707 9708 10145 12658  
 12703 12860  
 GRUSSER CORNEHLS U 9158  
 GRUSSER O J 9158  
 GRZESIK J 10978  
 GUALTIEROTTI T 7871  
 8660 10082 10083 10129  
 GUBA E G 6270  
 GUBERNALE A 0423  
 GUBLER E V 2850  
 9010  
 GUDBRANDSEN C O 11900  
 GUEDRY F E 0424  
 425 829 1500 1501 1502  
 2166 2851 2852 5792  
 7045 7203 7204 7205  
 9482 9483 9507 9510  
 9511 9512 9513 10084  
 12735  
 GUEHL J 11259  
 GUERRIN F 5900  
 GUGENHEIM C 2853  
 GUGENHEIMER H R 8090  
 GUIBAL E 6229  
 GUIBERT A 1504  
 GUIDA A 9471  
 GUIDA A W 0390  
 GUIDA V 5103  
 GUIGNARD J C 10979  
 10980 10981  
 GUIHERY LE ROLLAND J 3515  
 GUILBERT E A 0426  
 GUILD S R 0427  
 428  
 GUILFORD J P 0429  
 1229 2854 2926 4456  
 GUILFOYLE G 9573  
 GUILLEMIN V 430  
 1505 1506  
 GUILLENCHMIDT P DE 4357  
 GUILLERM R 1507  
 4162 4163  
 GUILLETT C C 9873  
 GUIMARAES G 0431  
 1508  
 GULIAEV P I 2855  
 6944  
 GULICK A 6795  
 GULICK W L 8984  
 10542 11255  
 GULLEY W E 0432  
 433  
 GUMBEL E J 0434  
 GUNCKEL J E 8522  
 GUNDERSON D E 3030  
 GUNDISCH M 8997  
 GUNDY R F 10982  
 GUNN S A 11326  
 11327  
 GUNN W H 12490  
 GUNS P 1509  
 GUNTER R 10543  
 GUNTZ ARNAL M C 10680  
 GURAKAR M 6307  
 GURDJIAN E S 2856  
 4287 4290  
 GUREVICH B KH 6973

8210 9255 12659  
 GUREVICH I I 2857  
 GUREVICH V G 1510  
 GURFINKEL V C 10085  
 GURFINKEL V S 1010  
 8760  
 GUROVSKII H 11496  
 GUROVSKII N N 7494  
 10252 10983  
 GURSKY K 7553  
 GURVICH G I 5932  
 GUSTAFSON C E 9256  
 GUSTAFSON L M 1671  
 GUSTAFSON P C 8157  
 GUTH S K 2858  
 GUTIERREZ E 10411  
 GUTIERREZ VILLEGAS L 4489  
 GUTNER L B 2859  
 2860  
 GUY B L 1511  
 2861  
 GUY G 3976  
 GUYTON A C 1512  
 10518  
 GUZEEV I M 2862  
 GUZMAN F C 9159  
 GVATUA N A 4288  
 GWOZDZ B 7402  
 GYLLENSTEN L 10544

**H**

HAAB P 6825  
 11779  
 HAAB P E 8761  
 8841 8842 8843  
 HAAN 12022  
 HAAN H DE 3548  
 HAAN P DE 7046  
 HAAS F 8502  
 HAAS P 2551  
 HAAS W R 4289  
 HABEL A 4968  
 5540  
 HABER F 0435  
 436 437 1513 1514 1515  
 8446  
 HABER H 0202  
 438 439 440 441 442  
 443 444 445 446 447  
 1516 1638 2863 2864  
 2865 6781 8447 9874  
 HABERER C E 4716  
 10434  
 HABERICH F J 5513  
 HABERLE J E 11328  
 HACKEL D B 2866  
 HACKMAN R C 4751  
 6675  
 HADDAD B F 2856  
 4290  
 HADDOCK J 2203  
 2807 3573  
 HADDY F J 3240  
 4692 5996 8790 10874  
 HADLEY D L 6390  
 HADLEY W L 12169  
 HADUCH S L 8386  
 11329  
 HAEFNER D 5741  
 HAESSLER H 12491  
 HAFSTROM J R 4291  
 HAGE G 0905  
 HAGEMAN K C 8081  
 HAGEN D H C 9859  
 9875  
 HAGEN E 0833  
 5057  
 HAGEN E P 11601  
 HAGEN J M 1980  
 HAGEN J P 6782  
 HAGER G 5493  
 7781  
 HAGER H 10545  
 HAGIHARA H 9739  
 11751  
 HAGIN W V 1134  
 HAHN C P 2867  
 HAHN P 1517  
 HAHN R 5793  
 HAIDER M 7594  
 11150  
 HAIG T O 2868  
 HAINES H L 1542  
 5563  
 HAINSWORTH T E 12700  
 HAIRE M 1160  
 HAIST R E 6138  
 HAJJAR G C 8576  
 HAJZOKOVA M 10309  
 HAKE H W 2712  
 2869 4113 4114 4292

4293 5514 7067  
 HALAC E 9876  
 HALBERG F 4294  
 5268 5274 6770 8548  
 8561 8573 8577 8578  
 8579 8580 8585  
 HALBOUYT M R 1518  
 4295  
 HALDANE J B S 4296  
 4297  
 HALE D M 9137  
 HALE E B 1519  
 HALE F C 2870  
 10349  
 HALE H B 0448  
 449 1520 2871 5041  
 6858 7178 7179 7184  
 7185 8581 8922 9133  
 9846 9877 9878 9879  
 9880 9881 9882 9883  
 9930 10350 10351 10394  
 10395 10396 10824  
 HALEY A G 8277  
 8278 8279  
 HALHUBER M 4298  
 HALHUBER M J 5849  
 HALL A L 0450  
 451 452 453 454 1384  
 1385 1521 2757 3135  
 4299 4300 4301 5943  
 6464 6531 6532 6830  
 7270 12233  
 HALL C E 4302  
 HALL E G 5366  
 HALL F G 0455  
 456 1252 1522 1523  
 2872 2873 2874 6831  
 6832 7909 8891 9011  
 9086 10546 11450  
 HALL G E 10642  
 HALL J F 1524  
 1525 2875 4303 4627  
 6465 6466 9012 12234  
 12235  
 HALL K 0455  
 HALL K D 2873  
 HALL M S 9007  
 HALL P W 1526  
 3647  
 HALL R A 9506  
 10058  
 HALL R H 6246  
 HALL W M 10343  
 HALLET B E 4304  
 HALLGREN B 11075  
 HALLIDAY A M 2695  
 HALLIDAY R C S 0389  
 HALLPIKE C S S 1527  
 1528 1529  
 HALLWACHS O 10739  
 HALM T 11843  
 11901  
 HALPIN A W 1530  
 1531 2876 4305  
 HALSEY R M 0457  
 2877 9257 9258  
 HALSTEAD B W 4306  
 4307  
 HALSTEAD J R 12382  
 HALSTEAD W C 1285  
 1532  
 HALVERSON R C 12389  
 HAMBACHER W C 6645  
 HAMBACHER W O 6646  
 6650 6651 6690  
 HAMBURGER F A 1533  
 HAMBURGER R J 4308  
 4309 4310 7271 7838  
 10547 11479 12059  
 HAMILTON C E 9287  
 HAMILTON J R 6138  
 HAMILTON L H 5429  
 5468 6007  
 HAMILTON W F 10571  
 HAMILTON W K 8753  
 HAMLIN R L 11461  
 11480  
 HAMLYN H 12075  
 HAMMEL H T 6463  
 7403 7404 7455 9005  
 9013 9014 9015 10696  
 10740 10871 10872  
 11770  
 HAMMER L R 10247  
 10260  
 HAMMOND D 0726  
 HAMMOND J 11841  
 HAMMOND J F 10741  
 HAMPSHIRE A C 6448  
 HAN L 6688  
 HANDFORD S W 0231  
 232 236 458 1534 2582  
 2878 3158  
 HANDKE E 12492  
 HANDLER E 2879  
 HANDLEY C A 5997

AUTHOR INDEX

HANES L F	12700	HARRIS P	10531	HAWTHORNE R	1551
HANES R M	7650	HARRIS P S	11330	HAXHOLDT B F	5424
HANKINS D L	12236	HARRIS R E	11563	HAYDEN R	6439
HANKS T G	4311	HARRIS S	1543	7963	
9884 12170		HARRIS 3903		HAYES J	8687
HANLEY T D	2134	HARRIS S J	11151	HAYES K J	9139
3749 3838 4076 7014		HARRIS W	5756	9140	
HANLON W H	9621	HARRIS W E	10352	HAYES R E	12845
9622 9623		HARRISON G W	11364	HAYES W J	12099
HANNA C H	0625	HARRISON J M	2887	HAYFORD WELSHING E J	11455
HANNA T D	9885	HARRISON J S	9599	HAYMAKER W	4324
9886 11273 12200 12237		HARRISON R W E	5442	4325 6319 7851 11349	
HANNON J P	8582	HARRISON J W	8877	HAYNES B C	1552
8583 8640 8641 8982		HARROD D C	6494	HAYNES J W	12864
9016 9017 9018 9887		HARROLD M C	0465	HAYNES P R	9260
10705 10742 10743		HARSING L	5113	HAYNIE G D	8924
10744 10745 10746		HART E M	12737	12150	
10747 10748 10749		HART J C	11309	HAYS E L	8449
10750 10900 10903		HART J S	2888	12227 12228	
12358 12369 12370		2889 2917 2918 2919		HAYS J A	4326
12371		2920 5979 5999 6000		HAYS R	1245
HANRAHAN J S	9888	6003 7393 7406 10696		HAYS R M	8924
HANSEL C E M	2880	10752 10753 10758		12150	
HANSEN A T	5424	10871		HAYTHORN W	3828
HANSEN D B	2881	HART W M	9321	HAZARD D M	1553
6801		HARTER W	4317	HEADLEY R N	10053
HANSEN J	6327	6175 6348		10090 10124 10210	
7814 7815 11846 11847		HARTLINE H K	6974	12240	
HANSEN L	4118	HARTMAN B	10245	HEAGY F C	6030
HANSEN R	2276	10262		HEARN G R	7554
HANSEN R G	0378	HARTMAN B O	4318	11089	
459 4312 10935 12238		5623 5687 6605 7064		HEATH C	2902
12270		7113 7114 7115 8211		5336	
HANSON J A	0276	9532 9595 9596 9923		HEBB D O	4690
1274 2630 8081 11451		10248 12577 12738		HEBERLIG J C	12471
11762		HARTMANN H	11873	HEBERLING E J	10638
HANSON S W F	12861	HARTWIG Q L	11331	10639 10754	
HANSSON L E	10019	11332 11350		HEBRAUD A	0467
HARA M	9019	HARTZ N	10986	HECHT F	4327
HARA T	9160	HARTZ N W	12245	HECHT K F	1554
HARADH T	8003	12660		1555	
HARANO K	9746	HARVEY C M	2890	HECK J	6975
9748		HARVEY R B	2891	6976 6977 6978 6994	
HARASAWA M	10601	3436 4319 5827 5889		HEDGECOCK L D	2102
HARASHIMA S	8584	5890 7244		HEDLUN J M	9516
HARBOE M	6833	HARVIE F H	7849	HEDMAN A R	2903
7272		HASAN J	2892	HEDMAN R	7555
HARBOLD G J	7022	2893		11062 11063 11076	
7023 9381 9382 9383		HASBROOK A H	0267	HEEMSTRA H	2904
10984 11874 12060		466 1544 4320 4321		4328	
HARCUM E R	7068	6553 6554 8090 8091		HEFEDOV I U G	12784
HARDENBERG E	5998	10087 12392 12393		HEGGENESS F W	9121
HARDENBERGH E	5476	12394		HEGLIN H J	6294
7405		HASBROOK H A	2894	7735	
HARDIE J B	0772	HASEGAWA A	4077	HEGNAUER A H	2637
HARDIN R A	8790	HASLER S G	1802	3792 4002 4005 4329	
10874		HASLETT W	10480	5425 8936 9021	
HARDING F D	0460	HASSAN W E	11903	HEIM H C	11298
7751		HASSELMAN M	9889	11334	
HARDMAN G A	3552	HASSELSTROM T	6796	HEIMANN J	7377
HARDMEIER E	4313	HASSELNFORDER E E	8315	HEIMER W	7079
5933		HASSON M	12149	HEINEMANN E G	2905
HARDY A V	1535	HATAWAY G D	3803	4330 9261	
2288		HATCH H G	10088	HEINEMANN E H	4331
HARDY H	11304	12418		HEINEMANN R F D	1351
HARDY H C	1536	HATCH R S	11642	HEINLE D R	9582
1537 1956		HATCH T	1545	HEINLEIN R	8688
HARDY J D	1453	HATCHER J D	10491	HEINONEN A	5361
2882 2883 3095 3096		HATMAKER D B	9890	HEINRICH H G	8586
4314 5426 6148 6160		HATTON J F	4322	HEINSIUS E	1556
7138 7404 7624 9005		6467		HEITMANN R	3549
9014 9015 9020 9664		HATTWICK R G	1030	HEISLER J J	4295
10050 10086 10696		2895		HEKHUIS G L	10306
11336 11404 11889		HAUB J G	12778	11335	
12638 12736		HAUER P	0630	HELD R	9517
HARDY L H	2884	HAUS E	1546	9598 11213	
HARE K	7792	8585		HELLBRUGGE T	8587
HARFORD E	9389	HAUSLER V	10371	HELLEGERS A	10398
HARFORD E R	9387	HAUSUND E	2896	10490	
HARKER G S	0085	HAUSWIRTH O	2897	HELLER H	4243
86 461 979 980 1464		HAUTY G T	1547	HELLINGS G M	8247
1465 4315 5623 7064		1548 1549 1550 1915		HELLMAN K	3986
9259 9514 9515		1916 2898 2899 2900		7407	
HARMONY B T	9159	3295 4323 4757 4758		HELLMANN K	2906
HARNACK G A VON	4316	4760 6365 6652 7116		3985	
HARNER R N	8561	7122 7354 7595 9541		HELLNER BJORKMAN S	4127
HAROLD W H	6114	9542 9891 9972 9973		HELLON R F	6001
HAROUTUNIAN L M	5433	9976 10089 11152 11199		6295 6296 7392 7434	
6881		11274 12739		10684 11077 12211	
HARPER B P	2764	HAVEN C B	11121	HELLRIEGEL K	11907
HARPER E D	6510	HAVENS D E	3483	HELLRIEGEL K O	10353
HARPER R S	9543	HAVILAND R P	8448	HELLSTROM B	10755
HARRIDGE W H	1538	12493		HELMENDACH R H	2448
HARRINGTON J D	8642	HAVRON M D	8060	2449 2450 2451 6136	
HARRINGTON M E	7537	8061 8242		6137	
HARRIS F H	2885	HAWKES G R	9161	HELMS A	6979
HARRIS J D	0462	9597 9661 9795		HELMSWORTH J A	4334
463 464 728 729 896		HAWKES R	5212	HELPER M M	7497
1539 1540 1541 1542		6511 6512 6678 8251		HELSON H	4233
1990 2275 2886 3357		11333 12239		6183 7755	
5563 7024 7905 9384		HAWKINS D F	2901	HELVEY T C	9892
9413 10985 11902		HAWKINS W R	9972	10987 12661 12740	
HARRIS J G	9593	9973 9975 10275 12739		HELVEY W M	9822
9594		12878 12886		HEMINGWAY A	0468
HARRIS N O	8253	HAWLEY M E	6580	469 470 5934 6098 6941	
10751		7496			



AUTHOR INDEX

6942 8818 9000 9001	HERTZMAN A B	0483	6006 6010 6011	HINOKI M	7202
9022 12646	691 1563 1564 1565	31402		HIRAHARA M	12592
HEMINGWAY C	1986 2927 3410 10714	8818		HIRSCH F G	6149
HEMPEL JORGENSEN J	10766 10767 10876	2908		10768	
HEMPEL W E	10877 12664	0912		HIRSCH H	9162
2735 2736 2737 2907	HERTZMAN M	4347		HIRSCH I J	7910
4158 4189 5681	HERVEY G R	0382		9385	
HEMPELMANN L H	2928	5794		HIRSCHBERGER W	10545
HEMPHILL J K	HESS J L	12335		HIRSCHOWITZ B I	9122
472 473 1231 1558 1559	HESS W H	10250		HIRSH I J	0488
HEMPLEMAN H V	HESSBERG R R	8139		489 1573 2932 4360	
HENDERSON A C	10024 10097	4348		4361 5706 10988	8765
HENDERSON A M	HESSINGER R W	0481		HISS R G	8766
4335 4336 8036	HESTER W R	2929		11904 11905	0214
HENDERSON B W	HETHERINGTON A W	9893 11813 12665		HITCHCOCK F A	260 324 529 530 1179
HENDERSON J G	HETTINGER T	7498		1349 1350 1388 1574	8588
HENDLER E	HEUSNER A	11402		1575 1576 1577 1578	1651
2910 4337 5426 7138	HEWITT J E	8829		1651 1652 1653 1654	1655
7624 9662 9664 10756	HEWITT W F	8829		1653 1656 1657 1658	2209
11336 12741	HEY E N	1566		2023 2129 2130 2209	2248
HENDRICKSON C F	HEYCK H	10895		2230 2247 2248 2249	2998
HENN O	HEYDEN A	11456		4141 4362 5757 6809	8450 8816 10327 12156
HENNEMAN D H	HEYFORD WELSH J	0482		HITCHOCK F A	6688
HENNEMAN R H	HEYMAN A	3292		HITTMAN R A	5850
3113 4338 4339 4340	8811	6362		HIXSON W C	5499
4341 4342	HEYMANS E	6366		8312 9519 9894 10144	0490
HENNESSY T G	HEYMANS R J	6526		HOBSON G N	8970
HENNING G B	HEYNINGEN R E VAN	3622		HOCH F L	1579
HENRIKSSON N G	HEYWOOD P M	10597		HOCHBERG C B	4363
9518	HIATT E P	8762		HOCHBERG J	1579
HENROTTE J G	10024 10098 10099	10137		HOCHBERG J E	11115
HENRY A F	HICK W E	1567		HOCHHELLA N J	2934
4463	1568 1569 2930	1570		HOCHREIN M	5284
HENRY F M	HICKAM J B	5338		HOCHREIN SCHLEICHER	5284
1562 2913 6320 9141	2557 3855 4349 5338	8763		HOCK R J	5285 7768 8641 10356
9599	8763	2096		10696 12578	0816
HENRY J P	HICKAM J D	4178		HODGES W E	6239
476 477 1712 2095 2783	HICKEN J	12395		HODGSON T F	4364
3071 3468 3469 4822	HICKEY J L	8168		HODLER J	1060
5786 6720 8139 9692	HICKS S A	11153 11275		HODLER J E	1581
11214 12662 12663	HIDERA G J	1571		HOEHN A J	0491
HENRY M C	HIESTAND W A	1169		4986	492 733 1582 2936 2937
HENSCHEL	3519 4029 4040 4350	10777		HOELTZENBEIN J	5036
HENSCHEL A	HIGGINBOTHAM A C	0483		HOF H	8914
3347 3534 3792	HIGGINS A C	4530		HOF M W VAN	9163
HENSCHEL A F	HIGGINS T J	9600		HOFF E C	1583
2915	HIGHBERG P F	11483		4659	9027 12650
HENSEL H	HIGHLAND R W	1081		HOFF H E	1143
4819 7426 9663	6271	0088		HOFFMAN A A	11538
HENSLEY G T	HIGHMAN B	2367 4352 5822 7325		HOFFMAN D H	12800
10021	10284 10285 10355	10390 10548 11061		HOFFMAN E L	1584
HENSON J B	10390 10548 11061	8764		1585 2940 3384	
9591	HILD R	12141		HOFFMAN G K	9314
HEPLER O E	HILDEBRANDT G	4353		HOFFMAN H S	5564
HEPPNER F	HILDES J A	6004		HOFFMAN I L	9264
HERBERT M J	10797	2931		9450	8643
7113	HILDING A C	6071		HOFFMAN R A	11306
HERBST R	HILDRETH K M	7033 7034		HOFFMAN R K	12443
HERCUS V	HILGER J A	4354		HOFFMANN J	6134
9025	HILL C J	3717		HOFFMANN K	8661
HERMANN F V	3998	4355		HOFFMANN W	1586
HERMANN H	HILL C W	2 23		HOFLER W	4794
HERMANSEN L	HILL F L	2767		4795 4796	
HERMANUZ N	HILL I R	0484		HOFFSTEIN L L	8690
HERNANDEZ PEON R	HILL J C	4356		HOGAN B W	8280
HERNANDO O J	HILL J F	12389		HOGAN G W	4365
HEROLD M	HILL J H	0485		4596 8260	
5399 5917 10514	486 1084 2969 5915	7335 9215 10549		HOGAN R J	3584
HERON W	HILL J R	10550		HOGBERG P	2935
6132 7612 11196 11215	HILL L W	8808		HOGENBOOM W P H	7026
11244	HILL N	4357		HOHL R W	21 2
HEROUX O	HILL R	10427		HOHN E O	8589
2917 2918 2919 2920	10457	6468		HOHNEN H W	6834
4346 5999 6000 6002	HILL V H	11167		HOHWU E	7596
6003 7408 10757 10758	HILL W F	7105		HOIJER D J	10769
10759 10760 10761	HILLE B A	8764		HOLADAY J A	3393
10762 10763 10764	12141	11122		HOLAHAN J	4367
10765 10797	HILLESUND R A	0487		HOLCOMB G A	12336
HERRERA ALONSO E	HILLIX W A	7732		12666	
8062	HILLMAN B	1572		HOLDING D H	5702
HERRICK F M	4358	1387		HOLDREGE F E	11493
HERRICK J F	HILLMANN B	11539		HOLECKOVA E	11481
HERRICK R M	HILLMANN B M	9263		HOLLAND D B	9600
HERRICK R M	HIMBERT J	1210		HOLLAND J G	3362
2340 2922 5515 6606	HIMELSTEIN P	11537		5689 5693 5713 7165	
10091 10092 10093	HIMMEL S C	8689		HOLLAND W W	11994
10094	HIMMELSTEIN A	4150		HOLLANDER E P	0112
HERRING M E	HINCHCLIFFE R	1301		493 494 495 1019 1021	
HERRINGTON L P	2664 2665 4359 6417	7025		1023 1587 1588 1589	
5688 9026	7025	6005		1590 2025 2118 2841	
HERRLIGKOFFER K M	HINES H M				
7811					
HERRNSTEIN R J					
HERRON C S					
HERSEY I					
8316 10249					
HERSHCO A					
HERSHGOLD E J					
10096 10354					
HERSHKOWITZ J					
HERTZ R A					
10302					
HERTZBERG H T E					
6607 7990 12799 12495					
HERTZKA A F					
2854 2926					





AUTHOR INDEX

JONGE T E D	2981	KAMPPFFMEYER H	10559	10782 10783	
JONGKEES L B W	2701	KAMRASS M	4438	KEATOR J E	0448
5796 9368 11988	11989	6090		KEENAN C E	8561
JONSSON B	8758	KAMYSZEW A	6899	KEENAN J J	1292
JONSSON R	6813	6900		KEENAN J J	4956
JORDAN E C	8879	KAN G S	6368	KEETON R W	0621
9124		7870		KEIDEL W D	9393
JORDI A U	0525	KANAREFF V T	9767	KEIDEL W D	1649
526 1634 1635		KANDEL G	6955	5707 9393	
JORGENSEN M B	11775	KANDROR I S	7418	KEIL P G	11865
JORVE W R	5811	7419		11963	
JOSENHANS W C T	6937	KANEKO T	12681	KEIST B F	4450
JOSEPH B J	5826	KANSAKU H	9789	6325	
5913		10359		KEITH J	5851
JOSSE J W	3238	KANTER G S	2989	KELENTEI B	7340
JOUANY J M	7968	4439 4440 5434 7420		KELLEN J	10367
7969 7970		8855 9039 9040 9041		KELLER A C	9047
JOUHANDOU J	11928	9042 9043 10779		KELLER A D	5438
JOUVET M	5384	KANWISHER J	0794	KELLER W	7560
9165		KAO F F	5435	7561 7565	
JOVY D	9832	5436		KELLEY C F	10169
JOY R J T	9161	KAPLAN J	1638	KELLEY C R	7687
JOZKIEWICZ S	7504	5222		12509	
10997		KAPLAN J A	11935	KELLEY E B	0305
JUAN VALIENTE F DE	7070	KAPLAN M N	11606	KELLEY H P	6266
JUCKER R	6430	11607		6267 7694 11549	
7844		KAPLAN S A	6440	KELLEY H R	6830
JUDE J	5456	12154		KELLEY J B	6471
6907		KAPLAN S J	1639	KELLEY R L	1524
JUDE J R	5433	4843		2875	
5457 6881		KAPOR G	5765	KELLOGG R H	6441
JUDY C J	1636	11548		7276 7277 8738 8884	
11544 11545 11546		KAPPAUF W E	1025	8885 8886	
11647 11648		1026 1640 8217		KELLUM W E	4451
JUHASZ P	8556	KARBOWITZ F	5340	KELLY C F	7209
JUHLIN L	7619	KAREV I S	7877	12744	
JUIN G	9904	KARK R M	2990	KELLY J J	6656
10254 11157		2991		KELLY M E	10655
JUKES M G M	6820	KARLER R	5896	KELSEY I B	11095
8864		9182		KELSEY P A	1650
JULIAN J D	10631	KARLIN L	1641	KEMLER D K	7169
JUNG M	6922	1642		KEMPER A H	12775
JUNG R	10492	KARMANY W H	2992	KEMP J D	4452
JUNG K	9492	KARMIOL E D	12360	KEMP W E	12864
JUNGMANN H	0527	KARN H W	9326	11846	7815
1546 2896		KARNOW P	10094	KEMPH J	4362
JURCYK W	6917	KARON H	6918	KEMPH J P	0214
JURTSYK W	11034	KARPENKO A G	4441	260 529 530 1179 1574	
JUSTYNA M	6864	KARPINOS B D	1643	1575 1578 1651 1652	
5865 6866		KARR A C	2968	1653 1654 1655 1656	
JUVENELLE A A	2982	KARRAKER W	7736	1657 1658 2998 2999	
2983		KARRASCH K	1644	KENDIG J H	9112
		KARSON S	7155	KENDRICKS E J	0531
		KARSTENS A I	0268	KENNEBECK G R	0532
		7275		KENNEDY C	4989
		KARSTIEN H D	2993	KENNEDY J L	1659
		KARVONEN M J	2343	KENNEDY J V	0533
		4442 5361		607	
		KASAHARA Y	12592	KENNEDY R	9507
		KASAMATSU A	4011	KENNEDY R S	10114
		7339		KENNEDY T E	12142
		KASER R	1637	KENNEY E C	8467
		KASIAN I I	10105	KENNEY R A	30000
		10251 10252		KENSHALO D R	96606
		KASIANOV V M	2994	KENT G W	3227
		KASPARI J C F	6258	5663	
		KASPAREK C F	8366	KENT P R	1660
		9522 12448		KENTER H	10368
		KASSENBAAR A A H	6017	KENYON J R	9048
		KATCHMAR L	1647	KEPLINGER M	11311
		KATCHMAR L T	1645	11313	
		1646 4876 6655 8218		KERN J D	11835
		KATER N M	0528	KERR T H	0534
		KATSH G F	2995	KERRICK J S	4453
		4443		KERSLAKE D M	2841
		KATZ A M	4444	4454 4455 5389 10653	
		KATZ L N	4444	10666 10784 11469	
		8833 9006 10528 10598		12783	
		KATZ M S	2996	KESSLER F	1661
		4445 4446		KESSLER H	7581
		KATZBERG A A	10113	KESTELMANN	10884
		KATZMAN H R	11425	KESTELMANN	9103
		KAUFMAN W C	5341	KESTELMANN	6764
		8856 11339		KESTELMANN	12053
		KAUFMANN W	4447	KESTELMANN	1662
		KAULBERSZ J	11340	KESTELMANN	0429
		KAUSLER D H	1648	1229 2854 4456	
		KAVYRSHIN A IA	7885	KETV S S	0875
		KAWAMURA Y	9044	4606 4989	
		KAWATA S	8003	2915 3534 5369 6109	
		KAY H	7089	KEYS H E	5377
		9607		KHACHADURIAN A	8939
		KAY R H	5342	KHAIKINA B J	1909
		KAYNE H	10480	KHAIKINA B J	1664
		KAYSER C	4448	KHALIL H S	3001
		4449 5276 5402 5437		KHECHINASHVILI S N	1665
		6882 8644 8645 8646		KHILOV K L	1666
		9045		KHITUN S A	6778
		KEARNEY A P	12234	8626	
		KEAST D N	12585	KHMELEVSKIY I U V	10560
		KEATING D A	8771	KHODANOV I I	7737
		12248 12804		KHORSIN M I U	10998
		KEATING F M	9069	10999	
		KEATINGE W R	7421		
		9046 10672 10780 10781			

AUTHOR INDEX

KHVATOVA E M	9049	KLARE G R	1671	KOIDE Y	9906
KHVOINITSKAYA M A	10785	KLASS P J	12587	KOIKE Y	9523
KHVOSTOVA V V	8501	KLEE J B	3718	KOIRANSKII B B	7423
KIANG N Y	5570	KLEEMAN C R	3346	KOIZUMI K	5472
KIBLER H H	10786	3347 3792 4468		9051	8611
KIDD B S L	5837	KLEIN K E	9832	KOJECKY Z	5253
8812 11452		10506 10507 10668		KOK B	5254 5255 5256
KIDD D J	5571	KLEIN P D	5936	KOLB I	8556
10717 10718		KLEIN S J	7183	KOLCHINSKAIA A Z	3021
KIDD J S	11650	8207 9608 10562 10563		KOLCHINSKAIA A Z	1677
11705 11706 11707		10564 11158 12281		KOLCHYNSKAIA A Z	8861
12586		12510 12719		KOLDER H	5854
KIDERA G J	3002	KLEINBERG W	2814	5855 6930 7278 7279	
4510 11776 12064 12065		KLEINERMAN J	2866	7280 7424 10369	
12450		4469 4606 5439		KOLDOVSKI O	11916
KIEDRZYNSKI Z	6883	KLEITMAN E	3013	KOLERS P A	9742
KIEHL P F	12249	KLEITMAN N	3012	KOLLA V E	10060
12364		3013 6943 8594		KOLLAR E J	9907
KIEN G A	7977	KLEM S	8928	KOLLER F	3022
KIERSZ J	6884	KLEMM F K	4627	KOLOSKOV S	11733
KIESELBACH D J	4243	KLEMMER E T	1672	KOLPAKOV E V	1678
KIETZ H	5572	1673 3992 4470 5691		KOLTAY E	2742
KIGHT M A	10894	5692 6634 6657 6666		7344	
KILBURN K H	8857	7118		KOLTAY M	9104
11453		KLENSCH H	6834	KOMADEL L	7532
KILDUFF J	12717	7557 10787		7533	
KILEY L A	11314	KLEPZIG H	5937	KOMARRSKAIA E N	4472
KILGARIFF T G	8039	KLIJN J	9368	KOMENETZKY J	3548
KILLIAN D C	6679	KLINE N S	8454	KOMORI Y	11155
KILLICK E M	1340	KLINE R F	0539	KOMOVA A R	9860
KILLIK E M	1339	1674 3014 3015 3016		KONDRASHOV S I	7558
KILLION P J	4457	4471		10476	
KILPATRICK F P	4458	KLING J W	9609	KONDRATOVICH M A	9053
KILRAIN W A	4459	9610		10364	
KIMBALL F N	4460	KLINGER O J	5957	KONDRATOVYCH M A	3023
12025		KLOCK J W	3317	9052	
KIMBEL P	11115	KLOCKE F W J	8858	KONECCI E B	1032
KIMBLE G A	1667	KLOPP H W	5629	3024 4476 4477 5856	
KIMELDORF D J	0535	KLOSOVSKII B N	4472	8095 8319 8523 9908	
536 537 1668 1873 3251		7613 11220		10250 11343 11344	
5870 8590 10403 10404		KLUBECK S	5200	11416 12539 12807	
KIMES R	4722	5740		12813	
KIMMEL H D	6609	KLUN J A J	5796	KONIG E	7029
KIMOTO T	9552	KLUPSCH E	6855	KONIGSMARK B	10543
KIMURA K	7628	KLUSSMANN F W G	9050	KONIKOFF J J	8524
9143		KNABENGOF V G	7913	8525 12889 12890 12896	
KIMURA R	9079	KNAFF P R R	9803	9611	7038
KINCAID W M	9287	KNAPP B N	7154	10565	
9288		KNAPP M J	9611	11551	
KINDERMANN G	5937	KNAPP R R	11001	11341	
KING A	3330	KNAUF G M	11551		
KING A H	11797	11342 11799		KONJIKI S	4478
11821 12045		KNAUFF H G	5938	KONNO M	9906
KING B G	0538	KNAZEVA P V	12057	KONOVALOV A I	10252
10257 10258		KNIGGE K M	7422	KONSTANTINOV V A	10566
KING B R	2155	10788		KONSTANTINOVA M M	11345
KING C M	4461	KNIGHT J S	4473	KONSTANTINOVA T I	9091
KING C T C	3003	KNIGHT L A	6394	KOOCHEMBERE C T	0543
3004 3005 3428 3429		7653 10259		KOOISTRA J A	6783
4462 4914		KNIPP G H	12792	8253 8695	
KING M E	12161	KNOBLOCK E C	9848	KOOKER J K	4479
KING P F	4057	9900 9901		KOOLSTRA J	0544
6343 11000		KNOELL D	0540	1679 3025	
KING S H	4463	1675		KOOMEN M	1680
KINGMA H	4464	KNOELL D M	2651	KOOP J M J	8595
4465		4502 4503 6273		KOPAL Z	5297
KINGSLEY D W	4466	KNOEPFEL H K	0541	KOPECKY M	12745
KINGSTON J R	10829	3017 3018 4313 4474		KOPPLIN J O	12808
KINGWILL A N	3006	5933 8094		KOPRA L L	7842
7690		KNOLL M	11483	9394 9395 9396 9397	
KINKADE R G	11705	KNOPFELMACHER F	3733	11918	
12580 12586		5373		KOPSTEIN F F	11651
KINLOCH J D	9123	KNOWLES J H	11454	KOPYTIN B M	1681
KINNEY J A S	3007	KNOWLES W B	1676	KORCHIN S J	1053
5522 9289 9290 9347		2778 4475 5693 7111		3026 3791	
KINNEY W A	8318	KNOWLES W R	12398	KORDECKI R	5440
KINNUNEN M	4442	KOBAYASHI T	10532	KORESHKOV A A	6835
KINSEY J L	4467	KOBLET R	11319	9167	
12806		KOBOLD E	11437	KORI N	9076
KINSLOE H	0944	KOBRAK H G	0542	KORNASZEWSKI W	10370
KIORBOE F	3008	KOBRICK J L	2694	KORNEEVA N V	9867
11708		3537 3538 5047 5048		KORNER P I	2622
KIPP F	3009	5654 6472 8140 8141		3027 3028	
KIPPAX D L	8544	KOCH C	3019	KORNHAUSER M	10115
KIPSHIDZE N N	10561	3576 7841 7914 11914		10116	
KIRCHER J F	12250	11915		KOROSTOVTSSEVA M V	9054
KIRCHHOFF H W	6101	KOCH H	6357	KOROSTOVTSSEVA N V	9055
KIRCHNER O E	6450	KOCH W	1884	KOROTKO G F	10789
KIRKSEY M H	3010	KOCYAN I	11340	KORPAS J	6885
KIRSCH E	9741	KOEHLER F	5268	KORY R C	3381
KIRSCH H	11530	KOEHLER J W	9264	KORZUN P A	6983
KIRSCHNER S L	5345	KOELLA W	1661	9291	
KIRSTEINS A	6018	KOELLA W P	2788	KOS C M	11919
KISELOVA A F	3011	KOENIG M	4969	KOSHEL A A	7915
KISLIAKOV V A	1669	KOEPCHEN H P	3786	KOSICHENKO L P	8596
1670 9464		KOFES A	11088	KOSKELA A	7718
KISTLER K	0225	KOGAN A D	7047	KOSMARSKAIA E N	7613
226 2576		KOGAN I R	6802	11220	
KISTLER W G	8312	8243		KOSMOLINSKII F P	8370
KITTINGER J	12339	KOHLER D	1202	KOSOV I I	9860
KITTLE C F	9087	KOHLER U	3020	KOSSOVSKAIA E B	12092
KITZES G	6438	KOHLMANN F W	10554	KOSSUTH L C	9979
9905 12105		KOHN H B	7746	KOSTELIJK P J	4480
KITZINGER C	5368	KOHUT R	9459	KOSTIAL K	6102
6902 8950		KOHUT R I	9518	10371 10881	
				KOTHARI D S	6714



AUTHOR INDEX

LANGHAM W H	11347	3068 8224 12401		LEMLEY J M	0565
11348		LAZUTIATSKII N P	10899	1718	
LANGLEY L L	3051	LAZZERONI A	3305	LEMLEY STONE J	7359
LANGRAF FAVRE F	1380	LE MER G	7945	LENDING M	10381
1700 3052 3053 4495		LE ROUX R	11159	LENFANT C	8862
4496 5170 7844		LEACH W G	3912	LENNON C S	3897
LANGTON N H	8127	3914 10312 12197		LENNOX BUCHTHAL M	12403
LANNE R DE	7562	LEAMER B V	11652	LENNOX C S	10649
LANSBERG M P	0555	LEARNER D B	3069	LENNOX M	1168
1701 1702 1703 2674		6612 12837		LENT H B	8285
3054 3055 3056 3057		LEAVITT W	8457	LENTI C	5860
3058 3059 3060 3061		11778 11800		LENZ H	1719
3062 3063 4497 4498		LEBEDEVA A F	7508	LENZ R	9118
4499 4500 4501 7026		LEBENTRAU K	9464	LENZO J E	11161
7073 7917 8143 8352		LEBISH I J	11349	LEONARD A	1720
9528 9911 10572 12061		LEBLANC J	3070	LEONARD C A	5442
LANSDELL H	3064	6022 10796		LEONARD G F	11483
LANSING R W	5714	LEBLANC J A	7428	LEONARD J A	3077
6945		7429 7430 9060 10795		5507	
LANZETTA J T	4502	10797		LEONARD J M	8528
4503 5741 6255 8181		LEBLANC J S	6023	LEONE D F	8544
9767 9769		LEBOW M	10126	LEONG G F	8961
LAPALLE R	6384	LECHNER H	8774	LEPPANEN V	2343
LAPRAS A	5859	LECHNER M	3900	LEROUX M	3950
7845		5775		LESAGE	1127
LARGE R E	10870	LECHTENBERGER H	5116	LESHKEVICH L G	11773
LARGENT E J	10933	LECZMAR W B	0560	LESIW W	4111
10949		1711 11553 11554		LESTOUNOV S P	9914
LARKIN T J	4504	11555 11556 11729		LETT J E	0566
LARMARCHE M	0098	LEDERBERG J	8699	567 1535 1721 2103	
LARSEN F J	12749	8700 8703		2180 3078 3079 4527	
LARSEN P J	1704	LEDERER J L	11929	LEUBNER M	5861
LARSEN P A	10742	LEDERER L	12402	LEULIER J	3080
LARSON A M	9887	LEDERER L G	0561	3081	
11491 12370		5583 8751 11992	4510	LEUSEN I	4528
LARSON M A	12371	LEDINSKAIA N	9080	9058 9059 10573	
LARSSON L J	0556	LEDUC J	10798	LEUSEN L	7563
LARSEN N J	7977	LEE G B	4358	LEUSHINA L I	4529
LASSEN N A	5424	7007		LEVASHOV V V	12252
LASSI I I	9010	LEE M C	7671	LEVASSORT C	1221
LASSITER L W	0500	11533		3949 3950 5918 5919	
1599 1705		LEE M F	1712	LEVEDAHL B H	12278
LASSMAN F M	3903	3071		LEVENTHAL C M	8572
LATASSA A	2575	LEE PORTER P B	4513	LEVERETT S D	5803
LATHAM A J	1409	LEE R A	0305	5804 7214 7215 10051	
LATHAM F	3065	LEE R E	6440	10123	
4505 6249 7212 8041		12154		LEVERING B	5819
10120 10121		LEE R H	5832	LEVI L	9915
LATIES V G	9695	10380		LEVI M	1722
10793		LEE R V	4511	4530 5071	
LATIMER F R	2856	LEE S H	5411	LEVIER A W	12340
LATYSH V N	10794	6874 8998		LEVIN B T	7169
LAUER J M	12121	LEE W A	3111	LEVINE A S	11557
12696		3112 4512		LEVINE L	6168
LAUER N V	3011	LEEBEEK H J	6413	LEVINE L M	8000
8861		LEEDS M F	12028	LEVINE M	1723
LAUGHLIN C P	9814	LEEDY H B	1888	1724 3082 5409	
9815 9848 9912		LEEUWE H	3072	LEVINE R B	9563
LAULER D P	8629	7946 8098		12750	
LAURELL L	11764	LEFEBVRE DES NOETTES	8549	LEVY A	12250
11991		LEFEBVRE R	1843	LEVY B I	7731
LAUREN F	6582	LEFFINGWELL T P	11331	LEVY E Z	9173
Laurie W D	12688	11332 11350 11364		9694 9793 11223 11240	
LAUTZENHEISER	6300	LEGEAIS A	4514	11242 11243 11583	
LAVAL P	12068	LEGENORE L	4137	LEVY H M	6013
LAVANDIER M	6125	LEGNANI J F	4515	7415	
LAVENDA N	5767	LEGOUX J P	5940	LEVY J	0167
6021		LEGRAND P	9731	2486 2487	
LAVERNHE J	7846	LEHALLE P	0562	LEVY L	11191
8416 11927 11928 11950		3073 4516		LEVY L M	5345
LAVINE O	1706	LEHMANN A	4517	7387 7472 7473	
LAVNIKOV A A	8353	LEHMANN G	6074	LEWALSKI B	7168
LAW O T	5498	6075 6076 6103		LEWIS B M	0568
LAWDEN D F	8244	LEHMANN J F	11006	569 1471 2822 3083	
LAWES T G G	11251	LEHMANN J H	3626	3084 8005 11455 11456	
LAWLER A	0853	LEIBOWITZ H W	197	12253	
2203 2204 3573		1157 1713 1714 3074		LEWIS C	8245
LAWRENCE J H	0557	3075 4518 4519 4520		11653 12341 12674	
1938 3364 3478		4521 4522 4523 5633		LEWIS D	1725
LAWRENCE J S	12809	9235		1726 1727 2113	
LAWRENCE L	4222	LEIDERMAN P H	7615	LEWIS D H	2683
LAWRENCE M	558	11222 11228 11229		3085 4531 4532 4533	
3066 3628 5156 5157		11263		5523 6803	
7030 7918 9399 11005		LEIFFHEIDT G	11930	LEWIS F J	4709
11007		LEIGHT J	11729	5455 6904 9061	
LAWRENCE R B	2416	LEIKIND M C	0877	LEWIS H E	6772
LAWRENCE W	11123	LEIMAN J M	1715	7397 7436 10717 10718	
LAWSON L	2606	1716		10802	
LAWSON R	9615	LEIN A	1350	LEWIS M L	6728
LAWTON A H	0559	2247 2248 2249		8333 8334	
1707 1708		LEININGER T C	0433	LEWIS N D	4534
LAWTON R W	4506	LEITES F L	11351	LEWIS P R	3086
5784 5785 5797 7213		LEITHEAD C S	7431	5269 6773 6774	
9913 10122		10799		LEWIS R B	0570
LAWTON W H	8097	LEITHEAD L A	7431	1728 4535 4536 7433	
LAY F	4507	LEIVESTAD H	8637	LEWIS R E F	6250
LAY F I	1709	LEMAIRE	8063	8176	
11736		LEMAIRE R	0399	LEWIS S T	7216
LAY M F	4508	401 402 403 563 564		7217 12254	
4509 6230		1717 1976 4524 4525		LEWIS W C	5362
LAZAR C	7201	4526 6024 6025 6890		LEWIS W G	9343
LAZAR C S	7223	7432 10800 10801		LEWY W	11250
LAZAREV N V	7877	LEMESSURIER D H	10740	LEY G D	8786
LAZARUS R S	0284	10871		12279	
1292 1710 11183		LEMKE G A	3076	LEY W	0571
LAZO J	3067			3600 5215	

AUTHOR INDEX

LI C	9062	LIUBLINA E I	7877	LOSADA A	6106
LI K	6155	12140		LOSSBERG V VON	12171
LIAPUNOV B	3087	LIVINGSTON R B	0217	LOSSE H	3443
LIAUDANSKY L H	4658	LIVSHITS G SH	5230	LOTHRIDGE C D	3117
LIBBER L M	7218	LIVSHITS N N	7625	LOTIRON P C	1746
8006 8021 9916		7626 11352 11353		LOTTER W S	9616
LIBBY W L	12356	LIZARSKII V M	7437	LOUBERE R	9870
LIBERMANN C	2439	LLANO G A	4545	LOUIS L H	10891
2440		LLEWELLYN THOMAS E	9696	LOURIE H	9112
LICHNER G	10625	LLOYD B B	6820	LOVDZHIEV I	12621
LICHTE W H	0572	8864		LOVE A	3780
LICHTENBERG J	0573	LLOYD V V	3100	LOVE T M	7510
LICKINT K	10382	LO MONACO CROCE T	0579	LOVEJOY W L	3896
LICKLIDER J C R	12675	580 1741 1742 1743		LOVEKIN L G	9296
LIDVALL H F	9460	1744		LOVELACE W R	2515
LIEBERT R S	5655	LOBANOVA L V	7614	5165 8495 9920 11585	
LIFTON R J	1729	11226		12082	
LIGHFOOT C	1731	LOBAO A	7371	LOVELESS N E	1747
4537 4538		LOBAO A L	4542	3118 4563 6662 8219	
LIGHT G A	8876	LOBBAN M C	3086	917 9798 12676	
LIGHTFOOT C	1203	5269 6773 6774 8598		LOVELL A C B	8459
1730 4415 4539 5574		8599		LOVELL F W	11861
LIGHTFOOT R B	0390	LOBELLE M J O	4546	11951 12382 12390	
LIGOU J C	8879	LOBZIN P P	8264	12405 12406	
LILLEMEI C W	3397	9812 10848		LOVELL G	3119
LILLEMEI J P	3088	LOCHMAN R F	2422	LOW G M	9921
4540 5320		LOCHNER W	3867	LOWE H N	12891
LILLY J C	6133	LOCKARD R B	5524	LOWE J	7552
11224		6584 9249		LOWENSTEIN O	1497
LIM T P K	7575	LOCKE N	3232	3121	
9063 10803		LOCKER A	2467	LOWI B H	10564
LIN T M	2986	LOCKMAN R F	1737	LOWRANCE P B	5941
LINCOLN R S	0574	1738 3101 3102 3103		11442	
1732 1733 3089 3474		3104 4548 4549 6217		LOWREY R O	12751
5694 6661		LOCKYEAR W H	5164	LOWRY R D	12752
LIND A R	2709	LODI A	4550	LOWRY R H	1748
2710 2732 6295 6296		7693		1749 3122 11561	
7392 7434 10684 10804		LOEB M	3105	LOYD B B	8821
12211		4551 4884 7509 9400		LOYKE H F	11932
LIND J	2982	9401 9597 9794 9795		LOYNING Y	7455
LINDAHL L E H	11838	9796 9797		10872	
11842		LOEBELSON R M	4552	LOZANO R	5853
LINDBERG E F	10052	11654		5881 10416 10422	
10124 10210		LOEHLIN J C	8600	LUBBERS D W	8846
LINDBERG E L	10125	LOEHNING R W	3106	LUBIN A	7593
LINDBERGH C A	3090	LOESCHCKE H H	1695	11160 11164 11175	
LINDE F A	2278	1697 5346 8865		LUBIN M	9142
LINDE H W	12151	LOESCHKE G C	1739	11304	
LINDE L M	8863	LOEVINGER J	0311	LUBINSKI R H	4439
LINDENBERG P	0575	LOEWENFELD I E	3121	LUBITZ J A	12865
LINDENBERG R	3091	LOEWENSTEIN R L	1145	LUBLIN A	0583
LINDEROTH A	3092	LOFTUS J P	10260	LUBLY E D	11139
LINDGREN S A	12143	LOGAN J A	9488	11161	
LINDHOLM A	3093	LOGIE L C	11295	LUCAS A	9420
3129		LOGINOV A A	10384	LUCAS B G B	0584
LINDOP P J	6931	LOHR B	5395	LUCAS J D	0585
LINDQUIST O H	12562	5396		LUCCHINA G G	5554
LINDQUIST S E	3094	LOHRENZ C A	11655	LUCCIONI H	0610
LINDSAY J R	9493	LOITERMAN L	4178	LUCEY K J	7511
LINDSLEY D B	5714	LOJNING Y	7403	LUCHINS A S	3123
11225		LOKATOS G	12240	LUCKING A S	7996
LINDSLEY D F	10001	LOMBARD C F	0577	LUCKNER H	6326
LINDVEIT E W	8458	578 1740 12335		LUDANY G	7341
LINFORTH R L	4541	LOMBARDI A R	7947	LUDANY GY	7340
LING J S	2413	LOMER T R	7334	LUDBROOK J	9048
7327		LOMNICKI Z A	9625	LUDER P	4564
LINGLEY L	2203	LOMONACO T	3107	LUDVIGH E J	1750
3573		3108 3109 3110 4553		1751 1752 1753 1830	
LINHART J	4821	4554 4555 4556 4557		3124 3125 3126 4565	
LINK H J	11036	4558 4559 4560 5243		4566 4563 5527 9297	
11037		5798 6104 6105 6231		9310 9312 9535	
LINK J D	9645	6232 6251 7238 7599		LUDWIG F	12641
LINK M M	1734	7919 8099 8100 8323		LUEHRS R E	4567
6727		8356 8357 9917 9918		4568 4569 4570 11562	
LINKENHEIMER W H	2458	10127 10128 10261		LUFT R	4128
3802		10385 11100 11558		LUFT U C	0178
LINQUETTE Y	5331	11559 11931 12069		586 587 1032 1033 1754	
LINS W	0638	12162 12404		1755 3127 3773 4571	
867 4542		LOMONT J F	3074	5862 5942 7575 8866	
LINSCHOTEN J	5634	3075		9959	
LIPARI L	3044	LOMOV B F	9531	LUHNING I	3786
LIPKIN M	3095	LOMBIERE R	8838	LUIDENS R W	8689
3096 3097		LONDON J A	9122	LUKACS S	11843
LIPPERT S	0576	LONG D R	1518	LUKAS C A	0757
1735		LONG E R	0581	758	
LIPSCOMB F E	4543	582 2912 3111 3112		LUKIN L	7564
LIS A W	10427	3113 3114 4339 4340		LUKOVSKII S A	7181
10457		4561 4562		LUMB G A	5323
LISARRAGA MORIA L	4544	LONG J E	5345	LUND M W	8144
LISON L	5287	LONG W F	0460	LUND P	0588
LISSAC J	5350	1745		LUNDBERG L	2598
6845		LONGMORE J	9788	LUNDBERG U	0589
LISSAK K	10924	LONGO V G	3115	590 2718 4572	
10925		3241		LUNDELL B	2598
LISSNER H R	2856	LONGWELL B B	9919	LUNDVOLD A	4026
4129 4287 4290 10126		LOON J H VAN	8601	LUNDGREN C	3128
LISTON D E	1736	LOPACIUK S	6893	LUNDGREN N P V	0861
LISTON J	12869	9064		1756 2242 2243 3129	
LISTOVA N M	10000	LOPEZ A	7300	4573 8867	
LIT A	9529	10431		LUNDIN G	1757
9530		LORD T H	12279	1758 3130 6813 10521	
LITTELL E T	3098	LORENTZEN F V	3385	11844	
LITVINENKO P M	8064	6833 6914		LUNNON J B	3985
LITWIN J	6891	LORET B J	12514		
6892 10574		LORIGA G	10386		
LIU C	3099	LORING J C G	3116		



AUTHOR INDEX

LURIA L 0591  
 3131 4237 4239 4574  
 5863  
 LURIA S M 9298  
 9299 9349  
 LURIE A S 7947  
 LUSHINGTON M L 0183  
 LUSKY L M 10665  
 LUTCKE A 9050  
 LUTHARDT T 10590  
 LUTZ C C 2774  
 12256  
 LUTZ H B 6668  
 LUTZ S B 8065  
 LUYKX H M C 7847  
 11933  
 LVOVA T S 9811  
 9867  
 LYBRAND W A 1761  
 LYBRAND W A 1130  
 1759 1760 3132  
 LYLE C B 10387  
 LYMAN J M 10182  
 LYMAN J M 2645  
 2646 4575 6894 8647  
 8648 8649 8970 10696  
 LYMAN J 2502  
 12232 12657  
 LYMAN J H 1762  
 LYNCH H F 6895  
 9065  
 LYON V W 0706  
 5642 6219 6220  
 LYONS H A 11459  
 LYSAKOV N A 11354  
 11908  
 LYTHGOE C 12119

M

M P 7889  
 MAAG C 1017  
 MAAG C H 0592  
 707 1022 1763 3133  
 3134 3135 4299 5943  
 6274 7358 9743  
 MABRY J E 1671  
 MACARTHUR R J 12029  
 MACCAGNO A L 8775  
 11101  
 MACCAGNO FERRERO V 11993  
 MACCANON D M 8868  
 MACCARTY E S 0593  
 MACCOBY N 11656  
 MACCORQUODALE K 5791  
 MACDONALD D J 12113  
 MACDONALD J A 12258  
 MACDONALD J S 4581  
 MACDONALD T C 4582  
 MACDUFF J N 11009  
 MACEDO D J 7285  
 MACFARLAND W V 6036  
 10805 11116  
 MACHATTIE L 11779  
 MACHEN G S 4931  
 8193  
 MACIOLEK J A 4587  
 5786  
 MACK C 1698  
 MACK C L 2143  
 MACKAY R S 12677  
 12678  
 MACKENSEN G 4588  
 MACKERSEY I 4589  
 MACKIE R R 2227  
 2272 5756 6557 6558  
 6609  
 MACKINNON D 6197  
 MACKINNON D C 4590  
 MACKINNON D W 7668  
 7669 11507 11563 11564  
 11626  
 MACKINNON I L 10388  
 MACKINNON P C B 10388  
 MACKWORTH J F 4591  
 5715  
 MACKWORTH N H 1778  
 3142 4591 4592 5715  
 9300 9799  
 MACLEOD A 6051  
 MACLEOD A R 6008  
 MACLEOD G K 7393  
 MACLEOD S 2446  
 MACMILLAN B G 7893  
 MACNAMARA W D 8176  
 MACNEIL R P 3144  
 MACPHERSON A E 0602  
 MACPHERSON R K 3148  
 5984 6001 7397 10807  
 10808 10809  
 MACRI S 1296  
 MACWORTH J F 9300

MADDEN H L 0604  
 MADDEN J M 11566  
 11567 11568 11712  
 MADDEN R 5978  
 MADDEN W F 0605  
 3149 11780  
 MADDOCK D R 12102  
 MADDOCK G E 8786  
 MADURO 3579  
 MADURO R 3150  
 MAESHIMA S 9552  
 MAEVA T A 6107  
 7567 9810  
 MAFFEI G 5946  
 MAFFEZZIONI G 3164  
 MAGER M 9119  
 9897 10772 11065  
 MAGER R F 1058  
 MAGGI G C 6896  
 MAGGIO M 7565  
 MAGGIO R C 3151  
 MAGID E B 10952  
 11011 11060  
 MAGILL A M 4598  
 MAGISTRETTI M 6838  
 MAGOUN H W 9924  
 MAGUIRE R X 4599  
 MAHADEVA K 3152  
 MAHATOO W 11196  
 MAHER P J 0475  
 MAHEUX C 0381  
 1456  
 MAHFOUZ M 10810  
 MAHL G F 3153  
 MAHLER R F 5323  
 MAHLER W R 0606  
 MAHNEKE A 2470  
 MAHONEY D I 0607  
 1191  
 MAHONEY J P 5271  
 MAHONEY P S 3030  
 MAINARD R 5809  
 6407 8769  
 MAINARDI D 8660  
 MAISKII I N 8505  
 8725  
 MAISON G L 0121  
 196 321 608 719  
 MAIZEL N I 11627  
 MAIZELIS M R 8603  
 MAJEWSKI N S 4846  
 MAJWMDAR K K 7286  
 MAKARIAN S S 9167  
 MAKAROV P O 1781  
 9301  
 MAKAROVA A F 11773  
 MAKAROVA A P 3154  
 MAKI R 9143  
 MAKINSON W 8247  
 MALARECKI I 7566  
 MALCIK V 3293  
 9925 11012  
 MALCOLM D 3155  
 MALDONADO F 5378  
 MALETTE W G 8870  
 10389 11845 12754  
 MALHOTRA C L 8934  
 MALHOTRA M S 11103  
 MALING H M 10390  
 MALKIN V B 7787  
 8325 8760 9862 10002  
 10003 10004 10085  
 11831 12176  
 MALKIN V B V 0981  
 MALLAN L 8358  
 4600 5231  
 MALLEN J 2817  
 2818  
 MALLETT B 3868  
 MALMEJAC C 5448  
 9066  
 MALMEJAC J 0609  
 610 611 612 613 614  
 1782 1783 3156 3157  
 4601 4602 5445 5446  
 5447 5448 5947 6369  
 7980 9066 11801  
 MALMO R B 11163  
 MALMSTROM G 1784  
 11713  
 MALONE F L 0778  
 1785  
 MALONE R D 0252  
 254  
 MALONEY A C 4369  
 MALONEY J V 0236  
 2582 3158  
 MALT R A 8776  
 8777  
 MALTZMAN I 3159  
 4603  
 MALYSHKIN E T 11934  
 MAMEESH M S 11482  
 MANAGAN R F 12240  
 3160  
 MANARA H I 3160  
 MANCINELLI D A 12741

MANCIOLI G 0615  
 3161 3162 3282  
 MANCUSI CAPUTI B 12030  
 MANDIGO R P 1786  
 MANGELSDORF J E 12363  
 MANGIACAPRA A 3163  
 3164 3165 3302 3303  
 MANGOLD R 4606  
 4989  
 MANHOLD J H 1787  
 1788 2964 3166 3167  
 4607  
 MANICA M 5926  
 5927  
 MANKIEWICZ W 0225  
 226  
 MANN C W 0616  
 617 618 619 620 1789  
 4608 5609 5610 5635  
 5636 5637  
 MANN J B 5972  
 6008 6051  
 MANNING E L 8609  
 MANNING G W 3168  
 6419 9126 12070  
 MANNSTADT C 6855  
 MANOLESCU N 12261  
 MANOLIDIS L 11059  
 MANSCHIEBEL A 6349  
 MANSOUR T E 3169  
 MANSUROV A P 11774  
 MANTEGAZZINI P 3170  
 MANTEL N 10648  
 MANUEL G 6681  
 MANZOTTI M 7074  
 MARBARGER J P 0194  
 195 621 1790 1791 1792  
 4598 5341 6327 7814  
 7815 8739 8767 8897  
 11846 11847 12450  
 MARCHBANKS V H 9926  
 9927 12588  
 MARCHESI A C 12453  
 MARCHESSEAU 11738  
 MARCHESSEAU R 8074  
 12376  
 MARCHI S 11104  
 MARCHIANDO B W 12453  
 MARCKS C A 0622  
 MARCINEK J G 6008  
 6051 7388  
 MARCOTTE BOY G 1793  
 1794 4610 5948  
 MARCOU G 10368  
 MARCUCCI L 5946  
 MARCUS M D 2082  
 MARCUS R E 1795  
 MARCUS S 10811  
 10812 10813 10814  
 MARCZAK K 6897  
 MARESCAUX J 10643  
 MARG E 1796  
 3920 6631 12677  
 MARGARIA R 1797  
 1798 3171 3172 6932  
 7074 7871 10082 10083  
 10129 10130 10317  
 11104 11802  
 MARGGRAF W 5449  
 MARIER G 3070  
 MARIES H 1379  
 MARILL T 2905  
 7119  
 MARINI S 11943  
 MARION R 4611  
 MARITZ J S 8920  
 MARIUZZI G M 6165  
 MARKARIAN S S 7219  
 11013  
 MARKIEWICZ L 6926  
 6898  
 MARKO A 12303  
 MARKO A R 12346  
 12680 12681 12682  
 MARKOVIC G IAJA L 4219  
 5416  
 MARKOVITS A S 7848  
 MARKS G 0623  
 1968 3340  
 MARKS M R 3173  
 4612  
 MARKS R A 7443  
 7444 7445  
 MARLEY F W 0624  
 MARLOWE E 1396  
 1880  
 MARMET J 4613  
 MARMORSTON J 10868  
 MAROTTA S F 6933  
 8739 8767 8897 11847  
 MAROVA E 8286  
 MARRA V 10391  
 MARRACCINI A 2458  
 MARRACCINI A 3802  
 MARRIOTT F H C 6997  
 MARRO F 3171







AUTHOR INDEX

MUNDT J P	7657	NAREBSKI J	6886	NEWSOM S J	12032
MUNGER S R J	11700	NAREFF M J	11941	NEWTON J A	6254
MUNNICH R J	12230	NARISI S L	8047	NEWTON J M	7438
MUNOZ J H	5853	NARRAN M	10620	NIASI S A	4709
MUNRO E H	3769	NARSIMHAN R	2468	5454 5455 6904	
MUNRO J	3137	NARTSUBHA D S	3345	NICELY P E	8177
MURAKAMI J B N	9076	NARVA M A	9700	NICHOL C A	10696
MURAWSKI J B K	11166	NASH C W	5274	NICHOLAS	0671
MURCH S J	1862	NASLEDOV G A	11278	NICHOLAS N C	11573
MURGA J M	0663	NASONOV D N	9168	NICHOLLS D	4710
MURGA R H	0663	NATH A	3242	6030 7453 10831 10837	
MURINO P H	2749	3243		NICHOLS G	7965
MURNIN J A	4689	NATSUBHA D S	5217	NICHOLS I A	1780
MURO M	7246	NAUGLE J E	11367	NICHOLSON F T	9569
MURPHREE H B	4467	11368 12451 12593		NICHOLSON J F	12269
MURPHY C E	3002	NAUMANN H H	1865	NICHOLSON M A	1237
MURPHY C E	3233	NAVARRANNE	4792	1238 1239 2592	
4690 5768		NAVARRANE P	6330	NICHOLSON W J	6163
MURPHY D F	3734	7816		NICKEL J F	5941
MURPHY J D	8191	NAVARRO MONTOLIU J	8106	6168	
MURPHY J D	6478	NAVAZHSKII G L	1868	NICOLAS B	1874
MURPHY R L	5576	NAVROTSKII V K	7950	1875 4711 11880	
MURPHY W F	1860	NAYLOR J C	9624	NICOLETTI R	5287
4243		NEAL K G	4307	NICOLL N R	3252
MURR B	6796	NECHAEVA G A	9075	NIELSEN A G	10847
MURRAY B L	11933	NEDZEL A J	1205	NIELSEN H P	2131
MURRAY E J	11167	4696 6028		4996	
MURRAY J E	1861	NEEL S H	3247	NIELSEN M	0672
7076		4667 4697 4698 4699		3626 3750 6808 7530	
MURRAY J F	8878	7892		NIELUBOWICZ J	6864
MURRAY W D	3234	NEELEY K K	7514	6865 6866	
MURRELL K F H	1862	NEELY J C	1869	NIEMI M	2892
1863 12688		1870 4700		2893	
MURTHA T D	7620	NEELY K K	0455	NIEMOELLER A F	6415
MUSETESCU S	12558	668 3248 5529 8176		NIEMOELLER H	12149
MUSSELMAN J F N P	12144	11016		NIESER R T	11369
MUSSER J F	3235	NEELY S E	12345	NIESS O K	0673
MUXWORTHY J F	1980	12415		6257 8288 8289 8462	
MYERS C K	1542	NEFEDEVA N P	8725	11998	
5563		NEFF W D	1871	NIEMIAROWSKA M	6905
MYERS J	3227	1872 3094 4701		NIGEON DUREUIL M	10679
3236		NEFFSON A H	4702	NIGRO A	5266
MYERS J E	8529	NEIFAKH E A	0669	NIJHOFF P	5802
8530 8531		NEIL E	0316	NIKITIN I M	8178
MYERS J L	7206	5952 10557		12416	
MYERS N A	4519	NELMS J D	10666	NIKODEMUSZ J	5961
4522		10835 11942 12267		NIKOLIC M	6421
MYGIND S H	7048	NELSON D G M	3995	NIMER R A	8610
MYSLIVECEK J	1626	NELSON D H M	4102	NIMS J	1115
		4103 5431 6029		NINOMIYA H	10143
		NELSON E	4051	NIR M I	10883
		7851		NITZ H T	6111
		NELSON J G	10038	NIVEN J I	0410
		NELSON L G	11890	411 425 674 1482 1876	
		NELSON P D	7761	1877 1878 2852 5791	
		7762 9717		7050 8312 9519 10144	
		NELSON R D	8532	10926	
		NELSON T M	5641	NIXON C W	9408
		NELSON W H	3391	12270	
		5642 6233 6559 6562		NIXON J C	11017
		NEMETS L L	7437	NIZETIC B	5530
		NENARTOVICH A V	1510	NOBER E H	12072
		NERI R	5481	NOBLE C E	1879
		NESSWETHA W	5579	4713	
		NETHERCUT R E	4703	NOBLE H	12816
		NEUBEISER R E	10836	NOBLE M	4714
		10879		NOBLE M E	1396
		NEUBURGER L	4364	1880 5696	
		NEUHAUS G	4704	NOBLE N	6665
		NEUMANN G	11122	NOBLE R	3253
		NEUMANN K H	9937	3254 3255 5580 8224	
		NEUMARK O W	3249	8364 9835	
		NEVELS E M	9125	NOBLE R L	1881
		NEVERIL R B	12900	4715	
		NEVERRE C	5947	NOCOLETTI I	9317
		NEVERRE G	0611	NOCOLOFF C	8011
		613 4601 4602 5445		NOE F F	8544
		9066		NOELL W	3091
		NEVILLE G M	11855	NOELL W K	0587
		NEVILLE J R	8223	967 969 1882 4716	
		8439 8456 8781 12689		NOGER A	1381
		NEVILLE R R	8455	NOLAN C Y	2228
		NEVIS E C	3250	3613 3616	
		NEVZGODINA L V	8501	NOLAN G F	6992
		NEW G W	4705	NOLI S	6896
		NEUBAUER J A	12268	NOLTIE H R	1883
		NEWELL H E	9938	3256	
		11367 11368		NOORDEN G K VON	9318
		NEWHALL S M	1184	NORBERG B	2982
		1185		NORDBERG L	12670
		NEWLIN E P	1676	NORDENSON J W	3257
		4475 7111		NORDENSTROM B	11713
		NEWLING P S B	2710	NORDLIE P G	12690
		3148		NORDLING D A	1463
		NEWMAN A I	12757	NORDMAN M	1884
		NEWMAN B	12887	NORDSTROM K	7361
		NEWMAN E B	4708	NORELL M W	12900
		NEWMAN M T	9939	NORMAN W T	9744
		NEWMAN R B	0176	9745	
		2027		NORMAND G H	12436
		NEWMAN R W	0670	NORRIS A H	6303
		NEWSOM B D	0535	NORRIS E B	1486
		536 537 1668 1873 3251		1885 1886 1887 2156	
		5870 10403 10404		3522 4267 4268 4272	
		NEWSOM J	12031	NORRIS R C	0832
				NORSWORTHY M E	2600

N

AUTHOR INDEX

3981 4719 5776 10215  
 10217 10219  
 NORTH A J 1888  
 NORTH J D 9625  
 NORTH W C 1889  
 NORTH W E 7741  
 NORTH W J 8161  
 NORTHUP D W 1386  
 2138 3582 5469 5892  
 7290  
 NORTON C P 11826  
 NORTON J A 11803  
 NOTARIO P 2053  
 NOTTERMAN J M 5710  
 7094 7131 7146  
 NOURRIT P 11948  
 NOURSE P R 4722  
 NOVAK P 11916  
 11917  
 NOVICK A 8703  
 NOVIKOV V F 8931  
 NOVIKOVA L A 5531  
 NOWAK A 11018  
 NOWAKOWSKA A 7570  
 NOWELL W R 12452  
 NOWICKA H 6906  
 NOWLIS H H 1890  
 NOWLIS V 1890  
 NOYES J C 11317  
 NUERNBERGER R E 2142  
 NUGENT C A 8610  
 NUMEROSO N 0676  
 3258  
 NUNGESSER F L 0087  
 1463  
 NUNGESSER W C 4724  
 6031 7439  
 NUTT A B 3259  
 NUTTALL J B 1320  
 12106 12417 12594  
 NYBOER J 4173  
 NYBORG W L 3260  
 NYE P W 9241  
 NYE R E 3261  
 10373  
 NYE S W 2797  
 2798 2799 2800 4215  
 5334  
 NYGARD C 7922  
 NYHOLM P 9088  
 NYLEN C O 0996  
 NYMAN M A 10397  
 NYSTROM C O 1891  
 3224 3262 4725 4726  
 5639 5697 6596

O

OAKLEY R L 1814  
 OBERMAYER R W 9619  
 9621 9622 9623  
 OBERST F W 0263  
 1254 1774 2606 8907  
 12136 12144  
 OBERTH H 3263  
 3264 4727 6717  
 OBONAI T 9746  
 9747 9748 12681  
 OBRAZTSOVA G A 1892  
 OBRIBEN B 1893  
 1894 1895  
 OBRIBEN R C 8647  
 OBRIBEN T F 2364  
 OBRINCSAK E 2679  
 OBRYAN T C 12418  
 OCALLOGHAN J 1896  
 OCCHIPINTI R P J 3265  
 OCHINSKAIA G K 10513  
 OCHSNER A 1897  
 OCONNELL D N 2222  
 OCONNELL M H 7923  
 11019 12073 12074  
 12075  
 OCONNOR J M 4728  
 OCONNOR T M 12033  
 OCONNOR W F 4729  
 5723 6263 9381 9749  
 11502  
 ODA F 9134  
 ODEBLAD E 5477  
 5478  
 ODELL J E 10531  
 ODENDHAL F 11020  
 ODESCALCHI C P 11021  
 ODINETS P I 1898  
 ODLAND L T 11366  
 11851  
 ODOHERTY E F 6997  
 ODONNELL J A 3266  
 ODONNELL W 7696  
 8107 8108  
 OECHSLI R 12677

OERTEL H 2808  
 OESTREICHER H L 0377  
 OEZER F 5895  
 OFIESH G C 7140  
 OGATA K 9078  
 OGATA S 10374  
 OGATA T 9898  
 OGDEN E 8787  
 OGILOVE J C 1900  
 4731 9286  
 OGINSKI A 11340  
 OGLE D C 0678  
 4732 4733 5250 6718  
 8149  
 OGLE K N 1901  
 3268 5532 9538 9539  
 OHALLORAN P S 11437  
 OHARE J J 5482  
 OHMART J G 9196  
 OHMURA M 4478  
 OHWAKI Y 7291  
 OKADA J 12592  
 OKANO F K 5268  
 OKAWA M 12681  
 OKSENGENDLER G I 9802  
 OKUMA T 7362  
 OKUNEV R A 11852  
 OLDER H 7697  
 7698 7699  
 OLDER H J 0485  
 486  
 OLEARY J L 9112  
 OLEJARCZUK G 6886  
 OLENEVA G N 4734  
 11022  
 OLGUIN V V 3269  
 OLIVER P 11023  
 OLLING E H 12692  
 OLMSTEAD D W 4735  
 OLMSTEAD F 8782  
 OLMSTEDT J M D 0679  
 OLSEN N S 4736  
 7351  
 OLSEN O 2834  
 3527 3528 4737  
 OLSON 6304  
 OLSON A L 11127  
 OLSON H F 6613  
 OLSON M W 1622  
 OLSON R 10272  
 OLUM P 4224  
 O'MALLEY T R 2176  
 OMORI K 12592  
 ONEILL J J 3270  
 4739 7035 7036  
 ONEILL T A 0686  
 ONESTI R 3271  
 9769 11943 12419  
 ONO M 10158  
 ONODERA S 2987  
 OPIK E J 5300  
 OPITZ A 10442  
 OPITZ E 0680  
 681  
 OPPLIGER G 11033  
 ORAHOVATS P D 1904  
 1905  
 ORD N 3232  
 ORDWAY F I 4740  
 ORIORDAN J L H 5407  
 6819 6820  
 ORLADY H W 11782  
 ORLANDI A 3272  
 ORLANSKY J 4347  
 6604 6641 8136  
 ORLOVA N N 9811  
 ORLOVSKAIA E P 11024  
 ORMEROD F C 12693  
 ORMISTON D W 10145  
 11232 11233  
 ORMOND D 8829  
 ORMOND E 1291  
 ORNSTEIN G N 11697  
 ORSETTI A 10595  
 ORTEGA J 12568  
 12569  
 ORTHMAYR A 7341  
 ORZACK M H 4741  
 OSBORN J 11183  
 OSBORN J J 3273  
 OSHER P 2995  
 OSHIMA M 10374  
 10405  
 OSHIMA Y 9739  
 9789 11540 11751  
 OSIBA S 7440  
 8591  
 OSIER D R 1914  
 OSIPOVA V G 11025  
 OSMUN W G 4742  
 OSTASHKOV K V 9077  
 OSTEN R VAN 8130  
 OSTYN M 7543  
 7579  
 OSWALD I 6993  
 9169

OSWALD W J 8521  
 12892  
 OTIS A B 0256  
 3370 5348 5349 5353  
 5456 5457 5953 6907  
 7355 9002 10723  
 OTT 6430  
 OTTO K 12648  
 9282  
 OURGAUD A G 2583  
 OUTCALT N R 4342  
 OVCHAROV V G 7877  
 OVENDEN M W 8128  
 OVERALL J E 9679  
 9680 9714 11293 11294  
 11295 11322 11472  
 OVERMAN R R 5371  
 8932  
 OVERTON R C 5404  
 OWEN S G 6805  
 6836  
 OWSTON J 0682  
 OZADOVSKAIA N S 1678  
 OZBAYDAR S 9409  
 OZER F 0826  
 827 828 3545 5823  
 OZOLINS G 8463

P

PAGE D 3274  
 PAGE N 0266  
 5109 5871 5896 5901  
 6441 7277 7312 7313  
 PACKARD J M 0683  
 684 685 1483 1906 3275  
 PACKCHANIAN A 1907  
 4743 4744 4745  
 PADULA F 7363  
 PAERISCH M 9319  
 PAGANELLI A 1908  
 3276 4746 7852  
 PAGE E 3277  
 3278 3279 3280 4747  
 7441  
 PAGE H E 3281  
 PAGE H M 10701  
 PAGE J 2545  
 PAGE J D 11234  
 PAGE T N 6398  
 7892  
 PAIRN J T 8090  
 PALAKAWONG M 6934  
 PALEVSKY G 8254  
 12887  
 PALIERI A 9941  
 PALL F A 4748  
 PALLADIN A V 1909  
 1910  
 PALM P E 1545  
 PALMAR T 9114  
 PALMAR U T 8793  
 PALMER E D 11944  
 PALMER M A 8464  
 PALMORE J 9787  
 PALTAROKAS J 6327  
 PALUCH WOLSKA J 7601  
 PALUDAN C T 9894  
 12694  
 PALVA T 5581  
 PANAGOS S S 4617  
 PANASEWICZ J 6893  
 6908 9064  
 PANCHENKO L F 12758  
 PANCHERI G 3282  
 PANDO B 2369  
 PANFILOV A S 11870  
 11974  
 PANISIAG V I 10838  
 PANNO G 10720  
 PANOS T 4302  
 PANSKY B 7293  
 PAOLUCCI G 10146  
 10375 10393 10512  
 11026 11098 11109  
 11363  
 PAP T 2434  
 2435 2679  
 PAPALOIZOS A 12695  
 PAPET R 12411  
 PAPPAS A R 5474  
 PAPPENHEIMER J R 2743  
 PAPT W 4749  
 6978 6994  
 PARAMELLE B 11446  
 PARDO E 4489  
 PAREDES D 2369  
 PAREJA B 5840  
 5841  
 PARENTELA A 5477  
 5478  
 PARIBOK V P 7973

AUTHOR INDEX

PARIN V V	8326	PECKHAM R H	9321	PETERS R W	3306
8465		PECORARO J N	3298	3337 3308 3553 4771	
PARIS J	11724	12759		4772 4773 4774 4775	
PARISH H S	7159	PEDIGO G P	8312	4776 4777 4778 5584	
PARKER G W	10406	PEDLEY P E	9543	5586 5598 6083 7037	
12085		PEDOYA C	10844	9410	
PARKER J F	4751	PEDRINI D T	9394	PETERSEN P	3857
7697 7698 7699 11664		11918		12760	
11665		PEIMER I A	9322	PETERSEN R L	4779
PARKER J T	1117	PEISS C N	0691	PETERSEN A C P G	0696
PARKER J W	11599	1563 1564 1565 1986		PETERSON A	3309
PARKES A S	9078	2927 9670		PETERSON E	11256
10839		PEKHOV A P	8725	PETERSON L	4506
PARKHILL E M	6143	PEKOV N	0827	PETERSON L H	5797
PARKIN P H	3283	828		10122	
PARKS D P	6157	PELLIPEIKO V	8463	PETERSON M S	3495
6694		PELLANDINI J	3299	PETERSON R O	1398
PARKS R B	1911	PELNAR R	7966	PETERSON R R	4038
PARLE F S	3284	PELOSSE J L	11436	PETERSON V A	0697
PARMA M	2434	PENA HERRERA L	7853	PETERSON W L	2611
2455		PENA L	11899	4418	
PARR W H	0686	PENA MATIAS L A	5873	PETIT	0943
PARRACK H O	0377	PENALOSA D	10410	PETIT E	3310
378 379 687 688 1912		PENALOZA D	5872	PETIT J M	8875
3285 4752 6082 7515		7292 10409 10411		PETRIQUE M	11952
PARRY D J	10332	PENCHENKO L F	10569	PETROV A V	9833
PARSONS V	10407	PENDINI A	11021	9860	
11853		PENGELLEY C D	0692	PETROV I P	2086
PARTON L R	12696	PENMAN J	3300	PETROV I R	1931
PASAMANICK B	12642	PENNETTI V	5332	1932 1933	
PASARGIKLIAN M	3286	6093		PETROV I U A	9701
3287 3288 3289 3587		PENNY A R	6520	11602	
6826		PENNYCUICK C J	8663	PETROVIC A	8645
PASCALOV STOENESCU L	12261	PENROD K E	1252	PETROVICH G V	8327
PASCHKE R	6798	3301		PETROVYKH V A	3312
PASCHKIS K E	4019	PEPINSKY H B	9626	8264 10848	
5007 5769 6041 7442		PEPINSKY P N	9626	PETRUKHIN V G	9811
10325 10696		PEPLER R D	1918	PETRUN N M	8881
PASSARELLI R	4754	1919 1920 1921 1922		PETSCHKE H	6151
PASSERINI D	8660	6033 9627 9628 10845		PETTERSSON H	1242
PASSERINI P G	0275	10846 12525		PETTI L J	1016
PASSMORE P	3152	PEPPER M C	2626	PETTIE C R	9411
PASSMORE R	8923	PERA C S A	1923	PETTIT W A	0674
PATCH C T	10258	PERA G	0693	3311	
PATELINA V V	3290	3302 3303		PETTITT J	9825
PATERSON A R	7516	PERAZZO D L	5874	PETTITT J A	9824
PATERSON D G	3291	PERDRIEL G	4764	PETTY T	4780
PATKIN J	10817	4765 5533 6399 6597		PETUKHOV M I	10589
PATKIN J K	10840	6598 7854 8109 9303		PETZ B	6120
10841		9323 9324 10412 10413		PEVSNER L	2986
PATT H	1913	10976 10977 11508		PEYSER A	1934
PATTERSON D G	11522	11576 11936 11945		PEZZANI G	3313
PATTERSON G C	2841	12556		PEZZI R	4781
5837		PEREIRA F A	8676	PFALTZ C R	2948
PATTERSON J L	1311	PERERA C A	1924	PFANKUCH L A	4748
2840 3292		PERES G	0267	PFEIFER H	6995
PATTERSON W E	12506	1263 1265 5752 7257		PFINGSTAG C J	3314
PATTON R M	7121	PERETEANU J	7549	PFISTER A	9751
7170		PEREVERTUN M P	8705	PFLANZ M	1615
PAUL D	4379	PERKINS D R	1911	PFLIDERER G	5056
PAUL J	11884	PERKINS W J	12652	PFROMMER J R	11854
PAUL J S	11370	PERKOFF G T	8610	PHARES L	9200
PAUL M C	4756	PERKOWSKE B	5275	PHELPS L J	10811
PAULY H	11397	PERLES R	7907	10812 10813 10814	
PAVLIK W B	9626	PERLITSH M J	10847	PHILIPSOON A J	11989
PAVLOK J	3293	PERLMAN H B	8996	PHILLIMORE H J	8110
PAWEL N E R	1241	9079		PHILLIPS A DE	7352
2593 3294 3960		PERLMAN K	11328	PHILLIPS C R	12443
PAWLICKI W	11772	PERMIN P	3373	PHILLIPS NE	8809
PAYNE B A	0689	PERMUTT S	11126	9820 10301 10414 12042	
PAYNE F A	12524	11460		12183 12184 12185	
PAYNE I R	10408	PERNAZZA P	4766	12186 12189 12271	
PAYNE M C	1025	PERNELL C	2233	12272 12780	
1640		PERNELL M L	5132	PHILLIPS P B	4872
PAYNE R B	0690	PERNET A	0694	4783 7156 9702 11716	
1915 1916 1917 2899		PERNOW B	10525	11804 11855 11946	
2900 3295 3382 4323		PEROT P L	8880	11947	
4757 4758 4759 4760		PERRET C	7571	PHILLIPS R B	0698
4761 4762 6365 6652		PERRET E	9252	4784 7848	
7116 7122 7354 7595		PERRET GENTIL A	4767	PHILMUS L C	4785
10638 10842 10843		PERRI F A	6350	7517 7700	
11152 11371		PERRY D R	6351	PHIPPS L W	4786
PAYNE R D	1914	PERRY M E	4768	PHOEBUS C P	1935
PAYRAU	3296	PERSKY H	1925	4787 7800 8466 9942	
PAYTON G	2148	3791		PHOENIX C	2887
PAZERA E E	9320	PERSON R S	11110	PIALOUX P	9420
PEACHY J W	1369	11111		PIANE C	8882
PEACOCK L J	6032	PERSSON P A	7331	PIATT V R	12814
7204 7438 7443 7444		PERVUSHIN V IU	7630	PICAMOLAS R	6518
7445		PERVUSHIN V YU	11372	PICARD	4792
PEARCE D	12610	PERYAM D R	12863	PICARD D	11948
PEARCE G W	12100	PESCARU A	11144	PICCINNI F P	11453
12101		PESCETTI V	5582	PICHTINO A M	4793
PEARCE J W	4241	PESKIN J C	1926	PICHOTKA J	4794
PEARL B E	4763	1927 4769 4770		4795 4796 10590 10591	
PEARL D C	5400	PESMAN G J	1928	10849	
PEARSON R G	6127	6563 12544 12840		PICKARD D	10147
6356 6370 7602 7873		PESTALOZZA G	3161	PICKERING E J	2024
7874 9541 9542 12391		3305 5583 9364 10945		PICKERING J E	1936
12420		PESTEL C V	1792	1937 9943 11373 11374	
PEARSON V A	6591	PETER J	8920	11431	
PEARSON W O	8060	PETER P A	1929	PICKERING W H	8467
8061		PETERS H	5260	PICKETT J M	1952
PECHAR J	8783	PETERS G B	11783	4797 5586 5587 7518	
PECHOUX R J A	3297	PETERS R M	1930	9412 11027 11029	
PECKHAM R E	4243	8804		PICKFORD M	3315

AUTHOR INDEX

PICKREL E W	0497	POBERI I A V	8225	POTTS P	12818
700 1595 9750		POCIDALO J J	5350	POTZL O	0351
PICON A	4798	6845		POUDOU F	6566
PICON REATEGUI E	1938	PODGORSKI J	11772	POULOS N A	12122
5875 5876 10415 10416		PODSHYBIAKIN A K	10476	POULSON J	2512
PIE A	3316	POE A C	0706	2513	
PIERACH A	4799	707 708 1763 1947 3103		POULTON E C	1957
PIERCE B F	12273	3329 5642		1958 1959 1960 1961	
12817		POE R H	9481	3336 3337 4816 5589	
PIERCE T F	0701	10851		5597 7123 7124 9804	
PIERCY M	7077	POGREBKOVA A V	7133	POVZHITKOV V A	11376
PIERSTORFF B C	12721	9653		POWELL A	1962
PIERY J	1266	POGRUND R S	12526	POWELL C P	0373
PIETRASANTA A C	4800	POKLEKOWSKI G	7129	POWELL G W	3561
6614 8179 12595		POKOROVSKI	7186	POWELL R C	9125
PIGG L D	10264	POKROVSKII B L	11627	POWELL T J	3338
12596		11717		6313 7194 7743 7818	
PIIPER J	8761	POKRYVALOVA K P	2171	8733 8883 11856	
8841 8842		POLACEK P	9080	POWELL W H	7658
PIKLER A G	9384	POLAK A	8924	POWERS J J	6055
9413		12150		POWNALL D	7501
PILIERO S J	2814	POLAK G	2775	10993	
4801 7293 10592		POLETAEV M I	12784	POZZI C	10319
PILLE G	4524	POLEZHAEVA SHIFMAN A	4809	PRAKASH RAO M S	6625
4525		POLIAKOVA N M	1909	PRANGE E M	3220
PILLSBURY R D	6400	POLIKANINA R I	1948	PRASAD A S	7957
7893		1949		PRATO Y	3415
PILOVITSKAIA V N	8814	POLINSKY D M	5534	5886 7303	
PIMENTEL D	3317	POLIS B D	2786	PRATT A J	4817
PINC B	12643	3672 4093 4204 7173		PRATT A W	8950
PINC B W	6481	7487 9843 10148 10149		PRATT C H	3007
8533 11741		10162 10163		PRATT D E	10424
PINC R	9074	POLISHUK A	9327	PRATT J G	5293
PINCEL J	6908	POLISTENA S	12076	PRATT L W	3339
PINEDA A	11112	POLITUR D	5724	PRAVOSUDOV V P	12092
PINEDA GANOZA R	10417	9751		PRAZIC M	5590
PINEGIN N I	1939	POLITZER W M	3330	PREBER L	3811
PINGREE F DEW	3318	POLIZZI DI SORRENTIN	3331	4818 5788	
PINKEL I I	6691	11949		PRECHT H	4819
PINKERTON M	4745	POLLACK I	0709	PREEM R	9946
PINKERTON M K	12121	710 711 712 713 714		PREININGER V	8611
PINNEO L R	6996	1950 1951 1952 3332		PRENTICE T C	7365
11369		3333 4810 4811 4812		10593	
PINSKER W J G	6683	5588 6666 7154 8226		PREOBRAZHENSKII V V	1963
PINSKY J J	5992	9414 9415 9803 11027		PREROVSKY I	4821
PINTILIE I	10292	11029 12527		PRESL J	5955
10314 12261		POLLARD J P	0715	PRESMAN A S	7631
PIPES W O	12893	11666		11377	
PIPKIN S B	11375	POLLOCK W T	0716	PRESTON J H	6199
PIPPITT R G	4802	POLOSA C	5954	PRESTON THOMAS H	4822
6534 6697 6700 7135		6093		PRETELL E	10399
10337		POLOSKOV S M	6788	PRETI L A	6567
PIQUET J	1940	POLTE J	4303	PREZIOSI P	3221
PIRCHER L	0889	POLTE J W	1524	PRICE A	6482
3052		1525 2875 6465 6466		PRICE H E	7697
PIRENNE M H	6997	9012 12234 12235		7698 7699	
PIRLET K	5459	POLVOGT L M	1438	PRICE H G	0718
PIRODDA E	0917	POND A W	8057	PRICE H L	1964
PIRTKIEN R	5272	PONOMAREV M F	7875	1965 12145 12151	
PISANO E	1941	9629 9630 9631		PRICE R	9131
PISMENNYI R I	3488	PONTUAL C	4542	PRICE W E	4215
PISSAREW D I	7799	POOL K B	7155	PRIDE A M	1966
PITTELOUD J J	7572	POOS E E	3334	1967	
PITTENDRIGH C S	9944	4813 6332		PRIEST J P	4823
PITTS D G	9325	POPOV V I	10085	PRIETO G	6106
PITTS G C	11499	POPOVA E O	11831	PRIGGE J S	6693
PITTS P M	1014	POPOVA N K	11773	PRIGMORE J R	8617
PITTS R F	0108	POPOVA T V	4814	PRINDLE R A	0512
109		POPOVIC P	5288	PRINE J R	6496
PITZ G F	9326	POPOVIC V	4815	PRIORESCHI P	5911
PIVOTTI G	0750	5288 9081 9082 9083		PRITCHARD A C	7141
3412 7078		POPPEN J R	7187	PROCHNIK G	0121
PIZZARINI N	3566	8048 12274		PROELL W	5301
PIZZUTI G	3319	PORITZKY S B	1953	6483	
PLACIDI T	0702	1954 1955		PROKOFEVA BELGOVSKAI	8501
3320 3321 3322 3323		POROT M	0610	PROKOP L	6846
4803 4804 4805 4806		11801		PROKOPOVICH N B	10534
PLANE P	0609	PORTER E	10817	PROUD G O	11768
612 1782 5446 5447		10819		PROUST R	4828
5448 6369		PORTER J E	12102	PROVINS K A	4829
PLANT W H	0703	PORTER R W	3335	10833 10853 10854	
PLAS F	0704	PORTERA A	5430	PRYCZKOWSKI J	9048
705 1210 1843 1942		PORTMANN M	3579	720 1968 3340 4349	
1943 1944 1945 1946		6084 7925		PRYSIAZNIUK A	11267
3324 3325 3326 4807		PORTON W M	7294	PRYSTOWSKY H	10398
7924		7742 7894 8111		PUCCIO V	4831
PLATNER W S	10836	PORTOS R	11950	PUGA D C	9809
10850 10879 11784		POSADA E	5535	PUGH L	0723
PLATONOV K	3327	POSNER J B	9151	PUGH L G C	3341
6732		9483		3342 3343 3344 7295	
PLATONOV K K	9945	POST J S	10958	10418 12202	
11577		6142	3944	PUISTER G J	4493
PLATT B S	3328	POSTIC	4806	7296 7838 9170 11578	
PLATT H	6013	POSTIC F	4804	12059	
PLATZER H L	4808	POSTLE J A	0717	PUNDLIK P G	8934
PLEINES E W	6564	POTE H L	12894	PUNI A C	7701
6565		POTKIN V E	11897	PUNSONI C	3345
PLETCHER K E	12345	POTOCKI W S	2570	PUNTE C L	1971
12421		POTOR G	12346	PURCELL J B C	4832
PLETTS G O	1722	POTTER B	9328	PURDY F A	10576
PLOMP R	10973	POTTER S M	1956	PURDY J	4221
10974		POTTER V R	5893	4222 4833	
PLOTNIKOFF N P	0234	7309 10696 10852		PUREC L J	6102
1225				PURKIS H J	3283
PLUMB C S	9669				
PLUTCHIK R	11028				



AUTHOR INDEX

PURPURO C	12717	3531 7659	REICHARD G A	11115
PUTILIN M I	9948	RANDOLPH J R	REID A M	4079
10855		RANDT C T	REID J B	4843
PUTILIN N I	9948	8469 9097 11235	REID J J	0944
PUTNAM L E	11992	RANGNEKER P V	REID L S	0581
PUTNAM R C	11115	RANKEN H B	582 1996 3113 3114	
PUTT D L	0724	1157	3362 4338 4340 4844	
725		RANKIN J	REID R L	3363
		RANKIN R E	REIF A E	8470
		1014	REILLY R	9348
		RAPIN I	REINBERG A	6776
		9573	REINDELL H	5937
		RAPOPORT K A	6101	
		7419	REINECKE R D	9544
		RAPOPORT K M	REINECKEN R	9545
QUAAS M	4834	RAPP R M	REINHARDT R F	11858
QUADBECK G	2459	RAPPAPOORT M	REINHARDT W O	5956
QUARTERMAN K D	12100	8150	REININGER E	12137
12101		RAPPORT D	REISSMANN K R	0491
QUASTLER H	4835	RAPPORT R L	733 2936 5460	
6592		RASIN S D	REITAN R M	7876
QUAY W B	11486	RASMUSSEN A F	REMOND A	8112
QUERCY J	6566	RATCLIFFE H L	11859	
QUERENGESSER E I	4731	3809 5779	RENAUD G E	12699
QUERIDO A	6017	RATCLIFFE J W	RENAUD S	11279
QUERO R	11579	RATHE G	RENBOURN E T	4079
QUILLETTE S	12234	RATHERT G A	4786 8471	
QUILLINAN J H	12313	RATHS P	RENDAHL I	6975
QUIMBY C W	2413	RATLIFF F	RENDEL D G A	1997
QUIMBY F H	11271	3368	RENIN I S	9085
QUINN M	3346	RATLIFF F R	RENNIE D W	5380
3347 3792 4468		RATSIMAMANGA A R	5405 6910 7380 7447	
QUINN M J	11260	RAUTIAN G H	10859 11779	
QUINNEL R K	5770	RAUTIAN G N	RENNIE L E	4659
QUINNELL R	5536	3356 4838	RENZETTI A	1322
QUIVY D	5914	RAWLINS J S P	RENZI A A	6333
10594		8015 12316	7821 11997 11999	
		RAWNSLEY A I	REPAZI M	6293
		729 1540 1650 1990	REPIN I S	12147
		3357	REPIN V I A	5932
		RAWSON K S	REPLOGIE E H	12343
		RAWSON R O	REPLOGLE E H	4845
		10858	4846 4847	
		RAY J	RESSEL F A	5879
		RAY J T	REST J	12746
		5635 5636 5801 8613	RESTIVO S R	10751
		RAY S N	REV J	7344
		RAY W S	REXFORD WELCH S C	4849
		4840	REY DE CASTRO J C	5880
		RAYBURN C J	REYNAFARE B	5852
		RAYFORD C R P	5853 5893 5894 7309	
		RAYMOND M P	7310 10423 10860	
		RAYNAUD G	REYNAFARE C	3364
		RAYNAUD J	7478 5853 5881 5882	
		11079	7297 10421 10422	
		RAYNER L C C	REYNAUD A R	9861
		RAYNOR G H	REYNIER M	10595
		9735	REYNOLDS B	0414
		REAL J D	734 735 947 1401 1998	
		REBAUDO G	1999 2000 2334 3365	
		RECAMIER J	REYNOLDS G E	11990
		REDDEN R J	REYNOLDS J B	0736
		REDDINGTON T H	REYNOLDS L W	12896
		REDFEARN J W T	REYNOLDS S R M	10266
		2695	P4EINSTEIN J	11476
		REDMOND R F	11483	
		644 645 731 1820 1992	RHEMREV N A N V	7763
		1993 2582 2583 2584	RIBNER H S	6615
		3201 3202 3359 3960	RICCA D A	9809
		REED D J	RICCI G	3418
		8885 8886	RICCI G F	2454
		REED E C	2455	
		7654	RICCIARDI POLLINI R	2427
		REED G F	RICCIUTI E A	3717
		REED J B	RICE E A	9417
		REED J D	9418 10596	
		REED J E	RICH L G	12867
		REED J F	RICH M	3432
		8017 8018	RICHARD	2001
		REED W S	RICHARDS E J	4850
		REEDY J D	7519	
		REES D W	RICHARDS G G	5183
		REESE E P	RICHARDS J	6484
		REESE T W	RICHARDS J B	5461
		REEVES E	5985 5986 6443	
		10068 10150 11412	RICHARDS N L	8544
		11668	RICHARDS W J	2002
		REEVES J L	RICHARDSON A W	11379
		10311 10420	RICHARDSON D E	12894
		REEVES J T	RICHARDSON J A	10635
		11113 11114	RICHARDSON J C	10597
		REFSUM H E	RICHARDSON P M	12859
		REGAN J J	RICHARDSON R S	4851
		REGENER V H	6789	
		REGER S N	RICHET J	5820
		7927 9416	6541 7945	
		REGIER A A	RICHEY E O	0373
		REGINA A M	RICHEY H W	0737
		REGIS H	6275	
		REGISTER U D	RICHLIN M	11767
		3361	RICHMOND D R	7298
			10152 10424 10425	
			RICHMOND G	7045
			RICHMOND J	5966
			RICHTER C P	4852
			RICHWINE D W	6568

AUTHOR INDEX

RICKENBACKER E V	11805	11238	ROBEY D H	11381	ROOS A	1930
RIECK W	10426	ROBIE R R	11861	ROOS C A	8372	
RIEDEL H L	5284	ROBINETTE J C	6737	ROOS G	2020	
RIEDEL M L	4853	ROBINSON D L J	7573	ROOT W S	1479	
RIEDSTRAL J W	3366	ROBINSON E J	2009	1481 1904 1905		
RIEHL J L	9171	ROBINSON F R	11030	ROSCOE S N	2021	
9966		ROBINSON H C	8889	3387 12622		
RIENDEAU R P	6859	ROBINSON J S	1451	ROSE H W	0740	
6938		ROBINSON K W	6036	741 742 7744 12598		
RIESEN A H	1890	11116		ROSEN M W	2022	
11236		ROBINSON L	12120	6760		
RIETSCH M L	8644	ROBINSON P F	11282	ROSENBAACH J H	1093	
RIEVELEY J F	12473	ROBINSON S	3379	ROSENBAUM D A	2023	
RIEZLER W	3367	7573 10861		2209 3388 3993 6837		
RIFF J	2003	ROBION J	11952	7299 10429		
2004		ROBSON J G	9213	ROSENBAUM G	2024	
RIFFENBURGH R S	2005	ROBY T B	1417	11192 11239		
RIGAL R D	11369	2010 2011 2012 2013		ROSENBAUM J I	2699	
RIGATTO M	12762	3380 6200 6203 6255		3624 3625		
RIGBY M K	3656	8181		ROSENBAUM S	10802	
RIGGS L A	3368	ROCHE J DE B DE LA	3321	ROSENBERG E G	6691	
4854		3323		ROSENBERG F J	7429	
RIGNEY J W	9765	ROCHELLE R H	8784	ROSENBERG F J	7428	
RIGSBY E P	3369	ROCHELS K H	1458	ROSENBERG N	2025	
RILEY E C	11785	ROCHMAN M H	12844	2026 2118 3389 3390		
RILEY M B	5812	ROCK I	7079	3391 3392 4873		
5814 5815 7215 10137		ROCK M L	2014	ROSENBERG P	8473	
10153 10354		2127 2128		ROSENBERG S	6203	
RILEY P	5475	ROCKWAY M R	3222	6276 7660 11719		
RILEY P A	5466	4866 5698 8229 9621		ROSENBLATT F	4224	
9111		11637 11638 11670		12763		
RILEY R L	1322	12702		ROSENBLITH W A	0743	
2602 3370 3371 8888		RODAHL K	4867	2027 2028 2135 4874		
11126 11460		4868 6535 6910 7449		9172		
RILLAERT R	12053	7450 10655 10825 10827		ROSENDAHL C E	4875	
RIMIRAS P S	10427	10862		ROSENFALCK P	12403	
RINALDI P L	3789	RODBARD S	5970	ROSENFELD J B	10896	
RINARD L A	2101	10601 11458		ROSENWINKEL N E	11031	
RIND H	12870	RODDIE I C	6037	11032		
RINGENBACH G	0738	6169 7451 7452 7964		ROSH E J	10284	
2006		8785 8954 10502 11070		ROSICA S J	5592	
RIONDEL A M	8609	RODDIE R A	4869	ROSMOFF H L	3393	
RIOPELLE A J	1855	RODDIS L H	2015	5462 8977		
3695 9372 9401 11830		RODEWALD F A	0739	ROSS B B	2029	
11848		2016 2017		ROSS B P	0415	
RIOS SASIAIN M	5537	RODEWALD G	1044	ROSS D N	2626	
RISAVI A	3372	1045		ROSS E	12713	
5772		RODLER H	8774	ROSS I	5056	
RISING B	12597	RODMAN I L	2227	ROSS J C	8786	
RISING J D	11860	3471		12279		
RISKAER N	3373	RODRIGUEZ J	4489	ROSS M A	12110	
RISSEL E	2467	RODWELL R R	8248	ROSS M D	6728	
RITCHIE M L	4855	ROEBUCK J A	8151	8333 8334 8534 11382		
6671 8228 12553 12700		12278		12819		
RITTENHOUSE C H	1466	ROEHM D C	3381	ROSS R E	12528	
2007		ROELOFS O	4870	ROSS S	2030	
RITTER O L	7235	ROFF M	2018	2031 2032 2255 3132		
8455 8456 8718 9949		3382 5725 7158 9752		3394 4876 4877 5669		
10237 11380 11408		ROFFI J	10623	6655 9649 9651		
11410		ROGERS A F	2773	ROSSANIGO F	3395	
RITTER R M	11580	ROGERS E B	11468	4555 4907 5887 6104		
12000		ROGERS J T	4943	7238 9636 10127 10156		
RITTLER M C	2884	ROGERS M S	5008	10261 11100 11117		
RIVAS GUTIERREZ O	6235	ROGERS O E	6201	11581 11582 12080		
RIVERA ESTRADA C	10598	6202 6236 7704 9704		ROSSBERG G	5800	
RIVOLIER J	3374	ROGERS O R	2019	ROSS C	10580	
4856 4857 4858 5883		ROGERS T A	10154	ROSSEN R	10602	
RIXON R H	3499	ROGGEVEEN L J	5802	ROSSI L	11033	
RIZO PATRON C	4662	6085		11104		
5868		ROGOZKIN V A	11773	ROSSI N	11383	
RIZZIO A	10865	ROHLES F H	0690	ROSSI V	7366	
RIZZIO B	4859	8472 9546 9568 9633		ROSSIER P H	3396	
6909 7379 10599 10600		9634 9635 9673 9705		ROSSIN I L	5356	
RIZZOLO J	2008	9706 9707 9708 9709		ROSSIN J R	6911	
3531 12452		10145 11786 12548		ROSSITER R J	4710	
ROACH C G	3375	12703		6030 7453 10831 10837		
12277		ROHRACHER H	4871	ROTA P	8890	
ROACH J H L	4860	ROHRER J H	1584	ROTH E	10430	
ROADMAN G H E	3376	1585 2940 3383 3384		ROTH E M	4878	
ROBACK G	2986	9768		ROTH F E	3397	
ROBARDS G R E	4861	ROHR S L C	12033	ROTH G L	6667	
ROBBINS J E	8925	ROKSETH R	3385	ROTH H P	2033	
ROBBINS J E F	8739	ROLEY E E	11437	ROTH J G	9547	
ROBBINS J E H	10866	ROLLINS L T	5183	ROTHERHAM A C	6706	
ROBBINSON J W	9950	ROMA M	9074	ROTHFELD E L	12165	
ROBERSON J J	6005	ROMAN J	10119	ROTHWELL S	0744	
ROBERTO 6011		ROMAN J A	10155	ROTHWELL W S	2034	
9932 12078		ROMANDER A	4872	ROTONDO G	2035	
ROBERT C	1381	ROMANI J D	6064	3398 3399 4879 7857		
ROBERT P	1378	6086		10386 11953		
3377 3378 4862 4865		ROMANO S	12673	ROTA A	2369	
4864 5591 7520 7809		ROMANOV S N	3386	3400 4880 4881 5053		
7856 7928 9419 9421		ROMANOWICZ M	9951	5884 7300 7301 10431		
12079		ROMANOWSKI W	7574	ROUBICEK C B	10701	
ROBERTS D F	10730	ROMBA J	10428	ROUGHTON F J W	2036	
ROBERTS E E	0193	ROMBERG H W	0421	3401		
ROBERTS J E	2244	422		ROUGIER G	10495	
3632		ROMEL E L	1010	ROUNDY R W	3402	
ROBERTS K E	11123	RONCHI L	6999	12277 12804		
ROBERTS L B	10933	9238 9313 9317 9329		ROUSH R O	1624	
ROBERTSON D G	12193	9330 9331 9332		ROUSH G R	12803	
12195		RONCO P G	8081	ROUSH R G	10399	
ROBERTSON M H	11237	ROORBACH E H	1756	ROUSSEAU J P	2655	
		3129 7575		ROUTLEDGE F G	1748	
				ROWE D S	11118	

AUTHOR INDEX

ROWE G G 9067  
 ROWEN B 7705  
 8474 8475 9952 11671  
 12704  
 ROWLAND E N 6777  
 ROWLAND G E 9294  
 ROWLANDS R P 12280  
 ROXBURGH H L 2037  
 3403 4882 8019 10334  
 12221 12347 12794  
 ROY R 4623  
 ROY S 7706  
 ROYCE M 4883  
 ROZE P 4176  
 ROZENBLAT V V 6939  
 9145 12705 12706  
 ROZENBLIUM D 9953  
 ROZSAHEGYI I 11862  
 RUBENSTEIN L 11191  
 RUBENSTEIN D 3831  
 RUBIN A 2038  
 RUBIN B 1795  
 RUBIN J J 8291  
 RUBIN L S 6371  
 RUBINSTEIN D 0148  
 372 1233  
 RUBINSTEIN E H 12001  
 RUBINSTEIN M K 4884  
 RUBIO C 2369  
 RUCH F L 2039  
 RUCHELLI P B 0844  
 RUDAT W 0745  
 RUDERMAN W 12820  
 RUDMOSE W 7521  
 RUDNICK I 2040  
 RUDOLF W 12034  
 RUDOLPH G G 4736  
 7351  
 RUDOLPH J A 2041  
 RUDOLPH S J 11863  
 RUDOMIN Z P 10603  
 RUEDI L 2042  
 3404  
 RUFF G 9848  
 9900 9901  
 RUFF G E 9173  
 9793 9954 11223 11240  
 11241 11242 11243  
 11583  
 RUFF S 3405  
 4885 4886 4887 4888  
 6524 6734 7522 9955  
 11584 12589  
 RUGH R 11346  
 RUHE C H W 6912  
 RUIZ GIJON D J 3189  
 RUIZ GIJON J 4889  
 RULON P J 0834  
 RUMMEL R W 2043  
 3406  
 RUMP E E 9333  
 RUND P A 8182  
 RUOSTENOJA R 3407  
 RUPE J C 0746  
 RUPEREZ PEREZ E 12002  
 RUSANOV V N 11720  
 11954  
 RUSECKAS J A 6460  
 RUSH C H 4072  
 7746  
 RUSH L 8610  
 RUSHTON W A H 7000  
 RUSIN V IA 9956  
 RUSK H A 0747  
 748  
 RUSS C 5409  
 5411 6874 6875  
 RUSSBACH A 4666  
 RUSSELL R W 3733  
 5373 5463 7454  
 RUSSELL W R 8232  
 12712  
 RUSSO G 12131  
 RUSSO R P 10604  
 RUSSUM B C 5957  
 RUTENFRANZ J 4890  
 RUTHVEN STUART I A 3408  
 RYACK B C 12500  
 RYAN A P 9289  
 9290 9347  
 RYAN E D 11721  
 RYAN J E B 4731  
 RYAN J J 0114  
 RYAN J M 5318  
 RYAN S 12110  
 RYAN T A 2044  
 RYBAKOV N I 8476  
 RYDER H W 1839  
 RYHMING I 2404  
 RYLOVA M L 12140

S

SAAKOV V A 6913  
 SAATHOFF H 0681  
 SABADASH E V 8614  
 SABATELLI G 9769  
 SABAWALA P B 10543  
 SABEH R 4937  
 5643  
 SABISTON D C 4891  
 SABORIDA D C M 9809  
 SACHS L D 0749  
 SACHSENWEGER R 3409  
 4892 5644  
 SACKLER A M 11034  
 SACKMAN H 2378  
 SADLER E 9348  
 SADOFF M 12707  
 SADYKOV A S 10863  
 SAENGER BREDT I 3410  
 SAFAR P 5885  
 SAGA G 10070  
 SAGAN C 8706  
 8707 8730 12445  
 SAHA H 3411  
 10432 11119  
 SAHLEIN H F 4894  
 SAID S 11460  
 SAIGER G L 3360  
 SAIKI H 10433  
 11120  
 SAILER E 0866  
 SAINT GIrons M C 8615  
 SAINT S 8183  
 SAIS J 3229  
 4682  
 SAIS V 10157  
 SAITO H 10864  
 SAITO I 10158  
 SAITO M 10605  
 SAKAMOTO H 7523  
 SAKATA Y 5868  
 SAKATA Y B 4662  
 SALA O 0750  
 3412  
 SALAJ B 5590  
 SALAMONE L 2750  
 2751 3413 7398 7591  
 10865  
 SALAZAR A 7800  
 SALCEDO J 7303  
 SALCES A 4031  
 4032  
 SALCHENKO I N 12092  
 SILDARRIAGA J 7302  
 SALGUEIRO B 2045  
 SALLE J 1171  
 1172 1173 1174 1176  
 2211 2553  
 SALLMANN L VON 3414  
 SALMON R D 6485  
 SALONNA F 6372  
 SALSTROM W K 2272  
 SALTER P G 6238  
 SALTIN B 11064  
 SALTZMAN B E 7984  
 SALTZMAN H 12084  
 SALTZMAN P W 10598  
 SALVAGNIAC 6385  
 SALVAGNIAC A 6384  
 6406 7887 12035 12038  
 SALVI G 9334  
 SALVINI M 7367  
 SALZANO J 8891  
 9011 9086 11450  
 SALZMAN E W 4822  
 5204 5786 5803 5804  
 6496  
 SAMAHA F J 7801  
 SAMARAS J C 5957  
 SAMBERG L C 11455  
 11456  
 SAMMARTINO R 0237  
 SAMMONS H 10855  
 SAMPFORD M R 10730  
 SAMPSON H 9710  
 SAMPSON P B 4210  
 6647 6648  
 SAMSONOVA V G 2046  
 SAMUEL G D 0655  
 6122  
 SAMUEL J A 12603  
 SAMUELS L T 5271  
 8610  
 SAN MARTIN M 3415  
 5886 7303  
 SANCETTA S M 10897  
 SANCHEZ C 5853  
 SANCHEZ R T 10424  
 10425  
 SANDAGE C 12107  
 SANDBORG H 12348  
 SANDEGARD K E 2047

11955  
 SANDEL T T 5567  
 SANDER E G 11384  
 SANDERS A F 11035  
 SANDERSON J W 1209  
 5640  
 SANDGREN N 6306  
 SANDOMENICO C 2639  
 SANDORFF P E 6693  
 SANFORD W G 12417  
 SANOTSKAIA N V 8859  
 10606  
 SANSOM W 11267  
 SANT ANGELO M A 6643  
 SANTA MARIA E 2369  
 SANTA MARIA L J 7304  
 7998 8021 9916 10756  
 SANTAMARIA L J 7267  
 8006 12281 12282 12883  
 SANTI G P 4895  
 SANTOS E M 9087  
 SANTOS F R DOS 0751  
 SAPIN JALOUSTRE H 6431  
 SAPIN JALOUSTRE J 6038  
 SAPIRSTEIN L A 8787  
 SAPORARO A 5954  
 SAPOUNOV O K 12529  
 SAPOV I A 7134  
 9654 11054  
 SAPPENFIELD L C 6832  
 7909  
 SARAJAS H S S 5464  
 9088  
 SARGENT B B 9683  
 SARGENT F 3416  
 3417 4896 4897 5990  
 8925 10716 10866  
 SARGENT V M 4897  
 SARGENT V W 3416  
 4896  
 SARNARI V 12132  
 SARNOFF C A 7764  
 8860 10159 10434  
 SARNOFF S J 2048  
 4898 5351 6815  
 SARTORELLI E 3287  
 3289 3418 6112 6838  
 7576  
 SASAKI T 9076  
 SASLAW M 3432  
 SASLOW G 5722  
 SATALOFF J 2049  
 3419 3420 3661 4899  
 7858  
 SATTES H 2050  
 SATYENDRA K N 3740  
 SAUCER R T 1593  
 SAUER E G F 8664  
 SAUER S C 3634  
 SAUERBREI H U 7305  
 SAUERWEIN E 4900  
 SAUL E V 4901  
 12530  
 SAULNIER R 4902  
 SAUNDERS D R 3421  
 SAUNDERS L Z 1971  
 SAUNDERS R A 12247  
 SAUPE J L 11614  
 SAURWEIN T D 9097  
 SAUSSER E R 1589  
 SAVELY H E 0752  
 6720 12765  
 SAVITSKII I V 7580  
 SAVITSKY I V 11136  
 SAVVE V D 4903  
 SAWYER C H 11956  
 SAWYER F M 12355  
 SAWYER H E 3318  
 SAWYER L 8925  
 SAWYER L M 10866  
 SAYEN A 10867  
 SAYERS G 5041  
 7178  
 SBERTOLI C 7576  
 SCACCIANOCE M 3422  
 SCANO A 1281  
 1743 2051 2052 3272  
 3423 4553 4905 4906  
 4907 5887 5888 7238  
 7306 8356 8357 8892  
 10127 10160 10261  
 10435 10436 10437  
 11100 11558 11957  
 12036 12080 12081  
 12821  
 SCARINCI C 2053  
 SCARO J L 10438  
 SCARPELLI E M 4908  
 5236  
 SCAVO R 5465  
 SCHACHTER H 6138  
 SCHACK G J D 7239  
 SCHADE J P 6867  
 SCHAEFER H J 0753  
 754 755 756 2054 2055  
 2056 3424 3425 3426

AUTHOR INDEX

3427	4909	4910	4911	SCHNORE M M	9753	SEALE L M	6237
4912	4913	6146	6152	SCHOCK G J D	9711	8122 8185 10217 11672	11672
6153	6154	7632	11385	10267 10268		12433	
11386	11387	11388		SCHOEDEL W	4918	SEAMAN E A	6668
11389	11390	11391		SCHOEFFLER M S	4919	SEANOR H E	0131
11392	11393	11394		SCHOENFELD W N	5710	SEAQUIST M R	5718
11395	11396			7094 7131 7146		6204 11588	
SCHAEFER J		5805		SCHOEHL A L	2065	SEARS G A	9126
SCHAEFER K E		0757		SCHOENING J K	1245	SEBAS R A	0138
758	2057	2058	3003	SCHOETTLLIN C E	12124	770	
3004	3005	3428	3429	SCHOHLANDER P F	12766	SECHREST L B	0473
3430	3431	4457	4462	6914 7403 7455 10696	5987	1558 1559	
4914	7307	7370	7965	10871 10872 10873		SECHZER P H	12151
12148	12149	12822		SCHOLANDER T	11168	SECKENDORF R	1563
12823				SCHOLER H	5357	SEDLACEK M K	5595
SCHAEFER K P		9153		SCHOLZ H	3440	SEDMAN G	11245
SCHAEFER V H		11036		SCHOLZ N	12283	SEDOV M A	3451
11037	11038			SCHOLZ P	10591	SEED J C	8810
SCHAEFER W C		0486		SCHOLZ W	2066	SEEGER C M	1397
SCHAEFER R W		1810		10545		8165	
SCHAEFER G		7368		SCHONBAUM E	10671	SEELER H W	2074
10439				10760 10869 10870		12284 12285 12286	
SCHAFER G E		0759		SCHOOFF H F	12101	SEGAL M S	2388
2059				12102		SEGAL A N	5317
SCHAFER L A		3225		SCHOOOP W	3444	8800 8801 8802	
SCHAFER N S		9131		SCHOPP R T	8893	SEGAR W E	5466
SCHAFFG		8607		SCHOPWALTER E J	2068	9089	
9889				SCHRAMM W	5938	SEGERS M	7577
SCHALET N		12084		SCHREFFER P A	2069	SEGOVA E	8783
SCHAMBRA P E		11310		SCHREIBER B	8660	SEHGAL J K	4934
SCHAPIRO H B		0760		SCHREIBER H	0765	SEHGAL N	9115
SCHAPIRO S		10868		SCHREIBER M	2288	SEIBEL R	4924
SCHAUB F		5324		SCHREIBER R J	2070	5699	
6848				2071 2072		SEIBERT R A	5997
SCHAUDIG A		9162		SCHREINER B F	10373	SEIDMAN D	7188
SCHAECHTER D C		7859		SCHREUDER O B	0766	SEIFERT R	11587
SCHEIN E H		7603		4921 4922 6401 7937		11722	
11167				9957 11742 11787 11806		SEITZ C P	1470
SCHEINBERG P		3432		12103		2075 4347 10443	
SCHELLINGER R T		6486		SCHROCKSNADL H	10442	SEKIGUCHI S	11040
SCHEPPKAT K D		10895		SCHROEDER W	3443	SELAWRY O	9090
SCHERS H		4915		3444		SELIGER V	6100
SCHERRER J		4345		SCHROERING G B	5177	SELKER R	5411
SCHERRER J		6110		SCHUBERT E D	4923	SELKURT E E	0771
SCHIAVUS		12261		4924 4925 5594 7018		1326 2076	
SCHIAVONE E L		4916		SCHUBERT G	3445	SELLERS A F	10738
SCHICKLE F		4324		3446 4926 5645 6953		SELLERS A H	0772
SCHIERBECK P		3433		7001		773	
3434				SCHUELLER O	12767	SELLERS E A	3452
SCHIEVE J F		1570		SCHUKNECHT H F	3094	6040 7456 10875 11866	
2060 2061				SCHULMAN A I	10965	SELLMAN R	2669
SCHILLER A A		0761		SCHULTE J H	9958	SELLS S B	0774
3435				SCHULTS J E	3447	2077 2078 2188 2444	
SCHILLING J A		2891		SCHULTZ I J	2073	2445 2947 4935 4936	
3436 4319 5827 5889				SCHULZ H	5358	5083 5084 6182 6204	
5890 7244				SCHULZE H	8559	6205 6374 7159 7641	
SCHINDL K		4917		SCHULZE H A	0767	7745 9734 9770 11246	
7221				SCHULZINGER M S	3448	11514 11588 11589	
SCHIPPER L M		4250		SCHUMACHER G P	8202	12000	
6616 6617 6618 8184				SCHUMACHER K	10609	SELTZER H S	10891
SCHLAEGEL T F		4741		SCHUNK J G	9712	SELTZER L J	12768
SCHLANG H A		12123		12825		SELYE H	7457
SCHLANK M		9598		SCHWAB R S	0768	SEM JACOBSEN C W	9962
SCHLESSINGER B S		8788		3449 4927		9963	
11121				SCHWAM W J	9485	SEMAGIN V N	8616
SCHLEUSING G		11122		9486 9487 12469		SEMENOV A S	12771
SCHLIG B B		5436		SCHWAN H P	4928	SEMENOV N V	9091
SCHLOREDT D L		11667		6155 11397 12708		SEMENOVSKAIA E N	2079
SCHLOSBERG H		9609		SCHWARTZ A B	12802	SEMER J M	6113
9610				SCHWARTZ A E	11123	SEMETTE D	7928
SCHLUTZ G O		3437		SCHWARTZ E	5714	SEMINARA J L	8236
SCHMEER H		11476		SCHWARTZ E E	11398	12599 12709	
SCHMID H		5277		SCHWARTZ I	9299	SEMOTAN J	9964
SCHMID J		2970		SCHWARTZ I L	5052	SEMPLE R E	3897
3175 5200 5740 6198				SCHWARTZ J L	2015	10649	
SCHMID W		3888		SCHWARTZ M	7707	SENAY L C	6006
SCHMIDT C F		0106		9174 9655		10876 10877	
107 1694 1695 1696				SCHWARTZ N F	9637	SENDERS J W	0775
1697 2413 5026 7327				SCHWARTZ W B	8924	2080 4937 4938 5700	
12003				12150		6619 9638	
SCHMIDT E A		9794		SCHWARZ E	3022	SENDERS V L	0259
9797				SCHWARZ M J	3993	776 2081 3453 3454	
SCHMIDT F L		6111		6373 7962 10533		4939 4940	
SCHMIDT I		0762		SCHWEITZER N M J	5538	SENDROY J	10607
763 2062 2063 2064				SCHWICHTENBERG A H	4929	11124 11788 11789	
3438				9959 9960 11585 11586		11790 12897	
SCHMIDT KOENIG K		8665		12082		SENECAL T L	4941
8666 8667 8668				SCIARELLI C	9961	SENEGAS R	6620
SCHMIDT L		0764		12380		8113 12422	
SCHMIDT R		2176		SCOKELE P W	3051	SENELAR R	4282
SCHMIDT R F		8789		SCOLNIK R	1680	6829 6849 7256 7268	
SCHMIDT V		3439		SCORSONELLI M	3836	7269 7319 8838 10161	
SCHMIDT W		10442		SCOTT D M	4931	10348 10469	
SCHMIDT Z N		10440		SCOTT J	5996	SENTURIA B H	0777
SCHMITT N E		4037		SCOTT J B	8790	1206 2082 2083 11877	
4366				10874		11887 11958 11959	
SCHMITZ E		10441		SCOTT J W	4932	SEPE E	11125
SCHMITZ H		12571		7194 8733		SEPETJIAN J	11952
SCHMITZ M A		11039		6132 11196 11244		SERCL J	8611
SCHNECK S A		7819		SCRIBNER K J	4933	SERGEANT R L	9422
SCHNEIDER M		5958		SEABRA P	0769	SERGEEV E P	10878
10608				SEALAMBRO A	3450	SERIO F P	9621
SCHNEIDER R		3764		SEALANDER J A	6039	9622 9623	
4152 7687						SERONSY L B	12530
SCHNEIDER R A		1325				SEROV A D	9833
SCHNITZER E		12824				9860	

AUTHOR INDEX

SERRA C	9175	SHIK L L	2091	5777	5814	5815	7201
SERRANO J	9694	SHILLESTAD I J	11651	7223	7224	7232	9547
9793		SHILOVITSKII S M	12016	10054	11193	11249	
SERVANT P	7968	SHIMAZOKO Y	7362	11591	11761	12288	
7969		SHIMIZU H	7038				3470
SERVANTY L R	6497	SHIMIZU S	7002	SILVERMAN R E			10959
SETTLER L P	4942	SHINABARGER E W	7033	SILVERMAN S R			8863
SETTLAGE R P	2726	7034 9404 9406 9407		SIMMONS D H			9424
SEUSING J	2753	9418		SIMMONS F B			9425
SEVERIN G	1433	SHINKMAN P G	10258	SIMMONS R F			2099
J455		SHIOZAWA K	11547	2227 3471			
SEVERINGHAUS J W	5467	SHIPLEY T	5646	SIMON B P			12600
5471 9092		SHIRAKAWA M	8003	SIMON C W			0342
SEVERSKII A I	11960	SHIRLEY R E	6402	780 1395 3472 9177			
SEXTON M S A	0778	6403 7222		SIMON E			8022
SHABALIN V A	11041	SHMAVONIAN B	11193	SIMON G B			2100
SHACKEL B	3456	SHMAVONIAN B M	11591	3473 10138			
SHAGASS C	9174	11761		SIMON J R			3089
SHAMBAUGH G	5708	SHMIDT Z N	10611	3474 4763 5703 12600			2101
SHAMINA Z B	8501	SHNEIDEROVICH M G	2091	SIMON S W			12037
SHANAHAN W P	7697	SHOCK N W	6292	SIMONEL			4665
7698 7699		6303		SIMONOVIC I			10371
SHANDRIN G V	11590	SHOCKET E	0513	SIMONS D			11319
SHANK R J	2084	2092		SIMONS D G			0475
SHANNON I L	8617	SHOENBERGER R W	9717	SIMONS D			6156
11961		SHOLTO DOUGLAS J W E	5303	3475 4960 5252 6156			8139
SHANNON I R R	9127	SHOOP J D	11451	6157 6694 7239 8139			8478
SHANNON R H	12415	SHOPLAND C D	9465	8336 8337 8338 8478			11349
SHAPIRO B B	11398	SHOSHIEV L N	10612	8479 9966 11311 11349			12827
SHAPIRO R	3457	SHRADER W A	4950	11402 12826 12827			10269
10685		7989		SIMONS J C			10270
SHAPIRO S L	11042	SHRINAGESH M M	0452	SIMONSON E			0201
SHAPLEY H	8708	453 3463 3464 4951		781 782 1167 9339			10614 11169
8709		5218 7369		10602 10614 11169			11791 12152
SHAPOT V S	2085	SHRINER J	5257	SIMONSON K M			2102
2086		SHRIVER B M	1824	SIMPKINSON S H			1354
SHARMA H S	12264	2093		SIMPSON H W			8598
SHARMA R N	3217	SHTERNFELD A A	12531	SIMPSON L R			10021
SHARP E H	4659	SHTERNSHIS S Z	7308	SINAIKO H W			8152
SHARP G W G	8618	SHUFORD E H	2002	SINES J O			9164
8619		SHUGG C	6166	11280			10598
SHARPE L	5141	SHUMANN L	3465	SINGER D			2103
SHATALINA A S	10444	SHUPUT D	3030	SINGER D E			11165
SHATALOV A M	6778	SHURLEY J T	11224	2766 2767			6927
8626		11248		SINGER M T			10829
SHAVONIAN B M	11249	SHURRAGER P S	3506	SINGER R C			2104
SHAW C C	3458	4952		6158 11403			6721
SHAW E A G	12295	SHUST V	10445	SINGH A			8731
SHAW E G	8439	SHUTSESKU P	8919	SINGH B			8934
SHAW J H	8710	SHVARTS L A	9335	SINGH H			8996
SHAW M E	4943	SIALER S	10287	11281			2105
SHAW T C	5269	SIAU J	4665	SINGLETON W T			8711
SHAW W I	0779	SIBLEY E A	8794	SIPON W M			9754
3459		SICKS M E	12128	SIPONICZ R R			12672
SHAW W J	3460	SIDDALL G J	4953	9779			3477
SHAY C T	3977	SIDDALL G J	5702 7125	SIPPLE W			10162 10163
SHCHEGLOVA A I	3461	SIDLOFSKY S	6138	SIR I W			0557
3462		SIDOROV B N	8503	8480			3478
SHCHERBAK I G	10610	SIDOROV L M	10880	SIROVIN E			2106
SHEA F	2087	SIDOROV O I U	10613	SIROVIN N N			10164 10165
SHEDD J L	9389	SIDOWSKI J B	5191	SISAKIAN N M			8292
SHEELEY W F	4450	SIEBECKER K L	5362	8293 8481 9967			4962
6325		9095		SISSON G M			8232
SHEER D E	4944	SIEBENS A	3466	SJOBERG S A			12712
SHEETS B V	12602	SIEBENS A	4954	SJOSTRAND F			3479
SHEFFEY P L	9511	SIEDELNIK J	7574	SJOSTRAND T			1784
SHEFFIELD F D	11656	SIEDLANOWSKA E	7784	SKAUGSTAD C			10211
SHEIKINA R L	1669	SIEGEL A	2094	SKILLING D C			6487
SHELANSKI M V	7943	SIEGEL A I	2969	SKLAR D L			9447
12108 12109		4955 4956 6629 8230		11055			6778
SHELDON P C	5245	8231 8249 8257 9219		SKLIARCHIK E L			7458 8626 10882
SHELLY M W	7130	9336 9337 9338 12532		SKOBBA J S			9713
SHEN S P	11400	12552 12710 12711		SKOGLAND H			12349
SHEPARD A B	8335	SIEGEL A T	6252	SKRAMLIK E V			7080
11675 11723		SIEGEL H S	12844	SKRETTLINGLAND K R			12289
SHEPARD R H	2602	SIEGEL P S	8620	12290			9548
3371 8888 8894 8895		SIEGELMAN M	7842	SKRIPCHENKO A V			10615
11126 11460		SIEGENTHALER B M	9423	SKRYPIN V A			10615
SHEPELEV E R	10704	SIEGFRIED M	6738	SKURIDIN G A			4441
SHEPELIN O P	11043	SIEGL J	6349	SKURIKHINA L A			11351
SHEPHARD A H	9639	SIEKER H O	0720	SLACK C W			2109
SHEPHARD R J	4379	1968 2095 2096 2783		SLACK R L			12588
4945 4946 4947 4948		3467 3468 3469 4349		SLAMEN J			10616
4949 5359 5701 5959		8811 8857 9176		SLAPAK L			7578
6850 6851 10733		SIERRACIN CORP	12287	SLAT B			10881
SHEPHERD J T	6037	SIESJO B	8846	SLATER A E			4964
6169 7451 7452 7964		SIFFRE M	7172	5304 6722 7240 7241			8712 9968
9992		SIGWALT D	8606	SLATER HAMMEL A T			9640
SHEPHERD L R	2088	8607 8608		SLATTERY B J			4966
7633 7634 11401		SIIRDE E K	7929	SLATTERY L C			11673
SHEPP B B	8157	SILAKOVA A I	2097	SLAUGHTER L			8030
SHEPP B E	4877	SILFVERSKIOLD B P	3811				
9818 9819		SILINI G	5911				
SHEPPARD L B	6948	SILIVINSKE A J	7003				
SHERLOCK L	7082	SILKWOOD J A	3620				
SHERMAN I C	2669	SILLEVAERTS C	8477				
SHERPING F	10425	SILLIMAN J	2380				
SHERRICK C E	2089	SILLIPHANT W M	12423				
2090 11044		SILLS F D	11127				
SHERROD T R	7977	SILVA C	10455				
SHIBATA J	9143	SILVA FUENTES J	4958				
SHIBE E	0912	4959 5539					
SHIBE E H	0910	SILVA J	6239				
2294		SILVER R J	2098				
SHIELDS J L	10836	SILVERMAN A J	5720				
10879							

AUTHOR INDEX

SLAUGHTER O L	3808	4954	10696		2121	SOULAIRAC M L	2121
SLAYTON D K	11592	SMITH R G		0653	SOULE C W	6525	
11675 11676		SMITH R J	4983 6238		SOUSSEN	4991	
SLECHTA R F	8258	SMITH S		8114	SOUSSEN G	6288	
8259 12828 12829	12830	9644	11250 11251		8828 8898 10617		
SLEIGHT R B	0783	SMITH S H		12831	SOUTH F E	8654	
784 2110 6622		SMITH S W		7004	10888		
SLIVINSKE A J	1996	SMITH W		12010	SOUTH O P	5219	
SLOAN A W	4967	SMITH W B		0789	SOUVRAS H	1171	
SLOAN L L	3480	SMITH W K		8572	1172 1173 1174 2553		
4968 5540		SMITH W M		0790	SOUVRAS P	1175	
SLOBODY L B	10381	2115 2116 3159 4603			SOVA J	8783	
SLONIM A D	3481	4984 7005 9340		12602	SOZINOV S I	11774	
SLONIM A R	10166	SMITH W R		0791	SPARKS A	12869	
10167		SMITH W W			SPARKS B W	6257	
SLONIM N B	6114	2117		2111	SPARVIERI F	10618	
SLORACH S A	8618	SMIRNOV A A		2112	12091		
SLOTE L	4969	SMIRNOV G D		6778	SPEALMAN C R	3494	
8268 12208 12887		SMIRNOV K M			4992 4993 10449		
SMEDAL H A	0743	7458 8626 10882		8795	SPECHT H	0625	
785 10057 10154 10168		SMIRNOV V A		7733	792 2122 6811		
12291 12292		SMIRNOV V M		11908	SPECTOR H	2562	
SMILEY J R	12424	SMIRNOV V V		8184	3495 9132		
SMITH A D	0786	SMODE A F		10446	SPECTOR W S	4994	
787		SMOLICHEV E P		0236	SPEETH S D	9428	
SMITH A H	5619	SMYTHE C M			SPEISMAN J C	11183	
5620 5647 7209 10169		2582 5941		10307	SPELLS K E	5012	
12744		SMYTHE D S			6488 8740 12293		
SMITH A K	4417	10308		12446	SPENCE K W	2163	
4970		SNEATH P H A		9426	SPENCER J	0793	
SMITH A U	3733	SNEPVANGERS C S		4985	2123 6249		
5373 5421 6915 9078		SNEPVANGERS G J		10171	SPENCER J J	1535	
9093		SNIVELY G G		8233	SPENCER L	10811	
SMITH B J	9913	SNODGRASS R P		6404	10812 10813 10814		
SMITH C A	3482	SNOWDEN W M			SPENCER W A	12650	
4025		8483		9341	SPERANSKII A P	11045	
SMITH C R	11480	SNYDACKER D		7524	SPERBER Z	11184	
SMITH C S	4008	SNYDER F W		2118	SPERLING H G	4358	
SMITH C W	0127	SNYDER J F			4660 7007 9343		
1054 4971 4972 8896		7674		10510	SPERLING P I	1711	
SMITH D	6770	SNYDER J L		8877	SPERRY C J	2415	
SMITH D C	1392	SNYDER M		4986	SPERRY E G	1555	
4817 5843 5844 7261		SNYDER R A		3912	2034 4996 8051		
10329		3914 6852		9969	SPICKARD W	10361	
SMITH D D	8777	SNYDER R G			SPICKARD W B	11907	
SMITH D E L	12175	9970		11677	SPICKLER M W	7151	
SMITH D L	12696	SNYDER R Z		4987	SPIEGEL F S	2124	
SMITH D R	5239	SOAR R S			11743 11964		
SMITH E	4973	4988		10447	SPIETH W	1725	
SMITH E A	0788	SOBEL H			4997 6087 9429		
SMITH E L	3541	10868		8897	SPILHAUS A	8486	
SMITH E P	11963	SOBEL S		7967	SPILKA B	1246	
SMITH E W	2670	SOBOLEVA V I		11929	SPINA A	7342	
4974		SOBOROFF B J		10671	SPINDLER T F	2125	
SMITH F A	4976	SOCOL H		1368	SPINELLI D	7871	
SMITH F E	4975	SODERBERG U			10129		
6256		8991		10679	SPINELLI I F	7863	
SMITH F K	10170	SODIGNE G		3762	SPIOCH F M	7459	
SMITH G A	3483	SOETENS R			SPICKLER W E	9984	
SMITH G B	8766	5824		3683	SPONS P	9710	
11962 12083		SOFFER A		9118	SPRADLEY J F	9405	
SMITH G S	9128	SOHAR E			SPRAGG S D S	0794	
11482 11487 11488		10883 10884 10885		4606	984 987 1283 1485 1486		
SMITH H	0672	SOKOLOFF L		5531	1488 1885 1887 2127		
3486		4989 6801 8757 12153		8503	2128 2156 2236 2381		
SMITH H B	3681	SOKOLOV E I		1974	2382 3522 3734 3735		
SMITH H G	3484	SOKOLOV N N		7973	4210 4265 4267 4268		
SMITH H P R	3485	SOKOLOVA E G		10886	4269 4270 4272 4445		
4977 4978 5011 8222		SOKOLOVA T I		4990	4446 4998 5040 5686		
11593		SOLIMAN F A		5652	6647 6648 6669 9565		
SMITH H W	8845	SOLLBERGER A			9644		
SMITH J	0374	SOLLEY C M			SPRAGUE L T	12687	
420 3487		11462		12298	12721		
SMITH J A	1294	SOLL I G		11066	SPRINGBETT B M	9550	
SMITH J B	12063	SOLLMANN H		11128	SPRUITT C J P	5253	
SMITH J E K	4412	SOLOGUB E B		10887	5256		
8417 8482		SOLOMKO P A		7615	SPURR E B	3496	
SMITH J R	7765	SOLOMON P		11228	5428 5429 5468 6007		
SMITH J T	4979	9755 11194 11195 11228			6936 7460 9094		
SMITH J U	0574	11229 11252 11263		11963	SQUIRES P C	6621	
1543 1732 2186 3474		SOLOMON R J		3488	7083 8187		
4763 5703 9641 9642		SOLOMONOV E V		8631	SQUIRES R D	9035	
SMITH L C	9286	SOLOVEVA L M		3356	STAAB F	12672	
SMITH L E	9141	SOLOVEVA V P		2419	STACY E F	6088	
9643		SOLOYANIS G		2119	STACY R W	12601	
SMITH L J	1371	SOLTI F		7344	2130	2129	
SMITH L L	5164	SOLTYSKII E I		7418	STADLER J	5345	
SMITH O	4363	SOMMER A V		3489	STAFFE A	3197	
SMITH O W	4225	SONGAR A		0826	STAHLE J	0996	
5648 5649 5650 5651		SOOTHILL J F		11118	STALEY M G	10894	
7062 7081 7082 9549		SOPER R L		3490	STALLINGS H D	7234	
SMITH P	4980	SORENSEN H		9377	7235 7236 9497 9943		
4981 4982		9427		5424	10237 10275 11849		
SMITH P C	7081	SORENSEN H R		12488	12878		
9549		SORKIN R D		8614	STAMBLER I	6569	
SMITH P E	10667	SOROKA V R		7006	6593 12832		
11071		SOROKHTIN G N			STAMMBERG M	3805	
SMITH P K	0231	9342		6159	STAMMLER A	10554	
232 236 2582 2878		SOSNA M		12713	STANBURY S W	4655	
3958		SOSNOW M		10448	5323		
SMITH P N	2113	SOTTANO E Y		6110	STANCU A	11130	
SMITH P R	3207	SOULA C		2120	STANDAERT F G	9818	
SMITH R A	8153	SOULAIRAC A			9819		
12533							
SMITH R B	7524						
SMITH R E	3466						

AUTHOR INDEX

STANDER N	11729	5008	5009	5596	5597	5742	5798	5960	6206
STANDER N E	11621	STEVENS W E			12845	6571	7126	7227	7238
STANLEY A R	7256	STEVENSON G C			9097	7526	9636	9756	9980
STANLEY R M	6526	STEVENSON J A F			3499	11131	11132	11170	
12350 12351		STEVENSON W A H			9772	11185	11500	11595	
STANMEYER W R	10847	STEWART H J			8488	11596	11597	11678	
10889 11807		STEWART K C			11031	12004	12426		
STAPP J P	2131	11032				STROM G			5025
2132 3497 4999 5000		STEWART M			3070	8754	10019	11082	11083
5806 5807 6526 6729		STEWART P B			8826	12388			
7216 7217 7225 7226		STEWART W K			2136	STROBLAD R			10521
8052 8487 9971 10172		2137 3500 3742 5010				STROH M L			0809
10173 10174 10175		5011 5012 5891 9977				STROTHER G K			10289
12254 12352		9978 11594				10452			
STAPP J T	7753	STEWART W R			5013	STROTHER W F			5878
STARITSKA L M	9948	5014				STROUD M W			1696
10855		STICE G			1675	1698 2143 5026			
STARITSKAIA L N	9948	STICKLAND B A			9979	STROUD R C			1981
STARKE R D	11129	STICKNEY J C			2138	2144 2145 2165 3510			
STARR P	2203	5469 5892 7290				3511 7370			
2807 3573		STIEGLITZ W I			0802	STROUD R S			8900
STARTSEV V G	8622	2139				STRUCHKOV M I			2079
STASEVICH R A	5808	STIEHM E R			10181	STRUGHOLD H			0436
STAUDE R W	8188	10182 10183				810 811 812 813 814			
STAUFFER F R	0795	STIGTER H			7843	1444 2146 2147 2148			
2133		STILES W J			4334	2795 3512 3513 3514			
STAVRAKY K	10837	STILL E W			8294	5027 5028 5029 5030			
STAZKA W	6877	8489				5220 5305 5790 6314			
6916		STILSON C B			5015	6594 6695 6734 6790			
STEA D	9805	STILSON D W			11298	6968 7236 8295 8296			
STEBBINS E L	0796	STIMMEL E W			3501	8341 8490 8491 8715			
STEEDMAN W C	9187	STINGELY N E			4365	8716 8717 8718 9981			
9344 9466 9467		5016 8023				9982 10271 11408 11409			
STEEL J	5753	STINNETT G W			12291	11410			
STEELE J E	4037	12292				STURMZA M V			0164
5002 11046 11864		STIRNER F W			8230	165 166 167 1098 1099			
STEEN J	6914	8231 12552				1100 2149 2486 2487			
7461 10871		STOBIE W H			2140	2488 2489 3515 3841			
STEENSEN J H	12868	STOCKBRIDGE H C W			5704	3842 5031 5914 6426			
STEER M D	2134	8471				10594 10619 10620			
3749 3838 4076 7014		STOCKTON E			11102	10621 10622 11965			
STEEVE J H	1660	STOENESCU R			12261	STURMZA POUTONNET			0166
STEFAN M	10314	STOIAN M			10292	STRYDOM N B			3516
12558		10314 12261				3673 3674 3675 3676			
STEFANOVIC M	5003	STOKINGER H E			7983	8920			
STEFFEN D	5541	7985				STUART D G			9001
STEGEMAN J	5542	STOLIARCHUK N K			3502	9100			
STEGEMANN J	7008	STOLL A M			5017	STUBBS R A			2150
STEGGERDA F R	0797	6148 6160 6803 7210				3517 7189 7802 12197			
798 799 5004 10324		9098 9099 10117 10184				12535			
STEHLING K R	5273	11404 11405 11406				STUDNITZ G VON			3518
8713 8714		12294				STUHLINGER E			2055
STEIER H P	5005	STOLPE S G			3416	6723 6724 11744			
5006 8234		4896 4897 6933				STULLKEN D E			3519
STEIN E	3444	STOLUROW L M			6239	8312			
STEIN M	3498	6240 7725				STUMM P W			2276
STEIN S N	6440	STOLZMANN Z			6918	STUMP N E			0815
6443 8880 12154		STONE H H			5470	3879 3880			
STEINBERG C A	12633	STONE I			3503	STUMPE A R			12125
STEINBERG I I	12714	5018 6527 6746 7709				STUNTZ S E			0758
STEINBERGER E	10890	12353 12534				STUPFEL M			5467
STEINER P	10616	STONE P T			7009	5471 7968 7969 7970			
STEINER S H	8899	STONE R A			6570	10623			
10095 10176 10177		STONE R W			5945	STURIALE G			12126
10178 10179 10180		STONEHILL R B			10406	STURUA G G			8847
STEINHAUS J E	9095	11865 12021 12041				STURUP H			6353
STEINKAMP G R	9865	12084 12085				STUTEVILLE J H			5032
9866 9972 9973 9974		STOPEL M S			3504	STUTMAN L J			10272
9975 9976 9994 11199		STOPHER D R			9979	10453 10454			
12839		STORER J B			2141	STUTTERER W F			10210
STEINMAN L	12641	3505				STUTZMAN J W			0121
STEINMETZ C H	5252	STOREY C F			3466	196 608 719			
STEINMETZ E	10075	4954				STVERAK J			3293
STEINSCHNEIDER A	7062	STORSTEIN O			0803	STYBLOVA V			6089
STEMBRIDGE V A	8104	STORTI D			5019	11966			
8118 12168 12377 12390		STOVALL W R			0804	STYNS H J			7579
12395 12413 12423		805 806 5020				SUAREZ J R E			10448
12425		STOVER A D			0896	SUBAUSTE C			10455
STEMLER F W	4350	2275				SUBBOTA A G			11411
11468		STOWE G			1795	SUBIRIA R			2369
STENSON H H	9774	STRAILE W E			3944	SUCHER T			0913
STEPAN V	8611	11303 11407				SUDA I			5472
STEPANOVA T S	9656	STRAND A L			3506	SUDDON F H			9645
STEPHENS F H	11312	STRANDELL T			8758	SUELTER C H			4595
STEPHENS G C	8623	STRANGEWAYS D H			0584	5033			
STERESCU N	11130	STRASSNER H			6979	SUFFIELD N G			1862
STERESCU VOLANSCHI M	11144	STRATTON K L			3507	SUGGS C W			9984
STERGERT K	6917	5022 9959				SUGIYAMA H			11547
STERY G	2471	STRAUTMANE DZ			8340	SUKTRAKOOL Y			7895
STERN I D	2958	STREAM R W			12086	SULLI E			3520
STERN J	12869	STREET E R			6035	3521 4491 5857 5858			
STERN J A	4421	STRETEN D H P			10891	7371 7372			
9069 9164		STREHLER A F			2515	SULLIVAN A			0816
STERN R	11222	STRICKLAND B A			0303	SULLIVAN B J			2151
STERN W E	9096	807 808 1223 1228 2142				11967 11968			
STERNER J H	0800	3508 3509 6405				SULLIVAN J A			12063
801 11785		STRICKLAND E H			10450	SULLIVAN R R			0817
STERNLICHT I R	0388	10451 10452				SULLIVAN W			8532
STEVENS C D	1839	STRICKLAND L E			9395	SULLIVAN W N			11375
STEVENS C E	4019	9397				SULTANOV F F			9101
5007 6041		STROBER M			6446	SULTZER M R			6801
STEVENS K N	2028	STRODE J W			5023	SUMBY W H			1952
2135 7525 12595		STROIKOVA K V			7635	2152			
STEVENS M R	0366	11434				SUMMERFIELD A			9379
367		STROLLO M			3163	SUN D Y			8791
STEVENS S S	4816	3165 5024 5726 5727				SUNAHARA F A			6489

AUTHOR INDEX

6852 7264 8883  
SUNDBERG J 7274  
SUNDEN A 5034  
SUNDERMAN F W 5007  
6041  
SUNDGREN N 2153  
11713  
SUNDIN T 4128  
6170 10185  
SUNKES W 11328  
SUOMALAINEN P 8655  
9088  
SURTSHIN A 5036  
SURWILLO W W 5728  
11163  
SUSLOV A K 6791  
SUTESCU P 7549  
SUTHERLAND G 10892  
SUTHERLAND G B 6042  
6043  
SUTHERLAND I H 10580  
SUTHERLAND N S 9551  
SUTTELL B J 5037  
SUTTER J 11801  
SUTTER J M 0610  
SUTTER R S 12354  
SUTTERER W F 10124  
SUTTON G G 7127  
SUTTON J 7084  
7004 12427  
SUTTON S 9572  
9573  
SUTTON W L 11785  
SUVOROV N I 6792  
SUVOROV P M 10186  
10187 10188  
SUZDALSKAIA I P 9168  
SUZUKI 11171  
12005  
SUZUKI J 9160  
SUZUKI M 4394  
SUZUMURA A 9345  
SVADKOVSKAIA N F 11047  
SVANBERG L 10521  
SVANBERG A 11075  
SVEINSSON S L 5355  
SVETILAKOV M I 2154  
SVIRBELY J L 7984  
SVORAD D 5038  
5039 6919 7228 8624  
SWAIN A D 0154  
3207  
SWAN A G 11339  
SWAN H 5388  
5473  
SWANDER D V 1585  
3384  
SWANN H G 2155  
SWANN W F G 10189  
SWANSON H E 6044  
SWANSON R A 0659  
SWARTZ B 11133  
SWARTZ P 2156  
3522 5040  
SWARTZEL K D 2157  
4438 6090  
SWEARINGEN J J 10190  
11489 12259 12811  
SWEAT M L 2871  
5041 7178  
SWEENEY E C 6536  
SWEENEY E J 6967  
9289 9290 9346 9347  
SWEENEY H M 3359  
SWEENEY J S 7109  
8235  
SWEENEY R 6746  
6747 6762 8154 8404  
SWEET A L 2158  
SWEIGAN D B 9146  
SWENSON E W 5321  
SWENSSON A 3846  
SWERINGEN J J 8024  
SWETS J A 9178  
9179  
SWITZER R E 0818  
SYDNOR K I 2871  
SYDNOR K L 5041  
7178  
SYMONDS C 0819  
SYROTINA M F 10991  
11048  
SYROTYNIN M M 3523  
9985  
SYSOEV A F 6920  
9102  
SZABO E 8983  
SZABO G 10539  
10540 10541  
SZABO M 5480  
SZABO M T 7374  
SZABUNIEWICZ B 6921  
SZAFRAN J 11757  
SZAFRANEK J 6887  
SZAK J 5961  
SZAMBORSKI J 2304

3691 10298  
SZASZ J 7344  
SZEGVARI G 6769  
6873 7343 10624 10703  
SZEKERES L 3524  
3525 3526 10625  
SZILAGYI T 8983  
9103  
SZMYD L 7860  
7896 11808  
SZORADY I 9104  
SZWARCOWA M 11134  
SZYMczyk K 5553

T

TABORELLI R V 7298  
10425  
TABUSSE L 282  
820 821 822 823 1945  
2160 2831 3527 3528  
3529 3530 4247 4248  
5043 5809 5962 5963  
6406 6407 7190 7907  
11598 12038 12087  
TAGLIAMONTE B 0554  
4555 4907 5887 5104  
11100 11117  
TAIT I B 9048  
TAKACS L 5930  
7373 7374 7375 7376  
10538 10539 10540  
10541  
TAKACS O 9104  
10626  
TAKAGI K 5653  
TAKAHASHI A 11135  
TAKAHASHI K 7505  
TAKAHASHI R 9430  
TAKANO E 10893  
TAKEBAYASHI H 9552  
TAKETOMI Y 8003  
TAKEUCHI K 4394  
TAKEUCHI T 10071  
TALA P 5361  
TALBOT J M 0824  
8115 12428 12429  
TALBOTT G D 6837  
TALC P 1119  
2517  
TALLAND G A 9553  
TALNER N S 3531  
TAMAS A 7971  
TAMAS A A 12120  
12121 12833  
TAMIYA H 6766  
TAMM J 6075  
TAMMARO J P 1463  
1464  
TANKA A 9180  
TANCHE M 2591  
3945 5044 5384 5401  
9105  
TANG P C 8438  
9872 12334  
TANNER K 3052  
TANNER W P 9178  
TANSEY K 7010  
TAPPAN D V 5893  
5894 7309 7310  
TAREN J A 5385  
5443  
TARLOV I M 4202  
TASAKI I 4025  
TASLER J 7311  
TATE F 11442  
TATUM A L 3106  
TAUFMAN W 12870  
TAUSCH R 3532  
TAYLOR A 11745  
12856  
TAYLOR A A 4479  
6696 6697 6701 8265  
12854 12871 12872  
TAYLOR A H 4802  
TAYLOR C B 11890  
TAYLOR C I 4580  
TAYLOR C L 0825  
1504 2161 2501 2502  
5045 5764 6487 7462  
10349  
TAYLOR C W 12602  
TAYLOR D M 5965  
TAYLOR D W 2162  
5046  
TAYLOR E K 11599  
TAYLOR E R 8360  
9986 11969  
TAYLOR F V 2491  
2492 3533 3843 5672  
6670 6676 7103 9574  
12536

TAYLOR H L 1167  
2550 2915 3534 3915  
5369 6109 6929  
TAYLOR I T 7659  
TAYLOR J A 2163  
TAYLOR J G 3535  
TAYLOR J L 10177  
TAYLOR J W 10192  
11412  
TAYLOR N B G 1881  
7820 9286 10107 10108  
11833  
TAYLOR P F 3898  
4786 11438  
TAYLOR R S 12834  
TAYLOR W F 1443  
3024 4476 5029 5790  
6968  
TAYLOR W J R 7818  
8733 11856 11866  
TAYLOR W K 7128  
TAYLOR Z 1240  
TEABEANT J R 4324  
TEATINI G P 10945  
TECZA R 7951  
TEEL K S 2164  
TEEPLE J B 6622  
TEIGHTSOONIAN R 11490  
TEICHNER W H 2694  
3536 3537 3538 3539  
3540 5047 5048 5654  
7463 9348 9646  
TEILLAC A 6094  
7259 10326  
TELCHAROV L 10456  
TELFORD I R 3541  
TELVEY W 12870  
TEMKIN I A S 11049  
TEMPEREAU C E 5729  
TEMPLETON R C 2188  
11588  
TENNENBAUM J 9118  
10883 10884  
TENNEY S M 1981  
2165 5049 7357 10373  
12155  
TEODORESCU V 10292  
12261  
TEODORINI S 10292  
TEPAS D 7055  
TER ARUTUNOV G A 10848  
TERENTEV V G 11050  
TERREAU 0075  
TERRACINI E D 8553  
TERRANOVA S 3542  
TERZIOGLU M 0828  
3543 3544 3545 5050  
5823 5847 5895 9106  
TERZIOGLU M N 0826  
827  
TESCHAN P E 6400  
TEUBER H L 5659  
TEYCHENNE J 2653  
THAKURDAS H 11251  
THALER V H 9173  
9793 11223 11240 11243  
THALER R 1706  
THAUER R 4447  
5051 9107  
THAVARAVEJ T 3546  
THAYSEN J H 5052  
THEILEN E O 4891  
5053  
THERMAN P O G 4606  
THETFORD P E 0829  
2166  
THIEDE F C 12156  
THIELE O 3547  
THIESSEN G J 12995  
THISTLETHWAITE D 3548  
THISTLETHWAITE D L 4661  
THOMA G E 1937  
THOMAE F W 8511  
8512  
THOMAS C E 12561  
THOMAS F H 6241  
9349  
THOMAS F W 8022  
THOMAS G J 2167  
THOMAS H D 5474  
THOMAS J P 5347  
THOMAS S 6171  
8342 11449 11463  
THOMAS S A 11600  
THOMPSON A 7972  
THOMPSON C A 11752  
THOMPSON E M 10894  
THOMPSON G V E 6749  
8535 12537 12873  
THOMPSON J I AND COMPANY 12874 12875  
THOMPSON J P 2168  
THOMPSON L N 0830  
THOMPSON M E 0831  
2168  
THOMPSON P O 2232





AUTHOR INDEX

ULRICH L 7410  
 ULUPOVA M 11649  
 ULVEDAL F 9933  
 12772 12880  
 UNDERWOOD B J 0317  
 1342 1343  
 UNDERWOOD G B 0365  
 UNGEHEUER H 9935  
 UNGER H R 11867  
 11868  
 UNGERLEIDER H E 12090  
 URBINI C 3566  
 URETZ E F 8504  
 UREY H C 8720  
 URQUHART D R H 12432  
 USACHEV V V 5810  
 7229 10002 10003 10004  
 10195  
 USELLER J W 10196  
 USHAKOVA T N 7011  
 USHIYAMA J 9051  
 USINGER W 2804  
 5908 8732  
 USPENSKAIA M S 9867  
 UUSPAA V J 8655

V

VACCA C 0854  
 2207 2647 3576 3577  
 5103 5104 5964 7316  
 10197 10198 10629  
 12091  
 VACCA L 10197  
 10198  
 VAETH J G 5105  
 12770  
 VAHOONY G V 5080  
 5081  
 VAIL E G 0214  
 855 856 857 1179 2208  
 2209 2210 2774  
 VAKAR M I 8795  
 VAKSLEIGER G A 5106  
 VALADE P 1171  
 1172 1173 1174 1176  
 2211 2553  
 VALDIVIA E 5899  
 7317 7318 10463 10630  
 11869  
 VALDIVIESO J 10416  
 10422  
 VALENTIN H 5116  
 6307 7252 7556 7581  
 VALENTINE L D 1415  
 11609 11610 11681  
 11794  
 VALEVA S A 8501  
 VALLE JIMENEZ A 5107  
 VALLE L D 2031  
 VALLERGA J M 9648  
 VALSI E 9352  
 VALTIN H 10373  
 VALTJ J 4280  
 VAMOS L 11843  
 VAN ACKEREN J F 3578  
 VAN ALLEN J A 0858  
 11421 11422  
 VAN BOCKEL J J 11726  
 11727 11728  
 VAN CITTERS R L 5460  
 VAN COTT H P 6595  
 VAN DER WAL F L 8492  
 VAN DER WAL L 8538  
 VAN DISHOECK H A E 6085  
 VAN EYCK 3579  
 VAN EYCK M 9554  
 11052  
 VAN FOSSAN D 7378  
 VAN FOSSAN D D 3580  
 3581 6117 6444 6551  
 7178 8581 10464 10465  
 10498 10499 10500  
 10631  
 VAN GAASBEEK W M 5333  
 VAN HOLTEN I 10514  
 VAN LAER J 8207  
 12719  
 VAN LIERE E J 0859  
 860 1386 2212 3582  
 5108 5469 5892 7290  
 7803  
 VAN MIDDLESWORTH L 6012  
 VAN SICKLE A W 3583  
 3584  
 VAN WART F D 9991  
 VANDAM L D 9108  
 VANDERBIE J H 6115  
 VANDERHOEF E R 7534  
 VANDERPLAS J M 2213  
 2958 3585 6626  
 VANDERWATER D K 0668

VANLERENBERGHE J 5900  
 VARELA J I 6408  
 VARENE P 8848  
 12204  
 VARGA F 3526  
 10625  
 VARGA NAGY I 6769  
 6873  
 VARGAS A 7303  
 VARIAKOJIS D 6327  
 7814 7815  
 VARNAI I 10624  
 VARNAUSKAS E 11126  
 VARTBARONOV R A 11423  
 VARVARIN V P 11974  
 VARVIS C J 8826  
 VASILAS J N 1398  
 1399 2214  
 VASILENKO M E 2215  
 VASILEV I G 6778  
 8626  
 VASILEV K G 7877  
 VASILEVA V V 12092  
 VASSAR P S 5965  
 VASTINE R J 7897  
 7934 7935 12093  
 VATSHAUG T O 5600  
 VAUCOULEURS G DE 8721  
 VAUGHAN B E 5109  
 5871 5901 6441 7276  
 7277  
 VAUGHAN D A 7466  
 7467 8641 9017 9130  
 9887 10742 10743 10900  
 10901 10902 10903  
 11491 12358 12369  
 12370 12371  
 VAUGHAN J A 6008  
 VAUGHAN L A 10902  
 VAUGHAN L N 7466  
 7467 9130 9887 10742  
 10746 10900 10901  
 10903 11491 12369  
 12370 12371  
 VAUGHN J A 6051  
 VAVALA D A 5110  
 5111 5112 5902 11863  
 VAVRINKOVA H 8783  
 VAWTER G 9881  
 VAWTER G F 0194  
 195 621 1790 1791 1792  
 VAZ FERREIRA A 4011  
 7339  
 VECE F R 5343  
 VECHMANS 3579  
 VEDEL R 7952  
 VEGA E DE LA 4015  
 VEGHELYI P 5113  
 9109  
 VEGHTE J H 6492  
 7468 10904 10905 10906  
 10907 12290 12298  
 12299  
 VEIGE S 5278  
 VELASCO DE PANDO M 10199  
 VELASQUEZ T 5852  
 5853 5884 5890 5903  
 10466 10467  
 VELLA G 9475  
 VELLARD J 0861  
 862  
 VENDITT G 10570  
 VENDITTI G 8773  
 11099 11777 12067  
 12127  
 VENDRAMINI E 5114  
 VENDRIK A J H 1497  
 VENEKLASEN P S 2216  
 2217 5115  
 VENERANDO A 7541  
 8775 11101  
 VENGER L A 7085  
 VENRATH H 5116  
 6307 7556 7581  
 VENSCLAUSKAS M I 9301  
 VENTURI G 9334  
 VENTURI V M 0863  
 VENULET J 6883  
 VERCESI C 3586  
 VERDEAUX J 1843  
 VERDEAUX G 1843  
 VERDEAUX J 5773  
 VERE D W 7582  
 VERESHCHAGIN N K 11137  
 VERHAMME V 1376  
 VERHEIJEN F J 9353  
 VERHOEVEN A F P M 7938  
 11975  
 VERMOT M 10622  
 VERMUND H 5274  
 VERNON J 6134  
 VERNON J A 5156  
 5159 7616 11255 11256  
 11257 11258  
 VERPLANCK W S 0864  
 VERSACE J 6616

6617 6618 6624  
 VERTUT J 7520  
 12079  
 VERZAR F 0345  
 865 866 1411 5851  
 VERZAR V 6879  
 VERZBENSKAIA N A 10468  
 VESELKIN P N 9110  
 VEZAR F 4164  
 VIADRO M D 7862  
 11870  
 VICKERS A 11810  
 VICKERS H D 11611  
 VICKERY S L 12288  
 VIDACEK L 7605  
 VIDAL J H 3903  
 VIDAL MADJAR M D 5119  
 VIDOVIC V 0866  
 VIDRENKO A IE 10476  
 VIGLIANI E C 3587  
 VIGNE 7887  
 VIKHLIAEV I U I 5120  
 VILLALOBOS PEREDA J 11811  
 VILLALOBOS T J 5475  
 9111  
 VILLALONGA J 0867  
 VILLAMIL A 6923  
 VINACKE W E 6207  
 VINARICKY R 6940  
 7583  
 VINCENTELLI P A 7863  
 VINNIKOV IA A 7041  
 9441 9442  
 VINSON C D 3588  
 VINTER HANSEN J M 4118  
 VINTHER PAULSEN N 1101  
 VIOLETTE 5121  
 VIOLETTE E 1476  
 5123  
 VIOLETTE F 0397  
 399 405 406 418 868  
 869 1477 2218 2827  
 2835 3589 3590 3591  
 3592 4249 5122 5848  
 5904 5905 7266 7319  
 8539 9870 10161 10469  
 12333 12733 12734  
 VIPOND H J 8618  
 VIRGILI R 2509  
 3593 3594 3595 8357  
 9773 11510  
 VIRNO M 8746  
 VISHNIAC W 8722  
 VISSCHER M B 3240  
 4692  
 VISSER A C 9443  
 VITALE U 5906  
 VITENZON A S 7320  
 VLIEGENTHART J A 6048  
 VOAS R B 3596  
 5124 5125 5730 5731  
 5732 5733 6208 6277  
 6278 6279 7665 7712  
 7713 7765 9758 11612  
 11682 11683 11684  
 11725 11726 11727  
 11728 12619  
 VOGEL G 1490  
 VOGEL J 8438  
 8540  
 VOGELSAANG C J 9354  
 VOGES W 1006  
 VOITINSKII E IA 7042  
 VOITKEVICH V I 3597  
 3598 5126 10632  
 VOLKMAN J 5494  
 VOLKOV A M 11053  
 VOLKOV I F 11173  
 VOLKSHWEIMER G 5239  
 VON AHN B 3599  
 VON BRAUN W 3600  
 3866 5215 5367  
 VON GIERKE H E 377  
 378 379 1420 1453 1454  
 1455 4108 4226 6453  
 6461 7490 8167 10075  
 10955 10970 10972  
 VON LOSSBERG V 11560  
 VON MALLINCKRODT H 6307  
 VON ST PAUL U 5293  
 VON UBISCH H 11418  
 VOOTS R J 7926  
 7927  
 VOREL F 11916  
 VOROBEV A T 12705  
 VOROBEV F K 9614  
 VOROBEV A I 11812  
 VOSBURG R 11259  
 VOSS J F 3795  
 5128 5705 7091  
 VOSS W 2219  
 VOSSINS G 7129  
 VOZHKOVA A I 11054  
 12771  
 VOZZA R 5129  
 7321 7379 10200

AUTHOR INDEX

VRINCEANU R	10292	5311	6409	7243	7714	4287	4290	
12720		8493	9973	9993	9994	WEBSTER W P		10397
VVOITKEVICH V I	5126	10238	10273	10274		WECHSBERG P		0430
VYKUKAL H C	12291	10275	10276	12839		1505	1506	
		12878				WECHSBERG P H		1790
		WARD M				1791	1792	
		WARD W D				WECHSLER R L		0307
		489	5499	6423	7864	308	309	875 4989
		9379	9445	9446	9447	WECKES M H		12128
		9448	11055			12129	12136	12144
		WARDEN A D				WEEREN J T VAN		0876
		WARE J R				2673	3670	4067 7058
		WARE R W				WEDEL IUS C		2982
		8455	8456			WEGNER N		5142
		WARGO J D M				5201	6092	
		4693				WEHMEYER H		8628
		WARNER H R				WEHRKAMP R F		3538
		4692				3540		
		WARREN C E				WEIDMANN W		2234
		874	4714			WEIL M P		9539
		WARREN D R				WEIL R		5143
		WARREN J M				WEINER J		0877
		WARREN J V				WEINER J S		2906
		WARREN N D				3622	6001	6296
		2226	2227	3471	5739	WEINER K		10471
		WARREN R M				WEINER L		12530
		WARREN R P				WEINER M		5144
		WARRICK M J				WEINHOUSE S		11115
		3605	5134	8216		WEINMAN J		9526
		WARRINGTON W G				WEINRAUCH H		11813
		WARSHAW L J				WEINREB L		12301
		WARTER P J				12302		
		WASE A W				WEINSTEIN M		5507
		WASHBURN D D				11427		
		WASNIOWSKA M				WEINSTEIN W		9112
		WASSERBURGER R H				WEIR F W		8907
		WASSERMAN L R				12129		
		WATANABE H				WEIR J B DEV		1196
		11616	11617			WEITZ J		1361
		WATANABE S				WEITZEL W K		5411
		WATANABE T				WEISS E B		12303
		WATERLOW J C				WEISS A D		9607
		WATERS L K				WEISS A I		2134
		11618	11619	11686		WEISS A K		5145
		11687				6050	7469	10914 10915
		WATERS R O				WEISS B		2235
		WATKINS L C				2236	3623	5040 5146
		WATSON E R				5147	5148	6375 7470
		7471	10793			WEISS E		2254
		WATSON J F				12095		
		10201	10202	10203		WEISS E C		1646
		WATSON M				WEISS H S		1347
		WATSON W L				1348	2699	3624 3625
		WATTS A F A				5149		
		WAXMAN D				WEISS R J		1842
		WAY E L				WEISSLER A M		8778
		WAYNE H H				WEISSWURM K		8541
		10633	11819			8771		
		WCISTO W				WEISSZ A		2630
		WEALE R A				9359		
		2387	5657	9356		WEISSZ A Z		12721
		WEAVER J A				WELBOURN J L		12879
		WEAVER O M				WELCH B E		5972
		WEBB H				6008	6051	6771 6856
		WEBB H B				6859	6938	7387 7388
		WEBB H M				7472	7473	7585 9923
		8552				9933	12334	12772 12880
		WEBB I B				WELCH E		0808
		WEBB J A				WELCH G E		0878
		WEBB J C				3626		
		WEBB M G				WELCH L		12540
		10204	10205	10206		WELFORD A T		2741
		12231				3627		
		WEBB P				WELKOWITZ W		2762
		6492	7468	7878	10904	5150	12717	
		10905	10907	10911		WELLS G		5890
		10912	10913	12300		WELLS J A		1889
		12815				WELLS J G		0433
		WEBB P P				879	5327	5363 5825
		8139				6117	6546	6810 8493
		WEBB W B				8803	10297	
		2228	2944	3596	3608	WELLS R		12541
		3609	3610	3611	3612	WELLS R E		8906
		3613	3614	3615	3616	WELLS R J		1390
		3617	4046	4047	4368	WELLS W G		12542
		5136	5137	5138	5139	WELNER A		9526
		5306	5736	5737	5743	WELTMAN A S		11034
		6091	6177	6258	6280	WELTMAN G		12604
		6562	6572	7142	7715	WENDEL H		6805
		7766	8122	8123	9581	6836		
		9704	9806	11620	11672	WENDT G R		1550
		12433				1890	3716	3717 3718
		WEBB W R				3998	4420	5741 10089
		WEBBER J M				WENDT H W		4660
		6837				WENDT R		10001
		WEBER B				WENDT W E		2783
		WEBER P				WENTZ A E		8482
		WEBER R F				WENTZ W B		3477
		WEBER R J				WERKMAN		5151
		WEBSTER A P				WERKO L		5152
		2230	2649	3619		11075		
		WEBSTER J C				WERNER A Y		5476
		2232	2233	3620	3621	WERNER H		0872
		3651	3654	4997	5140	2224	2237	2238 5656
		5141	6493	7930		7056	9533	
		WEBSTER J E				2225		
						WARD A A		12469
						WARD A		2225
						WARD J		5178
						WARD J E		3354

AUTHOR INDEX

WERNER K	3771	WHITE B	9517	WILLIAMS J A	9146
WERNERT G	6396	WHITE D C	11015	WILLIAMS J P	9609
6397		WHITE F E	12304	WILLIAMS L	4003
WERSALL R	0996	WHITE H A	11126	WILLIAMS L K	5625
WERTHEIMER E	7474	WHITE H C	6817	WILLIAMS M H	2269
10896		WHITE H L	5036	5365	
WERTHEIMER M	5153	WHITE M S	6243	WILLIAMS N E	2270
WESLEY I	3841	6574 8343		WILLIAMS R A	11470
3842 5154 9113 9114		WHITE R K	11426	WILLIAMS R B	6440
10520		11472		WILLIAMS V M	8068
WESLEY TANASKOVIC I	8793	WHITE R M	11671	WILLIAMSON S M	5175
WESSON L G	8629	WHITE S C	6837	WILLIG L	0983
WEST F V	3948	8496 8497 8498 9997		5660	
WEST J C	10957	12306 12544 12606		WILLINGHAM W W	6123
WESTBROOK C B	8155	12840		7160 7716 7717 7767	
12543		WHITE W J	2245	9716 9762 11623 11624	
WESTEN R J	5155	3634 5811 5812 10207		11688 11795 11814	
WESTERBECK C W	6308	11427		WILLIS H S K	9450
WESTERVELT P J	12567	WHITEHEAD R W	0990	WILLIS R G	12306
WESTHEIMER G	5543	3635		WILLMOT R	2271
7012 9212 9213		WHITEHORN W	0884	WILLSON J T	9116
WESTIN B	5477	WHITEHORN W V	1350	WILLSON R B	2024
5478 9115		1577 2129 2246 2247		WILSON C L	2272
WESTLAND R A	10349	2248 2249 2250 3574		5756 6609 11625 11730	
WETHERBE M B	7298	5898		11872 12307 12308	
10425		WIANT H W	6528	WILSON D	5176
WETHERBEE J K	6605	WICK E	12859	WILSON D K	2273
WETTERMARK G	7619	WICK E L	12885	WILSON F H	8788
WEVER E G	0558	WICKER J	8425	11121	
3628 5156 5157 5158		9943		WILSON G P	6238
5159		WICKER J E	9714	WILSON H T	5177
WEVER R	6806	11295		12040	
WEXLER D	7615	WICKERSHAM R	0085	WILSON J S	0304
11228 11229 11263		WICKETT J C	5168	7805 11994	
WEYBREW B B	9761	WIDDICOMBE J G	8909	WILSON M E	6494
11264 11265		WIDDOWSON E M	7436	WILSON M R	0894
WHALEN W J	5160	WIEBERS J E	3815	895 2274	
WHEDON G D	8915	WIECHA D	11340	WILSON O	6052
WHEELER D E	0743	WIECK H H	10554	6053	
5161		WIED D DE	3642	WILSON R B	8542
WHEELER H O	6116	WIEGAND P J	8022	WILSON R H L	12021
6118		WIELAND H	3643	12041	
WHEELER L J	0296	WIENER M A	3644	WILSON V	9375
1301 1303 2664 2665		WIENS D	11037	WILSON W P	1570
4359		WIESE K	5169	2060 2061 5338 9176	
WHEELER W L	12010	WIESINGER K	0889	WILSON W S	12545
WHEELWRIGHT C D	12259	2261 2262 2263 2264		WILTNER W	3237
12662 12663		3645 3646 5170 5171		10539 10540 10541	
WHELAN R F	2239	5172 5356		WILTSHIRE H C	5135
6037 7451 7452 7964		WIGAND M E	9393	WINCHESTER C F	11056
WHERRY R J	9806	WIGGERS C J	1601	WINCKLER J R	11429
11501 11504 11618		3647		11430	
11621 11622 11686		WIGGIN P L	8411	WINDER C L	3659
11687 11729		WIGGINS H S	9122	3660	
WHILLANS M G	2240	WIGHT R	12305	WINDLE C	5178
3070 5162 9995		WILBANKS W A	3648	WING J	6095
WHIPPLE F L	0880	3649 6091 6424 8185		WING J E	6411
3600 8494 8723 12449		WILBARGER E	8312	WING J F	9792
WHITESIDE T C D	0885	WILBARGER E S	8432	WING K G	0896
886 2251 3636 3637		12651		2275 10634	
3638 5907 7322 8190		WILBER C G	11282	WING S	4970
10015 10208 10277		WILBUR C E	7754	WINGET M	0897
11871 12607		8055 11746		WINGET C M	7209
WHITFIELD C E	4942	WILCOX E J	7143	10169 12744	
WHITLOCK G H	11752	WILCOX L R	3650	WINGROVE R C	10057
11753		5544		10168	
WHITMARSH G A	5711	WILCOX M	0890	WINKLER K	5424
WHITNEY K R	0887	WILCOXON H C	0891	WINOKUR G	0853
3639		3651 3652 3653 3654		2204	
WHITNEY R J	11464	WILDER E W	1850	WINQUIST P G	2276
WHITSELL W R	11698	WILHELMJ C M	3030	WINSMANN F R	6119
WHITTEMBURY G	5868	WILINSKI F T	12136	WINSOR T	8794
WHITTEMBURY G M	4662	12144		WINSTON J	2038
WHITTEN F I	10380	WILKENING W O	5173	3661	
WHITTENBERGER J L	1808	WILKERSON J E	8808	WINTER K	8344
2252		WILKES W H	0892	WINTERS W D	10001
WHITTENBERGER R K	12841	WILKIE D R	0893	WINTERSTEIN H	0898
WHITTENBURG J A	1646	WILKINS H	3655	899 2809 5179 10537	
2253 2254 2255 2256		WILKINS W L	3656	WINZ H	5851
9649		WILKINSON F R	7013	WINZEN O C	6730
WHITTINGHAM D G V	0655	WILKINSON R T	6129	WISE C S	10908
2257 2258 3640		9650 11174		WISE S P	2670
WHITTINGHAM H	6410	WILKS S S	2265	WISKONT BUCZKOWSKA H	6925
WHITTINGHAM H E	0888	2266 2267 3088 3657		WISNER A	5940
2259 2260 3641 3742		3658 3772 4476 6444		WISWELL O B	3541
5166 7939		6551 7978 8910 12157		9998	
WHITTOG G C	5167	12158 12159		WITKIN H A	0900
9007 10917 10918		WILL D H	10281	WITMER R G	12608
WHITWORTH R H	9449	WILLARD P	6924	WITT I	3786
WHISENHUNT G B	12605	WILLARD T L	12842	WITTERMAN W W VON	0377
WHISSEN N C	8576	WILLCOX M L	2380	901 1420	
WHITAKER E A	6794	WILLIAMS A C	1802	WITTERSHEIM G	8631
WHITCHER H	5163	6671 9715		WITTKOWER E D	3139
WHITCOMB M A	6209	WILLIAMS C M	11428	WITTSON C L	1606
WHITE	6309	WILLIAMS D	0819	WITTWER A L	10955
WHITE B W	5512	2268 5011 5174		WITWER R G	7667
9509		WILLIAMS D B	6163	12590	
WHITE C E	2241	WILLIAMS E E	3004	WITZLEB E	5180
WHITE C S	0881	3005 3429 4462 4914		WLATRIP O H	1228
882 883 2242 2243 2244		WILLIAMS E S	8630	WLECH B E	10916
3129 3629 3630 3631		10296 10388 10472		WLODAK E	5658
3632 3633 5164 5165		WILLIAMS F L	4444	7086	
5364 7298 8495 8908		WILLIAMS G D	4444	WOELLNER R C	7230
9996 10152 10424 10425		WILLIAMS H L	7593	9254 9557 10209 11465	
WHITE C T	9190	11160 11164 11175		WOERDEN J V	5181
9357 9516 9583 9584		WILLIAMS I T D	3935	WOESSNER B L	3663

AUTHOR INDEX

9651  
 WOJCIESZAK I 3209  
 7475  
 WOLF A K 5512  
 9509  
 WOLF A V 6540  
 WOLF E 5182  
 9358  
 WOLF J 7223  
 7586  
 WOLF J J 12532  
 WOLF R 1240  
 WOLFF F J 0647  
 WOLFF H G 7136  
 WOLFF W 10952  
 WOLFF W M 3664  
 12752  
 WOLFFE J B 7587  
 WOLPIN M P 12727  
 WOLSK D 9399  
 WOLSKI E J 12042  
 WOLTER M J 11088  
 WOMACK G J 8911  
 12011  
 WOOD C C 12546  
 WOOD C L 5567  
 WOOD E D 1911  
 WOOD E H 0664  
 902 1106 3808 4481  
 8743 10124 10210  
 WOOD J E 2465  
 6054 10919 11442  
 WOOD N E 8523  
 12813  
 WOODRY D M 5183  
 7955 9182  
 WOODCOCK A H 6055  
 8026 12773  
 WOODHEAD M M 3873  
 11057  
 WOODLING C H 10046  
 WOODS E F 10635  
 WOODS J A 2201  
 WOODS J W 7476  
 WOODS P J 3883  
 WOODS R 6056  
 WOODSON W E 5184  
 WOODWARD A A 10920  
 WOODWARD D H 2007  
 WOODWORTH D G 6197  
 7668 7669 9729 11507  
 11626  
 WOOL G N 0761  
 WOLF B 3152  
 WORSTER H 8688  
 WORBE J F 3996  
 WORCHEL P 0903  
 4944 5185 5676 7670  
 WORKMAN J M 8799  
 WORLEY T W 5186  
 WORRALL S H 1279  
 WORSHAM H J 3866  
 WRIGHT C C 6412  
 7898 12778  
 WRIGHT G O 12547  
 WRIGHT G W 0187  
 WRIGHT H N 9558  
 11058  
 WRIGHT L A 6057  
 WRIGHT L C 6672  
 WRIGHT N L 8236  
 WRIGHT P E 2277  
 WRIGHT V 8632  
 WRIGLEY C 6210  
 7671  
 WRONSKI A 11134  
 WULFECK J W 0276  
 1274 4576 4998 5519  
 5520 9359  
 WULFF V J 2278  
 4835  
 WULFFTEN P M 0904  
 905 906 907 1679 2279  
 2280 2281 2282 2283  
 2284 2285 3665 3666  
 3667 3668 3669 3670  
 5188 5189 5190 5483  
 6947 7161 7806 7866  
 7940 9763 11815 12434  
 WUNDER C C 10211  
 WUNSCH O 3671  
 5187 6335 7824 10473  
 10474 11873  
 WURTZ K R 3659  
 3660  
 WUST H 5603  
 WUSTENBERG W 1458  
 WUSTROW F 9451  
 WYCKOFF L B 5191  
 WYCKOFF L D 2386  
 WYETH J 3672  
 WYKE M 9360  
 WYMAN L C 10921  
 WYNDHAM C H 3673  
 3674 3675 3676 7477  
 8920 9014 10922

WYNN PARRY C B 3677  
 WYNN V 5479  
 WYNN E S 12447  
 WYNN J R W 5192  
 WYSS DUNANT E 2286  
 3678 3679 3680 5194  
 WYSS V 5193  
 WYSZECKI G W 9192

X

XHIGNESSE L V 9562

Y

YAFFEE M 12774  
 YAGI I 9076  
 YAGI K 11102  
 YAGLOU C P 10923  
 YAGODA H 3681  
 6164 11349  
 YAMADA T 8591  
 YAMAMOTO R 2586  
 YAMASAKI M 11978  
 YAMAZAKI T 10212  
 10213 11466 12722  
 YANG T L 9999  
 10924 10925  
 YANKOSKY G T 9146  
 YANNOULIS G E 11059  
 YANOW G 8724  
 YANTIS P A 5602  
 7030  
 YARBUS A L 9272  
 9273  
 YARCHO W B 3682  
 YARCZOWER M 8157  
 9818 9819  
 YARNOLD J K 0851  
 2287  
 YAWN E 2288  
 YAZIGI JAUREGUI R 5195  
 YEAGER C E 1638  
 2289  
 YERG R A 6310  
 YEVICH P 8907  
 YEVICH P P 12144  
 YOFFEY J M 2773  
 5956 10580  
 YORUGI R 10405  
 YOSHIDA M 9906  
 YOSHIKAWA Y 9906  
 YOSHIMURA H 8591  
 8633  
 YOST D H 11037  
 YOU R W 3452  
 6040  
 YOUNG B B 0121  
 YOUNG D 6798  
 YOUNG D H 6495  
 YOUNG D R 5196  
 5197 9131 9132 11492  
 YOUNG D W 10744  
 11491  
 YOUNG F A 1272  
 5534  
 YOUNG I M 1323  
 2239  
 YOUNG J G 5813  
 YOUNG M W 11270  
 YOUNG R J 11331  
 YOUNG R S 8499  
 YOUNG R W 5198  
 YOUNG V M 5199  
 YOUNG W D 8492  
 0146  
 YOURICK G A 12360  
 YOUTCHEFF J S 2214  
 YOUTZ R P 3683  
 YU P N G 7231  
 YUDKOFKY P L 10214  
 YURUGI R 8543  
 10475

Z

ZACCARIA L 0908  
 909 2290  
 ZACCARIA M A 5200  
 5740  
 ZACHERT V 0910  
 911 912 913 914 915  
 2291 2292 2293 2294  
 2295 2296

ZAGORSKI H J 1468  
 2815  
 ZAGORSKII I U M 8912  
 ZAGRIADSKII V P 10000  
 10636  
 ZAIMIS E 9117  
 ZAJAC J L 3684  
 ZAKHAREVICH G P 10476  
 ZAKHARIANTS I U Z 11176  
 ZAKHAROV A M 10060  
 ZANCHETTI A 2454  
 2455  
 ZANGHERI E O 10448  
 ZAPATA C 2369  
 ZAPATA ORTIZ V 3106  
 ZARETSKAIA R B 2297  
 ZARRIELLO J J 10080  
 10141 10215 10216  
 10217 10218 10219  
 11946 11947 11979  
 ZARROW M X 2657  
 4040 6058 8602 8643  
 10777  
 ZASLAVSKII I E 12096  
 ZAVIALOV E S 11627  
 ZBIEGIEN J 11340  
 ZBRANKOVA E 7583  
 ZEAMAN D 5142  
 5201 6092  
 ZECHMAN F 6831  
 ZECHMAN F W 5366  
 10039 10040 10203  
 10220 10221  
 ZEDEKAR R G 11726  
 11727 11728  
 ZEEHAN W P C 4870  
 ZEFF J D 12881  
 12899 12900 12901  
 ZEGERS T 9230  
 ZEIDNER J 1468  
 2201 2298 2764 2815  
 5545 6211 7672  
 ZEIGEN R S 9147  
 12178 12218  
 ZEIT W 5383  
 ZEITLIN L 5557  
 ZEITLIN L R 12609  
 ZELENY C E 1581  
 ZELLER A F 8056  
 8125 8126 12414 12435  
 12436 12437 12438  
 12439  
 ZELLER V M 3685  
 ZELLMER R W 9943  
 11431 11432  
 ZEMAN F 0573  
 ZEVEKE A V 3686  
 ZHAROV S G 10477  
 ZHUKOV E K 11176  
 ZHUKOV VEREZHNIKOV N 8505  
 8506 8725  
 ZHUKOVICH A V 2299  
 3687  
 ZIEGENRUECKER G 10155  
 ZIEGENRUECKER G H 10955  
 11011 11060  
 ZIEGLER J E 0307  
 308 309 1061 1062 1063  
 1330 1332 2461 4081  
 ZIEGLER R B 8364  
 9835 11190  
 ZIEMLANSKI S 6898  
 6926  
 ZIEMSKI Z 5566  
 ZIGLER M J 3536  
 5182 9358  
 ZILLOTTO D 5477  
 5478  
 ZILLER R C 3688  
 5071 7163 9764  
 ZILOV G N 8913  
 ZIMILES H 5040  
 ZIMILES H L 4270  
 ZIMKIN N V 11689  
 11731  
 ZIMMER C E 0916  
 ZIMMER H 5202  
 ZIMMERMAN R 6688  
 ZIMMERMAN W F 8069  
 ZIMMERMAN W S 3689  
 3690  
 ZIMMERMANN G 5322  
 ZIMMERMANN H 7560  
 7561  
 ZIMNITASKAIA L P 8626  
 ZIMNITSKAIA L P 6778  
 ZIMNY M L 5290  
 8656 8657  
 ZINN M B 12307  
 ZINNEMAN 6754  
 ZINSER L M 12548  
 ZIPF R E 5312  
 ZIPP H 6059  
 ZIRM K L 5291  
 5292  
 ZISKIND E 11266

AUTHOR INDEX

ZLOTNIKOV S A	7879	ZUIDEMA G D	4822	ZWISLOCKI J	0917
ZMORSKI T	6884	5204 5313 5786 5814		918 2301 2302 2303	
ZOLESE A	7324	5815 6496 7214 7223		5205 5206 5207 8027	
10478		7224 7232 10054 12288		ZWORYKIN V K	12644
ZOLLNER G	4447	ZULCH K J	10637	ZYAK J	3691
ZOTTERMAN Y	5203	ZURAW E A	8544	ZYLKA W	1433
ZSOTER T	5480	ZUVIRIA E M	6923	ZYMET B L	11655
ZUBEK J P	11267	ZVORYKIN V N	0964	ZYSK J	2304
ZUBOV V F	9361	965 2300			
ZUIDEMA G	5777	ZWICKY F	8726		
7201					

# CORPORATE AUTHOR INDEX

- AEROJET ENGINEERING CORP., I: 465
- AGARD *see* NORTH ATLANTIC TREATY ORGANIZATION, Advisory Group for Aeronautical Research and Development
- AIR REDUCTION CO., INC., VII-X(2): 12809
- ALBANY MEDICAL COLL., III: 2989; VII-X(1): 8855, 9039, 9040, 9042; (2): 10779
- ALBERT EINSTEIN MEDICAL CENTER, VII-X(2): 11398
- AMERICAN ELECTRONICS LABS., III: 2373
- AMERICAN INST. FOR RESEARCH, I: 328, 329, 550, 624; II: 1298, 1398, 1831, 1832, 1833, 1834, 2214; III: 2867, 3207; IV: 3728; V: 6272, 6595; VI: 7650, 7757, 7758; VII-X(2): 11494, 11699, 11767, 12453, 12766
- AMERICAN MACHINE AND FOUNDRY CO., VII-X(2): 12746, 12899, 12900, 12901
- AMERICAN POWER JET CO., VI: 7381, 7411
- ANDEAN INST. OF BIOLOGY (LIMA, PERU), IV: 5053; V: 5833, 5838, 5852, 5867, 5872, 5875, 5876, 5880, 5881, 5882, 5886, 5893, 5894, 5899, 5903; VII-X(1): 10409, 10410, 10415, 10422, 10455, 10466
- ANTIOCH COLL., I: 259, 342, 775, 776, 780; II: 1232, 1279, 1280, 2081; III: 2925, 3453, 3472; IV: 4417, 4939; V: 6095, 6452; VI: 7502, 7773, 7774, 7775; VII-X(1): 9787, 9790, 9791; (2): 12219, 12220, 12460, 12627
- APPLIED PSYCHOLOGICAL SERVICES (VILLANOVA, PA.), V: 6629; VI: 8230, 8231, 8249; VII-X(1): 9219, 9336, 9337, 9338; (2): 12552
- ARKANSAS, UNIV., I: 831; II: 2002, 2168
- ARMOUR RESEARCH FOUNDATION, VII-X(2): 12161, 12163
- AUSTRALIA. AERONAUTICAL RESEARCH LABS., V: 6611
- AVIATION CRASH INJURY RESEARCH, VII-X(2): 12393, 12394, 12398
- BATTELLE MEMORIAL INST., VII-X(2): 12250
- BAYLOR UNIV., V: 5997; VII-X(1): 8922
- BELL AEROSPACE CORP., VII-X(2): 12727
- BENDIX CORP., VII-X(2): 12236
- BJORKSTEN RESEARCH LABS., VII-X(2): 12215
- BOEING AIRPLANE CO., I: 892; VI: 7524
- BOLT, BERANEK, AND NEWMAN, I: 176; II: 2028; IV: 3860, 4832; VII-X(2): 10950, 10951, 12478, 12565, 12585, 12595, 12675
- BOSTON COLL., VII-X(2): 11967, 11968
- BOSTON UNIV., I: 120; II: 1864, 2009; III: 2887; IV: 4329; VI: 7382; VII-X(1): 8936
- BOSTROM RESEARCH LABS., VII-X(2): 11039
- BROOKLYN COLL., II: 966, 967
- BROWN UNIV., III: 3368; IV: 3944; VII-X(2): 11407
- BRYN MAWR COLL., I: 148, 149, 150; IV: 3830, 3831; V: 5829; VI: 7247, 7974; VII-X(1): 10360
- BUCKNELL UNIV., VII-X(1): 9681
- BUFFALO, UNIV., II: 1178; III: 2555; VII-X(1): 8841, 8842, 8843, 8844, 8862, 8902, 8903, 10553; (2): 11454, 11779
- CALIFORNIA INST. OF TECHNOLOGY, V: 6043; VI: 7338; VII-X(1): 8687
- CALIFORNIA, UNIV., I: 429, 836; II: 1562, 2161; III: 2501, 2913, 2954, 3046, 3159; IV: 3793, 4385, 4580; V: 5764, 5934, 6487; VI: 7209; VII-X(1): 8359, 8978, 9000, 9001, 9729, 9738, 9874, 9983, 10397; (2): 10725, 11892, 12520, 12559
- Inst. of Personality Assessment and Research, VI: 7668, 7669; VI-X(2): 11507, 11535, 11563, 11564, 11626, 11769
- Inst. of Transportation and Traffic Engineering, II: 1113, 1170, 1230, 1516, 1638, 1735, 1740, 1762, 1806, 1848, 2021, 2084, 2172, 2226, 2289
- CANADA. DEFENCE RESEARCH BOARD, I: 295, 518; III: 3563; IV: 3967, 4023, 4241; V: 6668; VII-X(1): 9274
- CANADA. DEFENCE RESEARCH MEDICAL LABS., I: 415, 668; II: 1749; III: 2392, 3248; IV: 3967, 4931; V: 6250, 6966
- CANADA. DEPARTMENT OF TRANSPORT, IV: 4110
- CANADA. INST. OF AVIATION MEDICINE, I: 772, 773; II: 1748; III: 3180, 3517, 3563; IV: 4628; VI: 8192
- CANADA. INTERNATIONAL CIVIL AVIATION ORGANIZATION, VII-X(2): 11154
- CANADA. ROYAL CANADIAN AIR FORCE, V: 5235; VI: 6733
- CARNEGIE INST. OF TECHNOLOGY, II: 1361; V: 6191, 6192, 6193, 6194; VI: 7112
- CATHOLIC UNIV., III: 2526
- CENTRAL INST. FOR THE DEAF, II: 1284; III: 2932; IV: 4109; V: 5499, 5552, 5558, 5583, 6415, 6423, 6601; VI: 7150; VII-X(2): 10959
- CHICAGO, UNIV., I: 338; II: 952, 1222, 1285, 1286, 1453, 1454, 1532, 1823, 1871, 1872, 2040, 2225; V: 6162; VI: 7649; VII-X(1): 8996, 9459, 9493, 9652, 10529; (2): 10939, 10940, 11419, 11420
- USAF Radiation Lab., VII-X(2): 11420
- CINCINNATI, UNIV., III: 3564
- COLORADO, UNIV., III: 3635; VII-X(1): 10318
- COLUMBIA UNIV., I: 197, 198, 199, 294, 380, 480, 832, 833; II: 1479, 1480, 1904, 2169; III: 2340, 2922, 3441, 3603; IV: 3988, 5057; VI: 7094, 7131, 7146; VII-X(2): 11601
- CONNECTICUT COLL., III: 2383; IV: 3741, 4660; VI: 7167, 7607
- CONNECTICUT, UNIV., IV: 3883, 5142, 5201; V: 5711
- CONSULTANTS AND DESIGNERS, INC., IV: 4504
- CONVAIR ENGINEERING LABS., V: 6470
- COOK ELECTRIC CO., V: 6528
- CORNELL AERONAUTICAL LAB., INC., VII-X(2): 12737, 12763
- CORNELL UNIV., I: 374; II: 1449; IV: 4222; V: 5648, 5649, 5650, 5651, 5684, 6463; VI: 7081;

VII-X(1): 10087  
 Crash Injury Research, I: 273, 274, 286, 287;  
 II: 1295, 1296, 1544; III: 2894; V: 6553, 6554,  
 6687; VI: 8090  
 Daniel and Florence Guggenheim Aviation Safety  
 Center, II: 1503  
 Dept. of Public Health and Preventive Medicine, I: 466  
 CURTISS-WRIGHT CORP., VII-X(2): 11655, 12730  
 CUTLER-HAMMER, INC., VII-X(1): 8792  
 DAVID CLARK CO., INC., VII-X(2): 12213, 12242  
 DAYTON, UNIV., V: 6503; VII-X(1): 8472  
 DELAWARE, UNIV., VII-X(1): 9767  
 DIAMOND ORDNANCE FUZE LABS., VII-X(1): 8359,  
 9874, 9983, 12520  
 DOUGLAS AIRCRAFT CO., I: 633; III: 3483; IV: 4088;  
 V: 5794; VII-X(1): 10250  
 DUKE UNIV., II: 1522, 1570, 2060, 2061, 2096; III: 2873;  
 IV: 4349; V: 5366; VI: 6831; VII-X(1): 8763,  
 9011; (2): 11450  
 DUNLAP AND ASSOCIATES, INC., II: 1247, 1248, 1324;  
 IV: 4088; V: 6604, 6641; VI: 7687, 8136, 8215  
 EDUCATIONAL RESEARCH CORP., I: 834;  
 VII-X(2): 11643  
 EDUCATIONAL TESTING SERVICE, I: 272  
 ELECTRIC BOAT DIVISION, VII-X(1): 8544; (2): 12898  
 EMORY UNIV., I: 305; III: 3198, 3200  
 ENGINEERING CLINIC, IV: 3911  
 EYE RESEARCH FOUNDATION, VII-X(1): 9321  
 FENWAL, INC., VII-X(2): 12192  
 FLORIDA STATE BOARD OF HEALTH  
 Bureau of Laboratories, II: 1535, 2288  
 FLORIDA STATE UNIV., IV: 3768  
 FLORIDA, UNIV., VII-X(1): 9003  
 FORDHAM UNIV., I: 91; III: 2378  
 FOSTER D. SNELL, INC., I: 366, 367  
 FRANCE. CENTRE D'ENSEIGNEMENT ET DE  
 RECHERCHES DE MÉDECINE AÉRONAUTIQUE,  
 VI: 8063  
 FRANCE. LYONS UNIV., VII-X(1): 9165  
 FRANKFORD ARSENAL, VII-X(2): 12354  
 FRANKLIN INST., I: 548, 549; III: 3034; IV: 4808  
 GENERAL DYNAMICS CORP., VII-X(1): 8509, 8544;  
 (2): 12865  
 GENERAL ELECTRIC CO., VII-X(2): 12889, 12896  
 GENERAL PRECISION, INC., VII-X(1): 10138  
 GEORGE WASHINGTON UNIV., I: 236; II: 1394, 1842;  
 IV: 4208, 4306, 4307, 4664, 5072; V: 6047;  
 VI: 7151, 7465; VII-X(2): 10898  
 GEORGIA INST. OF TECHNOLOGY  
 Engineering Experimental Station, VI: 6764  
 GERMANY. TECHNISCHE HOCHSCHULE, VII-X(2):  
 11476  
 GOODYEAR AIRCRAFT CORP., IV: 4235; V: 6499  
 GOODYEAR TIRE AND RUBBER CO., VII-X(2): 12841  
 GT. BRIT. AERONAUTICAL RESEARCH COUNCIL  
 Engineering Physics Subcommittee, II: 954, 1076,  
 1103, 1569, 1997, 2136  
 GT. BRIT. APPLIED PSYCHOLOGY RESEARCH  
 UNIT, I: 188, 352; II: 1148, 1151, 1256, 1257, 1258  
 GT. BRIT. BURDEN NEUROLOGICAL INST., VII-X(1):  
 9181  
 GT. BRIT. CHEMICAL DEFENSE EXPERIMENTAL  
 ESTABLISHMENT, IV: 5163  
 GT. BRIT. COLL. OF AERONAUTICS, IV: 5135  
 GT. BRIT. DURHAM UNIV., IV: 4563; VI: 8219;  
 VII-X(1): 9798  
 GT. BRIT. FLYING PERSONNEL RESEARCH  
 COMMITTEE, I: 119, 183, 184, 189, 269, 270, 296, 656,  
 657, 793, 886; II: 978, 1047, 1049, 1128,  
 1166, 1186, 1195, 1269, 1288, 1289, 1290,  
 1293, 1301, 1568, 1747, 1778, 1989, 2123,  
 2251, 2257; III: 2530, 2531, 2664, 2665, 2848,  
 3118, 3338, 3460, 3638; IV: 3890, 4057, 4116,  
 4117, 4180, 4359, 4379, 4563, 4945, 4946,  
 4948, 4980, 4981, 4982, 5166; V: 5329, 5359,  
 5516, 5747, 5761, 5762, 5763, 5773, 5795,  
 5907, 5959, 6033, 6063, 6122, 6129, 6248,  
 6249, 6422, 6456, 6488, 6630; VI: 7199, 7200,  
 7212, 7592, 8190, 8197, 8219, 8222; VII-X(1):  
 8740, 8831, 8832, 8854, 9209, 9210, 9220,  
 9221, 9222, 9223, 9224, 9225, 9226, 9284,  
 9469, 9474, 9798, 10073, 10109, 10121,  
 10277, 10331, 10334, 10365, 11818, 11871;  
 (2): 10653, 10654, 10666, 10835, 10968,  
 10979, 10981, 11067, 11068, 11445, 11818,  
 11871, 11942, 12049, 12119, 12193, 12195,  
 12221, 12222, 12267, 12293, 12315, 12317,  
 12318, 12326, 12328, 12329, 12332, 12338,  
 12629, 12783, 12794  
 GT. BRIT. MEDICAL RESEARCH COUNCIL, II: 1352,  
 1448, 1567, 1720, 1918, 1919, 1920, 1921,  
 1922, 1958, 1959, 1960, 1961; III: 2533, 2534,  
 2535, 2635, 2803, 3337, 3456; IV: 3890, 4591,  
 4975; VI: 6974, 6997  
 GT. BRIT. MINISTRY OF SUPPLY  
 Clothing and Stores Experimental Establishment,  
 V: 5704  
 Directorate of Physiological and Biological Research,  
 VI: 7009  
 GT. BRIT. NAVAL MOTION STUDY UNIT, II: 1862,  
 1863  
 GT. BRIT. RAF INST. OF AVIATION MEDICINE,  
 I: 655, 793; III: 3485, 3636, 3637; IV: 4117,  
 4180, 4379, 4945, 4980, 4981, 4982; V: 5329,  
 5359, 5516, 5761, 5762, 5763, 5773, 5795,  
 5959, 6248, 6488, 6630; VI: 7199, 7200, 7212,  
 7592, 8190, 8197, 8222; VII-X(1): 8740, 8831,  
 8832, 8854, 9209, 9210, 9220, 9221, 9222,  
 9223, 9224, 9225, 9226, 9284, 9469, 9474,  
 10073, 10109, 10121, 10277, 10331, 10334,  
 10365, 11818, 11871; (2): 10653, 10666,  
 10835, 10968, 10979, 10981, 11067, 11068,  
 11445, 11818, 11871, 11942, 12049, 12193,  
 12195, 12221, 12222, 12267, 12293, 12315,  
 12317, 12318, 12326, 12328, 12329, 12332,  
 12338, 12629, 12783, 12794  
 GT. BRIT. ROYAL AIRCRAFT ESTABLISHMENT,  
 I: 132, 133, 534, 655, 764; III: 3119; IV: 5174;  
 VI: 7186, 7481, 7484, 7485; VII-X(2): 12362,  
 12756  
 GT. BRIT. ROYAL NAVAL PERSONNEL RESEARCH  
 COMMITTEE, IV: 3758  
 GT. BRIT. UNITED KINGDOM ATOMIC ENERGY  
 AUTHORITY, VII-X(2): 12280  
 HARVARD SCHOOL OF PUBLIC HEALTH, V: 6594  
 HARVARD UNIV., I: 134, 343, 344, 488, 709, 721, 722,  
 743, 864, 918; II: 1560, 1969; III: 2516;  
 VII-X(1): 8634, 8635, 8647  
 Medical School, VII-X(1): 8648; (2): 11222  
 HUGHES AIRCRAFT CO., V: 6671; VII-X(1): 9715;  
 (2): 12668  
 HUMAN FACTORS RESEARCH INC., V: 5756, 6557,  
 6558, 6609  
 HUMAN RELATIONS RESEARCH FOUNDATION,  
 II: 1337  
 HUMAN SCIENCES RESEARCH, INC., VII-X(2): 12690  
 ILLINOIS INST. OF TECHNOLOGY, IV: 4952; VII-X(1):  
 8504; (2): 12196  
 ILLINOIS, UNIV., II: 951, 1024, 1025, 1370, 1371, 1505,  
 1538, 1640, 1671, 1790, 1791, 1802; III: 2762,  
 2986, 3416, 3548; IV: 3936, 4619, 4835, 4896,  
 4897, 5095; V: 6592, 6671; VI: 7815, 8228;  
 VII-X(1): 9620, 9621, 9622, 9623; (2): 11482  
 INDIANA UNIV., I: 864; II: 1183; III: 2468; IV: 4026,  
 4100; V: 5559, 5670, 5674, 5675, 5679, 6066;  
 VI: 7099, 7120, 7121; VII-X(1): 8967, 9183



INDUSTRIAL BIOLOGY RESEARCH AND TESTING  
LABS., VI: 7943; VII-X(2): 12108, 12109

INSTITUTE FOR HUMAN RELATIONS, I: 485, 486;  
II: 1084, 1085, 2094; III: 2969; IV: 4956

INTERNATIONAL LATEX CORP., VII-X(2): 12895

INTERNATIONAL PUBLIC OPINION RESEARCH  
CORP., II: 1470

IOWA, STATE UNIT., I: 117, 718; II: 946, 1002, 1058,  
1059, 1317, 1725, 2113; III: 2407, 2408, 2409,  
2410, 2411; IV: 3754, 3823, 4923, 4924, 4925;  
V: 6005, 6006, 6010; VI: 7926, 7927, 8009,  
8011; VII-X(1): 9416, 9436

JAPAN, MISAWA AIR BASE, VII-X(1): 8361

JEFFERSON MEDICAL COLL., V: 6041; VI: 7442;  
VII-X(1): 10325

JOHN I. THOMPSON AND CO., VII-X(2): 12874, 12875

JOHNS HOPKINS HOSPITAL, VII-X(1): 8888, 8894,  
8895; (2): 11126

JOHNS HOPKINS UNIV., I: 284, 457, 658, 716, 783, 784;  
II: 1039, 1213, 1291, 1292, 1438, 1772, 1903;  
III: 2712, 2713, 2714, 2869, 3371, 3535;  
IV: 4293, 4968; V: 5349, 5353, 5456, 5622,  
5953; VI: 6881, 6962, 7067

JOINT COMMITTEE ON AVIATION PATHOLOGY,  
V: 6341, 6545

KRESGE EYE INST., II: 1750, 1751, 1752, 1753, 1830;  
III: 3125, 3126; IV: 4565, 4653; V: 5525,  
5526, 5527; VI: 6988; VII-X(1): 9310

L. E. O'NEIL AND ASSOCIATES, V: 6486

LANKENAU HOSPITAL, VII-X(2): 12114

LEESONA CORP., VII-X(2): 12114

LEHIGH UNIV., II: 1622, 1623; III: 2968

LEWIS FLIGHT PROPULSION LAB., II: 1928

LITTON INDUSTRIES, VII-X(2): 12713

LOCKHEED AIRCRAFT CORP., III: 2549; VI: 7170;  
VII-X(1): 8563, 9563; (2): 11690, 11691

LOS ANGELES COLL. OF OPTOMETRY, V: 5528

LOUISIANA STATE UNIV., VII-X(1): 9722

LOUISVILLE, UNIV., III: 2374, 2375, 2376

LOVELACE FOUNDATION FOR MEDICAL EDUCA-  
TION AND RESEARCH, II: 1756, 2242, 2243, 2244;  
III: 3129, 3629, 3630, 3631; VII-X(1): 9996,  
10425

LOWELL OBSERVATORY, III: 3120

MCKIERNAN-TERRY CORP., VII-X(2): 12753

MAICO ELECTRONICS INC., VI: 7922

MANAGEMENT AND MARKETING RESEARCH CORP.,  
II: 2272

MARTIN CO., VII-X(1): 9700, 10044, 10047; (2): 12656

MARYLAND, UNIV., II: 1048, 1129, 1130, 1131, 1165,  
1282, 1608, 1609, 1645, 1646, 1647, 1659,  
1663, 1691, 1759, 1760, 1761, 1883, 1991,  
2030, 2044, 2105, 2253, 2254, 2255, 2256;  
III: 2642, 3663; V: 5844

MASSACHUSETTS INST. OF ELECTRONICS, II: 1356

MASSACHUSETTS INST. OF TECHNOLOGY, II: 1220,  
1484; III: 2507; V: 6639; VI: 7021; VII-X(2):  
12859, 12885

MASSACHUSETTS MENTAL HEALTH CENTER,  
VII-X(2): 11202, 11203

MATRIX CORP., VII-X(2): 11665

MAYO CLINIC, IV: 3808; VII-X(1): 10210

MIAMI UNIV., IV: 3963; V: 5496; VI: 7501

MIAMI VALLEY HOSPITAL, V: 5312

MICHIGAN STATE UNIV., VII-X(2): 11614

MICHIGAN, UNIV., IV: 4039, 4387, 4986; V: 5498;  
VI: 8158; VII-X(1): 9197, 9287, 9288, 9529,  
9530, 9744, 9745; (2): 12728

MIDWEST RESEARCH INST., VII-X(2): 12107

MINNEAPOLIS-HONEYWELL REGULATOR CO.,  
VII-X(1): 9638; (2): 12842

MINNESOTA, UNIV., I: 782; II: 1012, 2018; III: 2915,  
3291, 3382, 3534; IV: 3919, 4485, 4692, 4693,  
4735; V: 5336, 5393, 5725; VI: 6888, 7158,  
7956, 7957, 7963; VII-X(1): 8887, 8914;  
(2): 10738

MISSISSIPPI SOUTHERN COLL., VII-X(1): 9410

MOUNT HOLYOKE COLL., II: 1994; V: 5494

NATIONAL CASH REGISTER CO., VII-X(1): 9246

NATIONAL FIRE PROTECTION ASSOCIATION, I: 696,  
843

NATIONAL RESEARCH CORP., III: 2416

NETHERLANDS. INSTITUT T.N.O. VOOR WERK-  
TUIGKUNDIGE CONSTRUCTIES, VI: 7484, 7485

NETHERLANDS. TECHNISCHE DOCUMENTATIE  
CENTRUM VOOR DE KRIJGSMACHT, IV: 5181

NEW YORK UNIV., IV: 4969; VI: 6765, 8252, 8254,  
8267, 8268; VII-X(1): 8517; (2): 11206,  
11210, 11217, 11128, 12208, 12887

NEW ZEALAND. AIR DEPT., VII-X(2): 12372

NORTH AMERICAN AVIATION, INC., VII-X(2): 12124,  
12653

NORTH ATLANTIC TREATY ORGANIZATION  
Advisory Group for Aeronautical Research and  
Development, II: 1071; IV: 3975, 4064, 4075, 4082,  
4192, 4249, 4258, 4275, 4372, 4513, 4536,  
4560, 4573, 4641, 4670, 4700, 4720, 4721,  
4759, 4787, 4867, 4882, 4977, 4978, 5000,  
5010, 5162, 5165, 5190; V: 6683; VI: 7786,  
7788, 7791, 7795, 7800, 7805, 7871, 8155;  
VII-X(1): 8401, 9592, 9837, 9869, 10385;  
(2): 11562, 11620, 11629, 11631, 11703,  
11708, 11827, 11856, 11859, 12173, 12203,  
12230, 12320, 12352, 12376, 12379, 12383,  
12385, 12386, 12392, 12397, 12409, 12417,  
12422, 12428, 12431, 12432, 12472, 12517,  
12612, 12667

NORTH CAROLINA, UNIV., VII-X(1): 8804; (2): 10657

NORTHWESTERN UNIV., I: 317; II: 1203, 1342, 1343,  
1606, 1730, 1731, 1984, 1985; IV: 4414, 4415,  
4538, 4539; V: 5568, 5569; VI: 7148, 7912;  
VII-X(1): 9061, 9387, 9388, 9389, 9390, 9432;  
(2): 12050, 12062

OHIO STATE UNIV., I: 103, 104, 110, 154, 171, 472,  
695, 874; II: 1001, 1015, 1108, 1109, 1110,  
1111, 1179, 1231, 1349, 1350, 1396, 1419,  
1426, 1427, 1428, 1432, 1531, 1576, 1577,  
1652, 1653, 1654, 1655, 1657, 1722, 1880,  
1902, 2023, 2129, 2173, 2174, 2208, 2209,  
2210, 2246, 2247, 2248, 2250, 2250; III: 2495,  
2496, 2497, 2498, 3222, 3270, 3306, 3307,  
3308, 3553, 3554, 3555, 3556, 3557; IV: 3722,  
3847, 3849, 3850, 3851, 3852, 3853, 3918,  
4130, 4141, 4676, 4686, 4739, 4771, 4772,  
4773, 4774, 4775, 4776, 4777, 4778, 4866,  
5063, 5064, 5065, 5066; V: 5543, 5549, 5575,  
5584, 5585, 5599, 5671, 6599, 6610, 6612,  
6616, 6617, 6618, 6624, 6688; VI: 6946, 7022,  
7023, 7035, 7036, 7037, 7039, 7040, 7100,  
7512, 8184; VII-X(1): 8532, 8710, 8787, 8815,  
8816, 9135, 9148, 9196, 9268, 9363, 9383,  
9433, 9434, 9435, 9436, 9540, 9589, 9624,  
9693; (2): 10937, 10946, 10957, 11008, 11621,  
11705, 11706, 11707, 11729, 12072, 12137,  
12156, 12580, 12586, 12636, 12778

OLIN MATHIESON CHEMICAL CORP., VII-X(2): 12122

OPERATIONS RESEARCH INC., VII-X(1): 10258

OREGON, UNIV., VII-X(1): 9129

PENNSYLVANIA STATE COLL., II: 944, 1268, 1519,  
2119; III: 3260

PENNSYLVANIA STATE UNIV., IV: 4597, 4689, 4836;  
VI: 7003; VII-X(1): 10451; (2): 10930

PENNSYLVANIA, UNIV., I: 875; III: 3096; IV: 3809,  
3900, 3989, 4274, 4928; VI: 8207; VII-X(1):  
9013, 9015, 9375; (2): 11770

PERSONNEL RESEARCH AND DEVELOPMENT

CORP., VII-X(2): 11599  
PERSONNEL RESEARCH CENTER, INC., III: 3304  
PHYSICS, ENGINEERING, CHEMISTRY CORP.,  
VII-X(2): 11298, 11299, 11334, 11474  
PIEDMONT HOSPITAL, VII-X(1): 10503  
PIONEER SCIENTIFIC CORP., III: 2608  
PITTSBURGH UNIV., IV: 3802; VI: 6912  
POLACOAT INC., VII-X(2): 11316, 12216  
PRINCETON UNIV., III: 3570; IV: 4458  
PSYCHOLOGICAL CORP., I: 91, 891; III: 2641, 3651,  
3652, 3653, 3654; IV: 4020  
PSYCHOLOGICAL RESEARCH ASSOCIATES CORP.,  
II: 1827, 1828; IV: 4830; VI: 7697, 7698,  
7699, 8060, 8061, 8242; VII-X(2): 11634,  
11664  
PSYCHOLOGICAL SERVICES, INC., II: 2039, 2227;  
III: 3471  
PURDUE UNIV., II: 2134, 2170, 2273; IV: 3749, 3838,  
4076; VI: 7014; VII-X(2): 11328  
QUARTERMASTER FOOD AND CONTAINER INST.,  
III: 2562; VII-X(2): 12863  
RADIO CORP. OF AMERICA, VII-X(2): 12263, 12301  
RAND CORP., VI: 6736  
REF MANUFACTURING CORP., VII-X(2): 12844  
RICHARDSON, BELLOWS, HENRY AND CO., II: 1351,  
2176  
ROBERT A. TAFT SANITARY ENGINEERING  
CENTER, IV: 4942  
ROCHESTER, UNIV., I: 760, 794; II: 984, 985, 986,  
1283, 1486, 1487, 1890, 1894, 1895, 1978,  
2156, 2235, 2236; IV: 3734, 3735, 3876, 4209,  
4214, 4265, 4266, 4268, 4269, 4270, 4271,  
4446, 4770, 4998, 5040, 5146, 5147; V: 5334,  
5360; VI: 7053  
ROWLAND AND CO., VII-X(1): 9294  
RUCKER CO., VII-X(2): 12731  
RUTGERS UNIV., II: 1995  
ST. LOUIS UNIV., I: 483, 691; II: 1564, 1565, 1986;  
III: 2927; V: 5410; VII-X(2): 10714, 10766,  
10767, 10876, 10877  
SAN DIEGO STATE COLL., V: 6577, 6586  
SAN JOSE STATE COLL., IV: 3973; V: 5618, 6131,  
6268  
SCOTT AVIATION CORP., VII-X(2): 12343  
SHERIDAN SUPPLY CO., I: 849  
SIERRACIN CORP., VII-X(2): 12287  
SOUTHERN CALIFORNIA UNIV., II: 1493, 1494, 1495;  
VII-X(1): 9928, 10110, 10112, 10133, 10134  
SOUTHERN RESEARCH INST., VI: 6740  
SOUTHWEST RESEARCH INST., I: 692; III: 3491, 3492,  
3493; VI: 6740  
STANFORD UNIV., III: 2974, 3659, 3660, 3664;  
VII-X(1): 9718  
SWEDEN, STOCKHOLM, UNIV., VII-X(1): 9492  
SYRACUSE UNIV., II: 2278; III: 3155  
SYSTEMS RESEARCH LABS., INC., VII-X(1): 8770  
SYSTEMS TECHNOLOGY, INC., VII-X(2): 12611, 12768  
TENNESSEE, UNIV., VII-X(1): 9683; (2): 11749, 11752,  
11753  
TEXAS CHRISTIAN UNIV., VII-X(2): 11246  
TEXAS, UNIV., I: 168, 346, 496; II: 1104, 1245, 1907,  
2188; III: 3541; IV: 3845, 4843; V: 5677,  
6183; VI: 7050, 7670, 7842, 8189; VII-X(1):  
8530, 9394, 9397, 9659, 9680, 9714, 9846,  
9881, 10350, 10395, 10396, 10397; (2): 10751,  
10824, 10926, 11294, 11296, 11322, 11355,  
11356, 11357, 11358, 11359, 11360, 11361,  
11362, 11399, 11426, 11428, 11918  
THOMPSON RAMO WOOLDRIDGE, INC., VII-X(2):  
12835  
TORONTO, UNIV., V: 6615; VII-X(1): 8681  
TRACERLAB, INC., VII-X(2): 12113  
TRINITY UNIV., VII-X(2): 11516  
TUFTS COLL., I: 276, 845; II: 1274; III: 2630; IV: 4901  
TUFTS UNIV., IV: 4576; V: 5621; VI: 8081, 8258;  
VII-X(1): 8986, 9194; (2): 10817, 10818,  
10819, 10820, 10821, 10840, 10841, 11762,  
12530, 12775, 12828, 12829, 12830  
TULANE UNIV., I: 180, 424, 425, 618, 619, 620, 829;  
II: 1500, 1501, 1502, 1584, 1768, 1769, 2025,  
2026, 2118, 2166; III: 2415, 2851, 2852, 2964,  
3383, 3384, 3390, 3391, 3608, 3610, 3615;  
IV: 4608; V: 5609, 5610, 5635, 5636, 5637;  
VI: 7645; VII-X(2): 11369, 11484  
U.S. AIR FORCE, I: 80, 81; II: 955, 956; IV: 4043, 4044,  
4045; V: 5240, 5245, 5536, 6281, 6282, 6284,  
6285, 6300, 6301, 6302, 6304, 6308, 6309,  
6310, 6378, 6381, 6386, 6388, 6393, 6394,  
6398, 6401, 6402, 6403, 6404, 6409, 6412,  
6538  
Aeronautical Systems Division, VII-X(2): 11299,  
11334, 12364  
Aerospace Medical Lab., VII-X(1): 8541, 8563,  
8759, 8787, 8856, 8907, 9015, 9120, 9183,  
9196, 9540, 9624, 9637, 10110, 10201, 10202,  
10222, 10247, 10255, 10260; (2): 10655,  
10767, 10950, 10951, 10954, 11030, 11206,  
11210, 11222, 11339, 11384, 11461, 11634,  
11651, 11655, 11691, 11699, 11700, 11864,  
12107, 12109, 12113, 12114, 12115, 12121,  
12122, 12124, 12128, 12129, 12136, 12161,  
12236, 12284, 12285, 12483, 12565, 12568,  
12569, 12585, 12595, 12596, 12647, 12713,  
12730, 12731, 12746, 12795, 12842, 12848,  
12865, 12879, 12885, 12900  
Aerospace Medical Research Labs., VII-X(1):  
9621, 9622, 9623, 10231, 11638, 12484,  
12514, 12561, 12615, 12728, 12752, 12799  
Behavioral Sciences Lab., VII-X(1): 8563, 9196,  
9540, 9621, 9622, 9623, 9624, 9637, 10231,  
10255, 10260; (2): 11232, 11634, 11638,  
11651, 11655, 11691, 11699, 11700, 12453,  
12483, 12484, 12514, 12596, 12615, 12647,  
12728, 12730, 12737, 12799  
Biomedical Lab., VII-X(1): 8759, 8787, 8856, 8907,  
9015, 9120, 10110, 10201, 10202, 10242;  
(2): 10655, 10767, 10950, 10951, 10954,  
11030, 11206, 11210, 11222, 11232, 11339,  
11384, 11461, 11864, 12107, 12109, 12113,  
12114, 12115, 12121, 12122, 12124, 12128,  
12129, 12136, 12161, 12565, 12568, 12569,  
12585, 12595, 12713, 12731, 12752, 12865,  
12879  
Communications Lab., VII-X(1): 8504  
Flight Control Lab., VII-X(2): 12478  
Life Support Systems Lab., VII-X(1): 8541, 9183;  
(2): 12236, 12284, 12285, 12746, 12795,  
12842, 12848, 12885, 12900  
Personnel Lab., VII-X(1): 9728, 9744, 9745, 9757;  
(2): 11539, 11554, 11567, 11607, 11609,  
11661, 11681, 11712, 11729  
Aerospace Medical Division, VII-X(1): 8841, 8842,  
8843, 8844, 8862, 8902, 8903, 9155, 9325,  
9578, 9767, 10138, 10207, 10265, 10269;  
(2): 10689, 11218, 11454, 11690, 11770,  
12207, 12668, 12898  
Behavioral Sciences Lab., VII-X(1): 9147, 10265,  
10269; (2): 11474, 11494, 11658, 12617,  
12637, 12727  
Biomedical Lab., VII-X(1): 8804, 8936, 10134;  
(2): 10957, 11202, 12120, 12235, 12260,  
12681, 12682, 12696, 12859  
Life Support Systems Lab., VII-X(1): 8771;  
(2): 11298, 11299, 11334, 12196, 12240,  
12844, 12874, 12901  
Air Force Cambridge Research Center, III: 3120,

3457; IV: 3992, 4100, 4470, 4483, 4797, 4812;  
V: 5494, 5559, 6163, 6634; VI: 7035

Air Force Flight Test Center, II: 2276

Air Force Personnel and Training Research Center,  
IV: 3857, 4222, 4234, 4236, 5067, 5086, 5087,  
5088; V: 5740, 6275; VI: 7148, 7646, 7649,  
7650, 7662, 7663, 7664, 7668, 7669, 7681,  
7691, 7731, 7735, 7738, 7746, 7751, 8181

Aircraft Observer Research Lab., V: 6679

Crew Research Lab., III: 2651, 3380; IV: 3983,  
4502, 4503, 4530; V: 6200, 6203, 6246, 6255,  
6273, 6276

Interceptor Pilot Research Lab., V: 6599

Maintenance Lab., V: 6226, 6271

Office of Social Sciences Programs, VI: 8060,  
8061

Operator Lab., V: 5671, 6684; VI: 7100, 8092, 8237

Personnel Research Lab., III: 2816, 3175, 3176,  
3548; IV: 3874, 4185, 4189, 4983; V: 6184,  
6185, 6210, 6272

Skill Components Research Lab., III: 2737, 2738,  
2772, 2907, 3491, 3492, 3493; V: 5611

Training Aids Research Lab., III: 3473; IV: 4986

Air Force Research Division

Aeronautical Research Lab., VII-X(2): 12355

Air Material Command, V: 5315, 6707, 6344

Air Proving Ground Center, VII-X(2): 12276

Air Proving Ground Command, II: 957, 958, 959, 960,  
961, 962, 963; III: 2346, 2347, 2348, 2349,  
2350, 2351, 2352, 2353, 2354, 2355, 2356;  
IV: 3702, 3703, 3704, 4354; V: 6178, 6179,  
6673, 6674

Air Research and Development Command, II: 1814;  
IV: 4952; V: 5484, 5587, 5588, 5613, 5617,  
5643, 5666, 5680, 5682, 5700, 5812, 6176,  
6209, 6221, 6225, 6240, 6241, 6242, 6657;  
VI: 8139; VII-X(1): 8301

Air Technical Intelligence Center, VI: 8033

Air Training Command, IV: 5058

Air University, VI: 6748, 7179, 7222, 7653, 7654,  
7655, 7656, 7658, 7705, 7714, 7723, 7724,  
7734, 7744, 7745, 7794, 7900, 7902, 7908,  
7916, 8137; VII-X(2): 12514

Research Studies Inst., V: 5219

Air Weather Service (MATS), VII-X(2): 11285

Arctic Aeromedical Lab., II: 1204; IV: 4635, 4636,  
4868; V: 5934, 6043, 6351, 6463; VI: 6764,  
6870, 6910, 6941, 6942, 7380, 7381, 7389,  
7411, 7449, 7450, 7465, 7869, 8059, 8068,  
VII-X(1): 8392, 8583, 8634, 8635, 8640, 8641,  
8647, 8648, 8927, 8942, 8969, 8973, 8976,  
8978, 8980, 8986, 8999, 9000, 9001, 9013,  
9016, 9018, 9022, 9029, 9044, 9070, 9095,  
9100, 9128, 9129, 9130; (2): 10638, 10647,  
10673, 10676, 10686, 10705, 10706, 10707,  
10709, 10712, 10738, 10742, 10746, 10749,  
10811, 10812, 10813, 10814, 10817, 10818,  
10819, 10820, 10821, 10825, 10826, 10828,  
10840, 10841, 10842, 10843, 10859, 10898,  
10901, 10902, 10903, 10906, 10910, 11078,  
11085, 11246, 11482, 11484, 11487, 11488,  
11491, 11499, 11779, 11900, 11967, 11968,  
12181, 12262, 12289, 12290, 12298, 12299,  
12304, 12356, 12358, 12365, 12366, 12369,  
12370, 12550, 12646, 12664

Arctic, Desert, Tropic Information Center, II: 1596,  
1597; IV: 3721, 4545

Armament Systems Personnel Research Lab.,  
IV: 4111

Directorate of Flight Safety Research, I: 577, 809;  
VI: 7987

Directorate of Operational Support Engineering  
Division, VII-X(2): 12213, 12249, 12364

Directorate of Research and Development

Air Force Missile Development Center, VI: 7217;  
VII-X(1): 8302, 8303, 8345, 8429, 9634,  
10267; (2): 11320, 11786, 12827

Aeromedical Field Lab., VII-X(1): 9633, 9673,  
9705, 9706, 9709, 9711; (2): 12548, 12658,  
12703, 12860

Bioastronautics Research Lab., VII-X(1): 9568

Directorate of Rocket Propulsion Liquid Systems  
Division, VII-X(2): 12126

Directorate of Systems Engineering, VII-X(2): 12301

Holloman Air Development Center, II: 1628; IV: 3919,  
3944; VI: 7216

Human Factors Operations Research Labs., II: 1084,  
1085, 1231, 1337, 1356, 1398, 1531, 1602,  
1672, 1722, 2164, 2182, 2183, 2184, 2227,  
2272; III: 3304, 3471, 3559, 3560

Human Resources Research Center, I: 74, 76, 117,  
146, 147, 239, 347, 389, 390, 414, 540, 594,  
604, 659, 700, 718, 736, 737, 832, 833, 846,  
847, 848, 849, 850, 908, 909, 910, 911, 912,  
913, 916; II: 1087, 1187, 1745, 2140

Aircraft Observer Training Research Lab., I: 460,  
585; II: 1025, 1327, 1648

Armament Systems Training Research Lab.,  
II: 1046, 1160, 1466, 1911, 2007

Combat Crew Training Research Lab., II: 1616,  
1675, 2011, 2012, 2013

Perceptual and Motor Skills Research Lab., I: 110,  
158, 159, 160, 161, 163, 284, 374, 520, 735,  
831, 874; II: 946, 948, 1015, 1058, 1059,  
1090, 1093, 1094, 1292, 1361, 1396, 1401,  
1402, 1403, 1404, 1449, 1451, 1631, 1725,  
1879, 1880, 1891, 1998, 2168

Personnel Research Lab., I: 162, 272, 311, 391,  
394, 497, 560, 834, 851, 914, 915; II: 1007,  
1271, 1277, 1336, 1413, 1414, 1415, 1469,  
1595, 1618, 1711, 1715, 1716, 1780, 2114,  
2169, 2193, 2194, 2195, 2196, 2197, 2290,  
2291, 2292, 2293, 2294, 2295, 2296; IV: 4243

Pilot Training Research Lab., I: 328, 329, 550,  
II: 951, 1134, 1409, 1802

Technical Training Research Lab., I: 151, 653,  
746; II: 1024, 1081, 1581, 1636, 1640, 1671,  
1846, 1847, 1850, 1851, 2100

Human Resources Research Inst., II: 1028, 1029,  
1273, 1365, 1560, 2039; III: 2338, 2516, 3155,  
3291

Human Resources Research Labs., I: 298, 412, 472,  
695, 711, 712, 713, 714

Military Training Wing (3700th), II: 2073

Office of Inspector General, V: 5244

Office of Scientific Research, VI: 6765, 8252, 8254,  
8267, 8268; VII-X(1): 8517, 9165, 9181;  
(2): 12887

Office of the Surgeon General, II: 1899; V: 6234

Rome Air Development Center, II: 1247, 1248;  
IV: 3734; V: 5544; VI: 6996; VII-X(2): 11311,  
11313, 11369, 11397, 12570, 12699

School of Aerospace Medicine, I: 91, 115, 129, 148,  
149, 150, 168, 191, 195, 232, 233, 234, 235,  
236, 246, 247, 338, 348, 371, 372, 373, 410,  
433, 437, 491, 492, 496, 511, 621, 624, 645,  
689, 690, 731, 739, 741, 742, 762, 763, 774,  
782, 798, 799, 808, 814, 837, 838, 839, 840,  
853, 879, 894, 895; II: 966, 967, 1012, 1032,  
1033, 1042, 1055, 1056, 1066, 1167, 1203,  
1206, 1223, 1224, 1241, 1245, 1298, 1318,  
1319, 1438, 1442, 1443, 1479, 1480, 1505,  
1513, 1514, 1535, 1538, 1547, 1548, 1549,  
1557, 1570, 1582, 1610, 1611, 1612, 1639,  
1690, 1728, 1730, 1731, 1754, 1756, 1765,  
1766, 1790, 1791, 1820, 1842, 1882, 1904,

1914, 1915, 1916, 1984, 1985, 1992, 1993,  
2016, 2017, 2018, 2060, 2061, 2063, 2064,  
2067, 2082, 2083, 2093, 2096, 2103, 2146,  
2177, 2178, 2179, 2180, 2188, 2202, 2203,  
2214, 2242, 2243, 2244, 2266, 2267, 2274,  
2288; III: 2378, 2429, 2431, 2433, 2445, 2514,  
2515, 2541, 2567, 2583, 2588, 2629, 2678,  
2681, 2703, 2704, 2727, 2766, 2767, 2768,  
2769, 2791, 2807, 2865, 2867, 2898, 2899,  
2915, 2938, 2954, 2986, 2989, 3024, 3090,  
3127, 3129, 3136, 3201, 3212, 3294, 3348,  
3359, 3370, 3371, 3382, 3401, 3438, 3441,  
3442, 3501, 3508, 3509, 3534, 3541, 3550,  
3565, 3572, 3573, 3580, 3603, 3633, IV: 3772,  
3773, 3774, 3802, 3803, 3816, 3830, 3831,  
3845, 3936, 3956, 3960, 4013, 4214, 4302,  
4414, 4415, 4450, 4476, 4485, 4538, 4539,  
4540, 4664, 4692, 4693, 4716, 4760, 4762,  
4843, 4908, 4936, 4968, 5015, 5041, 5069,  
5085, 5110, 5177; V: 5236, 5334, 5336, 5349,  
5353, 5393, 5410, 5456, 5568, 5569, 5593,  
5670, 5674, 5675, 5677, 5679, 5710, 5718,  
5722, 5725, 5754, 5769, 5790, 5826, 5827,  
5829, 5833, 5838, 5844, 5852, 5853, 5856,  
5862, 5867, 5872, 5875, 5876, 5880, 5881,  
5882, 5886, 5889, 5893, 5894, 5899, 5903,  
5913, 5953, 5997, 6005, 6006, 6010, 6041,  
6066, 6067, 6117, 6127, 6163, 6182, 6183,  
6187, 6203, 6204, 6327, 6365, 6370, 6375,  
6414, 6445, 6446, 6546; VI: 6783, 6807, 6810,  
6854, 6858, 6881, 6888, 6912, 6988, 7028,  
7061, 7094, 7099, 7106, 7116, 7120, 7121,  
7122, 7131, 7146, 7153, 7158, 7178, 7185,  
7235, 7243, 7247, 7248, 7442, 7470, 7488,  
7602, 7647, 7670, 7676, 7764, 7777, 7815,  
7821, 7829, 7842, 7860, 7873, 7874, 7912,  
7923, 7926, 7927, 7932, 7955, 7956, 7957,  
7963, 7972, 7974, 8081, 8253; VII-X(1): 8354,  
8355, 8360, 8371, 8373, 8385, 8395, 8421,  
8425, 8434, 8435, 8439, 8455, 8456, 8518,  
8519, 8526, 8530, 8581, 8617, 8678, 8682,  
8695, 8715, 8734, 8735, 8763, 8765, 8772,  
8781, 8788, 8853, 8855, 8887, 8888, 8894,  
8895, 8914, 8922, 8996, 9003, 9039, 9040,  
9042, 9061, 9127, 9164, 9246, 9387, 9388,  
9389, 9390, 9394, 9395, 9397, 9416, 9432,  
9439, 9444, 9459, 9493, 9497, 9518, 9532,  
9534, 9595, 9596, 9652, 9659, 9679, 9680,  
9714, 9733, 9734, 9752, 9770, 9839, 9845,  
9846, 9875, 9877, 9878, 9879, 9880, 9881,  
9883, 9891, 9910, 9943, 9949, 9973, 9986,  
9994, 10089, 10113, 10153, 10174, 10239,  
10244, 10248, 10262, 10274, 10311, 10318,  
10325, 10345, 10350, 10352, 10360, 10389,  
10395, 10396, 10397, 10409, 10410, 10415,  
10420, 10422, 10430, 10451, 10455, 10466,  
10470, 10529, 10553, 10631; (2): 11796,  
11808, 11819, 11825, 11841, 11845, 11867,  
11876, 11877, 10725, 10751, 10779, 10824,  
10860, 11019, 11121, 11126, 11152, 11199,  
11294, 11295, 11296, 11322, 11331, 11332,  
11350, 11355, 11356, 11357, 11358, 11359,  
11360, 11361, 11362, 11364, 11398, 11399,  
11407, 11410, 11424, 11426, 11428, 11431,  
11552, 11580, 11589, 11679, 11694, 11711,  
11758, 11762, 11767, 11787, 11796, 11808,  
11819, 11825, 11841, 11845, 11867, 11876,  
11877, 11887, 11892, 11904, 11905, 11912,  
11913, 11918, 11920, 11921, 11922, 11923,  
11924, 11926, 11951, 11959, 11961, 11962,  
11969, 11976, 11977, 11997, 12009, 12011,  
12027, 12042, 12045, 12050, 12052, 12070,  
12073, 12074, 12075, 12083, 12090, 12094,

12163, 12310, 12334, 12399, 12447, 12448,  
12619, 12689, 12738, 12739, 12754, 12769,  
12781, 12797, 12839, 12878, 12886  
Strategic Air Command, IV: 5021  
Wright Air Development Division, I: 259, 271, 317,  
634; IV: 3722, 4561, 5016; VII-X(1): 8771,  
8804, 8841, 8842, 8843, 8844, 8862, 8902,  
8903, 8936, 9147, 10134, 10138, 10207,  
10265, 10269; (2): 10689, 10876, 10957,  
11218, 11298, 11454, 11474, 11494, 11658,  
11690, 11770, 12120, 12196, 12207, 12213,  
12235, 12240, 12249, 12260, 12617, 12637,  
12668, 12680, 12696, 12727, 12844, 12859,  
12874, 12898, 12901  
Aeromedical Lab., VII-X(2): 12899  
Aeronautical Research Lab., VII-X(2): 12269  
Aerospace Medical Lab., I: 121, 122, 154, 176,  
196, 197, 198, 199, 200, 238, 240, 262, 276,  
294, 321, 323, 342, 366, 367, 380, 459, 480,  
483, 484, 503, 504, 505, 506, 513, 533, 548,  
549, 581, 582, 599, 608, 642, 643, 647, 648,  
691, 719, 760, 775, 776, 780, 794, 815, 836,  
856, 857, 901; II: 944, 1039, 1050, 1104,  
1161, 1162, 1179, 1183, 1192, 1232, 1253,  
1268, 1278, 1279, 1280, 1284, 1291, 1342,  
1343, 1346, 1349, 1350, 1419, 1426, 1427,  
1428, 1432, 1511, 1519, 1522, 1524, 1525,  
1555, 1561, 1562, 1564, 1565, 1577, 1603,  
1622, 1623, 1652, 1653, 1654, 1655, 1656,  
1657; III: 1712, 1714, 1724, 1786, 1796, 1816,  
1829, 1831, 1832, 1833, 1834, 1849, 1894,  
1895, 1902, 1978, 1986, 1996, 2023, 2028,  
2080, 2081, 2119, 2129, 2161, 2208, 2209,  
2210, 2213, 2246, 2247, 2248, 2249, 2250;  
III: 2340, 2342, 2374, 2375, 2376, 2384, 2386,  
2416, 2426, 2468, 2501, 2522, 2523, 2526,  
2603, 2605, 2623, 2630, 2656, 2697, 2699,  
2712, 2713, 2714, 2754, 2762, 2774, 2777,  
2861, 2869, 2873, 2912, 2913, 2921, 2922,  
2925, 2927, 2932, 2952, 2958, 2968, 3014,  
3015, 3016, 3034, 3040, 3074, 3075, 3082,  
3111, 3112, 3113, 3114, 3145, 3146, 3222,  
3224, 3225, 3227, 3260, 3262, 3375, 3388,  
3402, 3416, 3453, 3467, 3468, 3472, 3482,  
3564, 3585, 3605, 3625, 3634, 3650, 3682;  
IV: 3698, 3770, 3876, 3879, 3880, 3911, 3920,  
3953, 3954, 3955, 3963, 3964, 4039, 4108,  
4141, 4231, 4293, 4303, 4312, 4329, 4340,  
4341, 4342, 4349, 4356, 4365, 4366, 4387,  
4416, 4417, 4471, 4479, 4504, 4512, 4562,  
4580, 4587, 4595, 4596, 4627, 4648, 4686,  
4802, 4832, 4844, 4866, 4896, 4897, 4937,  
4939, 4942, 4969, 4994, 4998, 5033, 5134,  
5204; V: 5309, 5312, 5313, 5360, 5366, 5496,  
5504, 5528, 5622, 5698, 5760, 5764, 5804,  
5811, 5815, 6070, 6071, 6095, 6290, 6364,  
6442, 6452, 6453, 6455, 6462, 6466, 6481,  
6487, 6492, 6496, 6528, 6534, 6579, 6595,  
6604, 6607, 6610, 6612, 6616, 6617, 6618,  
6619, 6624, 6627, 6628, 6638, 6641, 6671,  
6696, 6697, 6698, 6699, 6700; VI: 6737, 6738,  
6831, 6962, 7034, 7053, 7067, 7135, 7170,  
7171, 7256, 7299, 7390, 7468, 7479, 7501,  
7502, 7627, 7769, 7773, 7774, 7775, 7943,  
7961, 7971, 7990, 7993, 8001, 8023, 8066,  
8136, 8165, 8184, 8195, 8208, 8216, 8227,  
8228, 8229, 8258, 8260, 8261, 8263, 8265;  
VII-X(1): 8472, 8509, 8532, 8770, 8792, 9011,  
9012, 9154, 9187, 9194, 9268, 9269, 9270,  
9304, 9344, 9358, 9410, 9417, 9418, 9454,  
9455, 9563, 9589, 9620, 9638, 9675, 9676,  
9681, 9686, 9693, 9694, 9708, 9715, 9742,  
9787, 9790, 9791, 9825, 9928, 10040, 10052,

10053, 10054, 10069, 10112, 10125, 10133,  
 10145, 10180, 10210, 10220, 10221, 10235,  
 10243, 10256, 10264, 10270, 10533, 10596;  
 (2): 10714, 10735, 10766, 10876, 10877,  
 10905, 10907, 10930, 10935, 10939, 10940,  
 10952, 11046, 11056, 11060, 11203, 11217,  
 11233, 11316, 11450, 11467, 11625, 11642,  
 11664, 11705, 11706, 11730, 11760, 12108,  
 12192, 12208, 12215, 12216, 12218, 12219,  
 12220, 12229, 12238, 12242, 12248, 12250,  
 12256, 12263, 12270, 12287, 12288, 12303,  
 12311, 12343, 12460, 12461, 12473, 12500,  
 12547, 12580, 12586, 12614, 12616, 12627,  
 12636, 12640, 12653, 12656, 12675, 12682,  
 12702, 12753, 12766, 12768, 12775, 12778,  
 12804, 12805, 12809, 12828, 12829, 12830,  
 12835, 12841, 12855, 12863, 12875  
 Aircraft Lab., II: 1554, 1555; III: 3034, 3259  
 Behavioral Sciences Lab., VII-X(1): 9155, 9194,  
 9256, 9454, 9455, 9578, 9767, 9787, 10256,  
 10264; (2): 11233, 11706, 12311, 12500,  
 12675  
 Biomedical Lab., VII-X(1): 9012, 9417, 9418,  
 10069, 10210, 10243; (2): 10939, 10940,  
 12863, 12865  
 Directorate of Advanced Systems Technology,  
 VII-X(2): 12626  
 Directorate of Air Weapon Systems, II: 1491, 1492  
 Directorate of Flight and All-Weather Testing,  
 III: 2960; IV: 3994  
 Directorate of Labs., VII-X(1): 8710  
 Directorate of Research, V: 6509  
 Equipment Lab., I: 465; II: 1555; V: 6503, 6688  
 Flight Control Lab., V: 6672; VII-X(2): 12543,  
 12611  
 Life Support Systems Lab., VII-X(1): 9325;  
 (2): 12209, 12216, 12243, 12660, 12802,  
 12813, 12820, 12835  
 Personnel Lab., VII-X(1): 9683, 9687, 9718, 9724,  
 9729, 9738; (2): 11493, 11507, 11512, 11513,  
 11516, 11518, 11521, 11524, 11529, 11534,  
 11535, 11544, 11545, 11546, 11553, 11555,  
 11556, 11563, 11564, 11565, 11566, 11568,  
 11572, 11599, 11601, 11606, 11608, 11610,  
 11614, 11621, 11626, 11639, 11647, 11659,  
 11660, 11662, 11663, 11749, 11750, 11752,  
 11753, 11767, 11792, 11793, 11794, 12602  
 U.S. ARMED FORCES MEDICAL LIBRARY, II: 2020  
 U.S. ARMED FORCES-NATIONAL RESEARCH  
 COUNCIL  
 Committee on Hearing and Bio-Acoustics, IV: 4109,  
 4361, 4654; V: 5552, 6601  
 Vision Committee, I: 94, 346; II: 1274; IV: 4576  
 U.S. ARMY, III: 3159  
 Aberdeen Proving Ground  
 Army Ordnance Human Engineering Lab., III: 2955;  
 VI: 8168, 8171, 8218; VII-X(1): 9783, 10428;  
 (2): 11153, 11275  
 Adjutant General's Office  
 Personnel Research Branch, II: 1197, 1468, 1827,  
 1828; III: 2764; IV: 4612; V: 5238, 5545,  
 6211; VI: 7657  
 Army Chemical Center  
 Army Chemical Research and Development Labs.,  
 VII-X(1): 8907; (2): 10920, 12128, 12129,  
 12136  
 Army Field Forces, III: 2394  
 Army Medical Research Lab., I: 85, 86, 87, 193, 461,  
 597, 627, 686; II: 1463, 1464; III: 2811, 2812,  
 2813, 3105, 3360; IV: 4315, 4486, 4551, 4884,  
 4919; V: 5557, 5604, 5623, 5625, 5630, 5687,  
 5745, 5792, 5996, 6013, 6032, 6065, 6073,  
 6605; VI: 6889, 6935, 7045, 7063, 7113, 7114,  
 7115, 7203, 7204, 7205, 7438, 7443, 7444,  
 7445, 7454, 7497, 7509, 7588, 8211; VII-X(1):  
 8790, 8990, 9136, 9161, 9259, 9367, 9369,  
 9370, 9371, 9372, 9401, 9481, 9482, 9483,  
 9484, 9486, 9487, 9500, 9501, 9502, 9504,  
 9511, 9513, 9514, 9585, 9661, 9666, 9671,  
 9672, 9700, 9794, 9795, 9797, 10084;  
 (2): 10656, 10692, 10693, 10694, 10695,  
 10778, 10851, 10874, 11036, 11037, 11038,  
 11439, 11440, 11441, 11475, 12225, 12469,  
 12574, 12576, 12579, 12631, 12726  
 Army Signal Engineering Labs., VI: 7141  
 Chemical Corps Medical Labs., I: 229, 263; II: 1112,  
 1219, 1355, 1575, 1684, 1845, 1971, 1977,  
 2252, 2265; III: 2499, 2606; IV: 3989  
 Chemical Warfare Labs., V: 6371; VII-X(2): 11468,  
 12110  
 Continental Army Command, V: 6500, 6501  
 Frankford Arsenal, VI: 8047  
 Medical Nutrition Lab., V: 5354, 6051; VI: 5859,  
 6938, 7472, 7585  
 Office of the Surgeon General, VII-X(1): 8432, 10503,  
 12486  
 Pitman-Dunn Labs., I: 749; IV: 4461  
 Quartermaster Research and Development Center,  
 I: 670; III: 2694, 3346, 3347, 3536, 3537,  
 3538; IV: 3769, 4901; V: 5972, 5977, 5978,  
 6008, 6055, 6115, 6119, 6472; VI: 7112, 7387,  
 7388, 7396, 7412, 8007, 8008, 8009, 8011,  
 8140, 8141; VII-X(1): 9119; (2): 10790  
 Quartermaster Research and Engineering Command,  
 VII-X(2): 11328  
 Research and Development Command, VII-X(1):  
 10032; (2): 11641  
 Signal Corps Supply Agency, IV: 4924  
 Transportation Research and Engineering Command,  
 VI: 8220  
 Walter Reed Army Inst. of Research, V: 5365, 5487,  
 5495, 5799, 5813  
 Walter Reed Army Medical Center, IV: 5053  
 U.S. ATOMIC ENERGY COMMISSION, VII-X(1): 9996,  
 10425  
 U.S. CIVIL AERONAUTICS ADMINISTRATION, I: 325  
 U.S. CIVIL AERONAUTICS BOARD, I: 248, 249  
 Bureau of Safety Investigation, I: 207, 208, 209, 210,  
 211, 212, 213, 482  
 U.S. DEPT. OF AGRICULTURE, VII-X(2): 11056  
 U.S. DEPT. OF DEFENSE, IV: 4095, 4175, 4177, 4217,  
 4895, 4996, 5002  
 U.S. DEPT. OF HEALTH, EDUCATION, AND  
 WELFARE, II: 1970  
 National Institutes of Health, VII-X(1): 8380  
 National Library of Medicine, V: 5600; VII-X(1):  
 8363, 8368, 8372  
 Public Health Service, VII-X(1): 8372  
 U.S. FEDERAL AVIATION AGENCY, VII-X(1): 9320,  
 9817; (2): 11605  
 U.S. HOUSE OF REPRESENTATIVES, VII-X(1): 8290,  
 8317  
 U.S. LIBRARY OF CONGRESS, I: 877  
 U.S. MARINE CORPS  
 Marine Corps Development Center, V: 6485; VI: 7997  
 U.S. NATIONAL ACADEMY OF SCIENCES, VI: 7446;  
 VII-X(1): 8380, 8406, 8408, 8529, 8613, 8699,  
 8707, 8720, 9186, 9750, 9965, 10010, 10050,  
 10072, 10075, 10097, 10099, 10135, 10151;  
 (2): 10993, 11427, 11633, 11670, 11671,  
 11683, 11695, 12584, 12701, 12712, 12732,  
 12735, 12893  
 U.S. NATIONAL ADVISORY COMMITTEE FOR  
 AERONAUTICS, I: 501; II: 1354, 1358, 1705, 1928;  
 IV: 3917, 4915; V: 6561, 6563, 6691;  
 VI: 7195, 8232

Lewis Flight Propulsion Lab., VI: 8070  
U.S. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, VII-X(1): 8314, 8324, 8330, 8332, 8335, 8380, 8687, 9519, 9582, 9613, 9815, 9848, 9901, 10057, 10061, 10088, 10114, 10168; (2): 11284, 11378, 11425, 11727, 11728, 12292, 12418, 12444, 12566, 12663, 12707, 12761, 12840

U.S. NATIONAL RESEARCH COUNCIL, I: 94, 346; III: 2341, 2393, 2483, 2539, 2586, 2640, 2689, 2914, 2923, 2990, 2991, 3208, 3210, 3211, 3279, 3351, 3417, 3495, 3655; IV: 4994; V: 6176; VII-X(1): 8406, 8408, 8529, 8613, 8699, 8707, 8720, 9186, 9750, 9965, 10010, 10050, 10072, 10075, 10097, 10099, 10135, 10151; (2): 10993, 11427, 11633, 11670, 11671, 11683, 11695, 12584, 12701, 12732, 12735, 12893

U.S. NAVY, V: 6077, 6078, 6079  
U.S. NAVY  
Bureau of Aeronautics, I: 622; IV: 4235  
Bureau of Naval Personnel, II: 1181, 2170; IV: 3761, 3823, 3909, 4205, 4206, 4257, 4277, 4278, 4451, 4567, 4570, 4590, 4695, 4783, 4979, 5057  
Bureau of Ordnance, VI: 8215  
Bureau of Ships, IV: 3860  
Bureau of Supplies and Accounts, V: 6482  
Naval Air Development Center  
Aviation Medical Acceleration Lab., I: 309, 368, 875; II: 1061, 1062, 1330, 1331, 1332, 1440; III: 2414, 2540, 2625, 2785, 2786, 2882, 2883, 3095, 3096, 3097, 3314, 3477, 3672; IV: 3808, 3809, 3821, 3822, 3900, 3910, 4093, 4256, 4532, 4533, 5017; V: 5489, 5627, 5779, 5781, 5782, 5785, 5797, 5915, 6148, 6173; VI: 6803, 6965, 7137, 7173, 7196, 7197, 7206, 7210, 7213, 7487, 8005; VII-X(1): 8747, 8748, 8749, 8750, 9035, 9098, 9099, 9200, 9201, 9215, 9458, 9505, 9506, 9569, 9571, 9577, 9834, 10014, 10027, 10033, 10037, 10038, 10045, 10046, 10049, 10056, 10058, 10062, 10063, 10064, 10068, 10079, 10086, 10091, 10092, 10094, 10118, 10150, 10163, 10181, 10182, 10192, 10204, 10224, 10225, 10226, 10230, 10549; (2): 11015, 11404, 11406, 11412, 11668, 11677, 11889, 12214, 12231, 12294, 12672, 12729, 12736, 12748, 12796

Naval Air Experimental Station  
Aeronautical Materials Lab., II: 1016  
Aeronautical Medical Equipment Lab., I: 79, 277, 474, 543; II: 1156; III: 2544, 2631, 2632, 2879, 2910, 3067, 3068, 3253, 3254, 3255;  
Naval Air Material Center  
Aero Medical Equipment Lab., III: 2739, 3255  
Aeronautical Medical Equipment Lab., IV: 4014, 4337  
Air Crew Equipment Lab., V: 6475, 6476, 6629, 6644, 6645, 6646, 6650, 6651, 6665, 6690; VI: 7003, 7031, 7138, 7183, 7267, 7288, 7624, 8006, 8021, 8025, 8205, 8206, 8207, 8230, 8231, 8249; VII-X(1): 8364, 8874, 9139, 9140, 9219, 9294, 9336, 9337, 9338, 9375, 9401, 9403, 9662, 9835, 9885, 9916, 9987, 10562, 10563, 10564, 10579; (2): 10756, 11158, 11179, 11188, 11189, 11254, 11273, 11497, 12198, 12200, 12201, 12224, 12237, 12264, 12265, 12282, 12485, 12552, 12741, 12816, 12883

Naval Air Test Center, I: 666; II: 1866, 1966, 1967; III: 2686, 2687, 3244  
Naval Aviation Safety Center, V: 6519; VII-X(2): 12330

Naval Medical Field Research Lab., I: 458; III: 2649; VII-X(2): 11519  
Naval Medical Research Inst., I: 384; IV: 4102, 4391; V: 5461, 5577, 5578, 5986, 5998, 6240, 6443, 6675; VI: 8157; VII-X(1): 8605, 8840, 9819, 10607; (2): 10829, 10830, 10890, 10972, 11124, 11324, 11788, 11789, 11790, 12154, 12618, 12897

Naval Medical Research Lab., I: 236, 420, 462, 463, 667, 728, 729, 757, 758, 778, 896; II: 1294, 1387, 1389, 1539, 1540, 1541, 1542, 1572, 1650, 1785, 2057, 2229, 2241; III: 2608, 2609, 2724, 2886, 2996, 3004, 3007, 3357, 3429, 3431; IV: 4358, 4467, 4660, 4751; V: 5563, 5564, 6621; VI: 6967, 7007, 7024, 7083, 7965, 8187; VII-X(1): 9299, 9347, 9411, 9761; (2): 10985, 11264, 11551, 11829, 11835, 11902, 12777

Naval Ordnance Lab., V: 6505; VI: 8162  
Naval Ordnance Test Station, V: 5524, 6506, 6584  
Naval Radiological Defense Lab., I: 536, 537; II: 1873; VII-X(1): 8961  
Naval Research Lab., I: 457, 658, 716, 784; II: 1163; III: 2491, 2492, 2547, 2548; IV: 4475; V: 5490, 5616; VI: 7177, 8152, 8182, 8235; VII-X(1): 8362, 8528, 9202; (2): 12247, 12499, 12814, 12831

Naval School of Aviation Medicine, I: 103, 104, 111, 112, 113, 171, 180, 222, 223, 251, 252, 253, 254, 255, 305, 392, 410, 411, 424, 425, 450, 451, 452, 453, 454, 493, 494, 495, 516, 592, 601, 605, 618, 619, 620, 674, 684, 685, 706, 707, 708, 755, 756, 795, 829, 841, 842, 891; II: 982, 1001, 1017, 1018, 1020, 1021, 1022, 1108, 1109, 1110, 1111, 1233, 1236, 1237, 1238, 1311, 1384, 1385, 1500, 1501, 1502, 1587, 1588, 1589, 1632, 1737, 1738, 1750, 1751, 1752, 1753, 1763, 1768, 1769, 1779, 1787, 1788, 1830, 1867, 1876, 1877, 1906, 1947, 2025, 2026, 2055, 2056, 2118, 2125, 2126, 2166, 2173, 2174, 2189, 2190, 2191; III: 2370, 2371, 2372, 2421, 2422, 2423, 2495, 2496, 2497, 2498, 2520, 2599, 2600, 2627, 2641, 2716, 2757, 2837, 2838, 2839, 2840, 2851, 2852, 2941, 2944, 2964, 2977, 2978, 3069, 3101, 3102, 3103, 3104, 3125, 3126, 3133, 3135, 3166, 3167, 3187, 3198, 3199, 3200, 3245, 3246, 3270, 3292, 3306, 3307, 3308, 3329, 3389, 3390, 3391, 3424, 3426, 3553, 3554, 3555, 3556, 2557, 3568, 3596, 3608, 3609, 3610, 3612, 3614, 3615, 3617, 3648, 3649; IV: 3724, 3725, 3726, 3765, 3812, 3813, 3847, 3848, 3849, 3850, 3851, 3852, 3853, 3918, 3973, 3981, 4009, 4010, 4046, 4130, 4187, 4260, 4299, 4300, 4301, 4424, 4426, 4548, 4549, 4565, 4607, 4608, 4640, 4653, 4719, 4729, 4739, 4771, 4772, 4773, 4774, 4775, 4776, 4777, 4778, 4848, 4911, 4912, 5063, 5064, 5065, 5066, 5124, 5125, 5136, 5139; V: 5306, 5499, 5525, 5526, 5527, 5549, 5558, 5575, 5584, 5585, 5599, 5609, 5610, 5618, 5635, 5636, 5637, 5642, 5695, 5723, 5730, 5733, 5736, 5737, 5738, 5743, 5776, 5791, 5828, 5943, 6091, 6114, 6131, 6153, 6154, 6177, 6180, 6201, 6202, 6207, 6208, 6214, 6215, 6216, 6218, 6219, 6220, 6222, 6228, 6233, 6236, 6237, 6245, 6253, 6258, 6263, 6266, 6267, 6268, 6269, 6274, 6277, 6278, 6279, 6415, 6423, 6424, 6464, 6507, 6531, 6532, 6547, 6559, 6560, 6562, 6572, 6635, 6636; VI: 6830, 6946, 7022, 7023, 7036, 7037, 7039, 7040, 7050, 7150, 7160, 7230, 7270, 7338, 7512, 7632, 7645, 7665,

7674, 7675, 7685, 7686, 7694, 7695, 7704,  
7707, 7712, 7715, 7716, 7717, 7761, 7762,  
7765, 7766, 7767, 7797, 7798, 7828, 8122,  
8123, 8185; VII-X(1): 8366, 8367, 8776, 8777,  
8779, 8805, 8806, 8807, 8808, 8809, 8817,  
9135, 9148, 9254, 9305, 9306, 9307, 9308,  
9310, 9363, 9364, 9381, 9382, 9383, 9433,  
9434, 9435, 9436, 9479, 9480, 9507, 9508,  
9510, 9519, 9522, 9557, 9580, 9581, 9593,  
9594, 9606, 9655, 9704, 9716, 9717, 9736,  
9740, 9743, 9749, 9758, 9760, 9762, 9806,  
9936, 10042, 10043, 10080, 10114, 10141,  
10144, 10215, 10216, 10217, 10218, 10219,  
10246, 10300, 10301, 10321, 10323, 10414;  
(2): 10926, 10937, 10946, 10959, 10984,  
11008, 11129, 11219, 11387, 11388, 11389,  
11391, 11394, 11465, 11502, 11503, 11504,  
11541, 11549, 11570, 11571, 11574, 11619,  
11622, 11623, 11624, 11657, 11672, 11686,  
11687, 11688, 11696, 11748, 11780, 11814,  
11816, 11830, 11832, 11848, 11850, 11874,  
11979, 12060, 12062, 12072, 12164, 12182,  
12183, 12184, 12185, 12186, 12187, 12189,  
12271, 12272, 12620, 12632, 12780  
Naval Training Device Center, VI: 7014, 7687, 7697,  
7698, 7699, 8242; VII-X(1): 10258; (2): 11643  
Navy Electronics Lab., II: 2232; III: 3620, 3621;  
IV: 4021, 5198; V: 5555; VI: 8138  
Navy Hydrographic Office, VI: 8067  
Navy Mine Defense Lab., VII-X(1): 10380  
New York Naval Shipyard, III: 3151  
Office of Naval Operations, IV: 4730; V: 6533  
Office of Naval Research, I: 864; II: 2089; III: 2383,  
2974, 3383; IV: 3729, 3814, 3877, 3883, 4153,  
4201, 4225, 4284, 4385, 4390, 4566, 4701,  
4769, 4808, 4854, 4920, 4956, 5062, 5158,  
5206; V: 5683, 6331, 6557, 6558, 6577, 6609;  
VI: 7162, 7209, 7607, 8213; VII-X(2): 12530,  
12559  
Group Psychology Branch, VII-X(1): 9722  
Special Devices Center, I: 783, 845; II: 984, 986,  
1283, 1324, 1351, 1470, 1486, 1487, 1994,  
2113, 2134, 2156, 2176, 2235, 2236; III: 3267,  
3651, 3652, 3653, 3654; IV: 3735, 3749, 3838,  
4020, 4076, 4209, 4265, 4266, 4268, 4269,  
4270, 4271, 4274, 4446, 4597, 4619, 4689,  
4836, 5040, 5146, 5147; V: 6590

Office of the Chief of Naval Operations, IV: 3951,  
3952  
Office of the Surgeon General, II: 1180, 1207, 1621,  
2015, 2270  
Philadelphia Naval Hospital, I: 236  
Philadelphia Naval Shipyard, III: 2771  
U.S. OFFICE OF TECHNICAL SERVICES, I: 677  
U.S. RESEARCH AND DEVELOPMENT BOARD,  
I: 318, 703  
U.S. SENATE, VII-X(1): 8341, 8458, 8468, 8485, 8700;  
(2): 11583  
U.S. VETERANS ADMINISTRATION HOSPITAL,  
VII-X(1): 8922  
U.S. WEATHER BUREAU, II: 1552  
UNIVERSAL MATCH CORP., III: 3575; IV: 5092, 5093,  
5094  
UNIV. HOSPITALS, VII-X(2): 12769  
UTAH, UNIV., VI: 7955; VII-X(2): 10811, 10812, 10813,  
10814, 12602  
VIRGINIA, MEDICAL COLL., III: 3292  
VIRGINIA, UNIV., I: 581, 582; II: 1996, 2089; III: 2912,  
3111, 3112, 3113, 3114; IV: 4340, 4341, 4342,  
4512, 4561, 4562, 4844; VII-X(2): 11499  
WASHINGTON UNIV., I: 271, 311, 853; II: 1206, 2082,  
2083, 2202, 2203, 2228; III: 2541, 2623, 2703,  
2704, 2807, 3482, 3572, 3573, 3613, 3616;  
V: 5722; VII-X(2): 11877, 11887, 11959  
WASHINGTON, UNIV., II: 1204; VII-X(1): 8926, 8927,  
8969, 9029, 9839; (2): 10673, 10674, 10676,  
10686, 10712, 11078, 11085, 11900  
WELLESLEY COLL., VII-X(1): 9358  
WEST INDIES. UNIV. COLL., VII-X(1): 10470  
WESTERN ELECTRO-ACOUSTIC LAB., INC.,  
VII-X(2): 12568, 12569  
WESTERN ONTARIO UNIV. (CANADA), IV: 4241  
WESTERN RESERVE UNIV., IV: 5041; V: 6290  
WESTINGHOUSE ELECTRIC CORP., IV: 3740  
WETMORE HODGES AND ASSOCIATES, II: 1192  
WHIRLPOOL CORP., VII-X(2): 12848  
WILLIAMS COLL., II: 1624  
WINZEN RESEARCH INC., VII-X(1): 8345  
WISCONSIN, UNIV., II: 1160, 1714, 1849, 1891;  
III: 2384, 2386, 3074, 3075, 3224, 3227, 3262;  
VII-X(1): 9095  
WOODS HOLE OCEANOGRAPHIC INST., III: 3318  
YALE UNIV., VII-X(2): 12115

## SUBJECT INDEX

### ABDOMINAL PRESSURE

#### effects of:

- explosive decompression, IV: 3774
- respiration, VII-X: 8796

#### effects on:

- blood, VII-X: 8767
- blood pressure, II: 1106; III: 3085
- circulation, II: 1064, 1105, 1512; VII-X: 8767
- heart function, II: 1512
- respiration, II: 1064

#### role in:

- pressure breathing, II: 1105
- respiration, II: 1193, 1194; IV: 3921; VI: 6884

### ABILITY *see* Flying ability; Mental ability; Rhythmic ability

### ABNORMALITIES *see under* Ballistocardiogram; Bone; Electrocardiogram; Heart; Heart function; Labyrinth; Vectorcardiogram. *Also see items under* Disorders; Disturbances

### ABSENTEEISM

- incidence, III: 3611

### ACCELERATION (incl. Deceleration) (*see also* Artificial gravity; Body movements (passive); Centrifugation; Change of acceleration; Impact; Oscillation; Rotation; Tumbling)

- aftereffects, VI: 7197; VII-X: 10092
- analysis, II: 1311; VII-X: 10199
- cause of:

- anxiety, II: 1474
- eye movements, III: 3057; VII-X: 10105, 10209
- fatigue, VII-X: 10167
- inguinal hernia, VI: 7857
- lung pathology, VII-X: 11990
- motion sickness, VII-X: 11833
- spine injuries, VII-X: 11891
- visceral displacement, V: 5789; VII-X: 10155
- visual illusions, I: 251, 408, 409, 410; IV: 3884; V: 5615; VII-X: 9472, 9479

#### classification, VII-X: 10010

#### effects on:

- blood, VII-X: 10005, 10166
- body fluid distribution, I: 368; II: 1441; III: 2786
- brain activity, VI: 7228
- brain sodium-potassium ratio, III: 2786; IV: 4204; VII-X: 10034
- catecholamine excretion, VII-X: 10077
- circulation, II: 1803; IV: 4095; V: 5803, 5804, 5809; VII-X: 10214
- cerebral circulation, I: 875
- peripheral circulation, VI: 7231
- conditioned reflexes, VII-X: 10195
- digestive system function, VII-X: 10186
- electrocardiogram, VII-X: 10032
- electroencephalogram, VII-X: 9153, 10001
- galvanic skin response, VII-X: 10054
- gastric secretion, VII-X: 10186, 10188
- intestinal secretion, VII-X: 10187
- labyrinth, I: 408; II: 1474, 1550; III: 2852, 2975,

- 3057, 3412; IV: 4501; VI: 7205; VII-X: 9505, 10107, 12063, 12557

- mental performance, VII-X: 10138
- muscle sodium-potassium ratio, VII-X: 10034
- muscular tonus, VII-X: 10071, 10105
- neuromuscular performance, VI: 7227
- nystagmus, VII-X: 10015
- performance, IV: 3900; V: 5775; VII-X: 10230
- phosphorus metabolism, VII-X: 10166
- pilot performance, IV: 3752; VI: 7197; VII-X: 10017, 10026, 10111, 10168, 10205, 11584
- psychomotor performance, IV: 4822; VI: 7227, 7229, 7236; VII-X: 9569, 10027, 10028, 10037, 10038, 10064, 10100, 10127, 10195
- animal experiments, VII-X: 10145
- research methods, VII-X: 10056, 10094
- reaction time, III: 3539
- respiration, VII-X: 10179
- salivary glands, VII-X: 10188
- size perception, VII-X: 10208
- spatial orientation, I: 251, 408, 409, 900; VI: 7193, 7230; VII-X: 9472, 9508, 9665, 10130
- spinal column, VII-X: 10157
- time estimation, V: 5787
- vectorcardiogram, VII-X: 10025
- visual acuity, V: 5811
- visual illusions, V: 5791
- visual perception, V: 5530; VII-X: 10076, 10100
- X-ray tolerance, VII-X: 10192
- general physiological effects, I: 423; II: 1138, 1429, 2137; III: 2414, 3017, 3097, 3619; IV: 3900, 4205, 4863; V: 5808; VI: 7198, 7208; VII-X: 8762, 10048, 10049, 10067, 10078, 10086, 10108, 10151, 10167, 10168, 10174, 10204
- animal experiments, VI: 7210; VII-X: 10214, 12734
- post-mortem findings, V: 5778
- research, V: 5783; VII-X: 8420, 10098, 10173, 12734
- research methods (*see also* Centrifuges), II: 2125, 2126, 2132; III: 3477; VI: 7214; VII-X: 10075, 10147
- reviews, V: 5775
- test methods, VII-X: 12733
- time factors, V: 5776
- general psychological effects, II: 1474; IV: 3900; V: 5775, 6685; VII-X: 10151
- test methods, VII-X: 10072
- hazards, VII-X: 10099
- in accidents, V: 6557; VI: 8070
- in parachute jumping, IV: 4559
- measurement, I: 602; II: 1311; III: 3039; V: 6558; VI: 7211; VII-X: 10058
- pathological effects
- post-mortem findings, VII-X: 10070
- protection (*see also* Anti-g devices; Anti-g procedures; Anti-g suits; Anti-g valves), VII-X: 10013, 10049, 10067, 12190, 12258
- terminology, VII-X: 10010, 10050, 10074, 10191



- tolerance *see* Acceleration tolerance
- ACCELERATION (CONTINUOUS)**  
 animal experiments, VII-X: 10211  
 effects on growth, VII-X: 10211  
 general physiological effects, VI: 7209; VII-X: 8437, 10169
- ACCELERATION (NEGATIVE)**  
 aftereffects, VI: 7206; VII-X: 10093  
 cause of motion sickness, III: 3122  
 effects on:  
   brain, IV: 3809  
   cerebral circulation, I: 307, 308, 309  
   circulation, II: 1422  
   conditioned reflexes, VII-X: 10093  
   digestive system function, III: 3122  
   eye, VII-X: 10200  
   lung, IV: 3809  
   psychomotor performance, VI: 7206  
   respiration, I: 307, 309  
 general physiological effects, V: 5778  
   post-mortem findings, V: 5778  
 pathological effects, IV: 4638  
 protection, IV: 5173  
 tolerance, II: 1061; III: 2625, 3467; IV: 3809; V: 5778  
   effects of acceleration adaptation, V: 5779; VI: 7206  
   time factors, IV: 4638
- ACCELERATION (POSITIVE), V: 5797**  
 aftereffects, VII-X: 10091, 10218  
 cause of:  
   brain injuries, VII-X: 11946  
   spine injuries, V: 6340  
 effects on:  
   adrenal glands, VII-X: 9928  
   arm movements, II: 1201  
   blood, VII-X: 10007, 10134  
   blood cells, VII-X: 10062, 10063  
   blood pressure, IV: 4506, V: 5797; VI: 7213; VII-X: 10118, 10122  
   brain activity, V: 5810; VII-X: 10131  
   circulation, VII-X: 10095, 10101, 10210  
     cerebral circulation, III: 2461  
     renal circulation, VII-X: 10132  
     retinal circulation (*see also* Blackout), II: 1331, 1693  
   electrocardiogram, I: 720; VI: 7199; VII-X: 10131, 10137, 10162, 10163  
   electroencephalogram, VI: 7194; VII-X: 8733, 10194  
   electromyogram, VII-X: 10003  
   electroretinogram, IV: 4532  
   eye movements, VII-X: 10014  
   heart function, VII-X: 10019, 10123, 10124, 10158  
   kidney, VII-X: 10161  
   kidney function, VII-X: 10073, 10132, 10134  
   metabolism, VII-X: 10004  
     enzyme activity, VII-X: 10218  
     oxygen consumption, VII-X: 10101  
   metabolism of organs  
     brain, IV: 3910  
     muscles, IV: 3910  
   metabolism of substances  
     potassium, IV: 3910  
     sodium, IV: 3910  
   peripheral vision, IV: 4531  
   pilot performance, VII-X: 10002, 10065  
   psychomotor performance, VII-X: 10002, 10056, 10065, 10091  
   pulse rate, VII-X: 10030  
   pupil size, VII-X: 10014  
   reaction time, VI: 7196; VII-X: 10029, 10065  
   reflexes, V: 5810  
   respiration, VII-X: 9868, 10004, 10008, 10009, 10022, 10156  
   salivary sodium-potassium ratio, VII-X: 10006  
   scale reading, V: 5812  
   time estimation, VII-X: 10066  
   urine composition, II: 1881  
   urine sodium-potassium ratio, VII-X: 10006  
   vascular tonus, VI: 7215  
   vectorcardiogram, VI: 7199  
   visual acuity, VII-X: 10065  
   visual perception (*see also* Blackout), VII-X: 10029, 10180  
   visual thresholds, VII-X: 10207  
 general physiological effects, IV: 3981; V: 5814; VII-X: 10041  
   post-mortem findings, V: 5778  
   time factors, V: 5815  
 general psychological effects, V: 5814; VII-X: 10065  
 pathological effects, IV: 4638; VII-X: 10041  
 tolerance (*see also* Anti-g procedures), I: 795; II: 1061, 1062, 1063, 1330, 1693, 2133; III: 2600, 2625; IV: 4951, 5017; V: 5778, 5814; VI: 7210, 8041; VII-X: 10041  
   animal experiments, VII-X: 10117, 10118, 10158, 10162, 10163, 10193  
 effects of:  
   anoxia, VII-X: 9834  
   anti-g suits, IV: 4531; VII-X: 10124, 10137  
   cold acclimatization, VII-X: 10150  
   continuous immersion VII-X: 10224, 10225  
   drugs, VII-X: 10193  
   epinephrine, VII-X: 10160  
   heat, VII-X: 10035  
   metaraminol, V: 6364  
   muscular tonus, IV: 4256  
   norepinephrine, VII-X: 10160  
   subgravity, VII-X: 10012  
 general physiological factors, VII-X: 10133  
 relation to:  
   age, VII-X: 10193, 11668  
   blood pressure, VII-X: 10216  
   cerebral circulation, VII-X: 10118  
   circulation, IV: 4587; VII-X: 10217  
   personality, VI: 7232  
   polycythemia, VII-X: 10182  
   research, VII-X: 12335  
   test methods, VI: 7200; VII-X: 10180, 10219  
   time factors, IV: 4638; V: 5786; VII-X: 10137
- ACCELERATION (SMALLER THAN 1 G) *see* Sub-gravity**
- ACCELERATION (TRANSVERSAL)**  
 cause of:  
   passive body movements, VII-X: 10045  
   visceral displacement, VII-X: 10096  
 effects on:  
   blood oxygen tension, VII-X: 10177  
   circulation, VII-X: 10095, 10142, 10177, 10210  
   electrocardiogram, VII-X: 10052, 10197  
   kidney function, VII-X: 10201  
   oxygen consumption, VII-X: 10221  
   performance, VII-X: 9943  
   pilot performance, VII-X: 10057, 10112  
   psychomotor performance, VII-X: 10052, 10110  
   pulmonary circulation, VII-X: 10178  
   pulse rate, VII-X: 10142, 10176  
   respiration, VII-X: 10018, 10022, 10039, 10040, 10052, 10096, 10104, 10154, 10156, 10203, 10221  
   urine composition, VII-X: 10016  
   vital capacity, VII-X: 10220  
 general physiological effects, II: 1332; III: 2785; IV: 4081; VII-X: 10184  
 tolerance, I: 116; II: 1061, 1332; III: 3497; IV: 4081, 4999; VII-X: 10039, 10045, 10051, 10052, 10057  
   animal experiments, VII-X: 10184

- effects of pressure breathing, VII-X: 10202  
 role of spleen, VII-X: 10197, 10198
- ACCELERATION ADAPTATION**  
 effects on negative acceleration tolerance, V: 5779;  
 VI: 7206
- ACCELERATION TOLERANCE** (see also Anti-g suits;  
 Impact tolerance), I: 205, 543, 752; II: 1515, 1803,  
 2137; III: 2929, 3631; IV: 4926, 4963, 4995,  
 5000, 5001; VI: 7198, 7220, 7222, 7225; VII-X:  
 9856, 9882, 10024, 10046, 10088, 10097,  
 10035, 10173, 10174, 12352
- animal experiments, VI: 7193, 7209; VII-X: 10020,  
 10053, 10082, 10129, 10141, 10164, 10165
- effects of:  
 anti-g suits, V: 5785  
 anxiety, V: 5777; VI: 7201  
 change of acceleration, VII-X: 10011, 10012  
 drugs, VI: 7877  
   Lucidril, VII-X: 10149  
 encapsulation, VII-X: 12231  
 environmental temperature, VII-X: 10033  
 hypothermia, VII-X: 10020, 10021  
 immersion, VII-X: 10020, 10021, 10023, 10048,  
 10082, 10086, 10106, 10129, 10130, 10141,  
 10206, 12231  
 oxygen breathing, VII-X: 10100  
 plant extracts, VII-X: 10060  
 posture, I: 631; IV: 4061; V: 5784; VII-X: 8762,  
 10051, 10172, 10175, 10274  
 prone position, I: 92, 478  
 safety belts, VI: 7217; VII-X: 10120, 12254  
 safety harnesses, VI: 7207, 7212; VII-X: 12274  
 subgravity, VII-X: 10011, 10223, 10274  
 supine position, I: 116; III: 2785; V: 5785  
 tilting, III: 2785  
 X-rays, VII-X: 10192
- physical factors, VII-X: 10175  
 psychological factors, VII-X: 10159
- relation to:  
 age, VII-X: 10165  
 epilepsy, VII-X: 11947  
 personality, VI: 7223  
 reticulo-endothelial system, VII-X: 10181
- research, VI: 7226; VII-X: 10048, 10090, 10183,  
 10205
- research methods, IV: 4337; V: 5807; VI: 7216
- reviews, III: 3630
- role of:  
 adrenal glands, VII-X: 10148  
 hypophysis, VII-X: 10148
- test methods, III: 2716; V: 5795; VII-X: 10125
- time factors, VII-X: 10116
- ACCELERATORS** see Animal centrifuges; Centrifuges;  
 Human centrifuges; Vertical accelerators
- ACCEPTABILITY** see under Food
- ACCIDENT PRONENESS**, I: 596, 610; II: 1084, 1398, 2164;  
 III: 3448; IV: 4657, 4826; V: 6559; VI: 8075
- general physiological factors, I: 605
- psychological factors, III: 3303; IV: 4488; VII-X:  
 12434
- relation to:  
 age, II: 1771; VI: 7785, 8125; VII-X: 12435  
 electroencephalogram, V: 6422; VII-X: 12403  
 neuroses, VI: 8094  
 personality, IV: 4154, 5083  
 practice, VI: 8125
- test methods, IV: 4751; V: 6572; VI: 8123; VII-X:  
 11816
- tests, III: 3302
- ACCIDENTS** (see also Aircraft debris, hazards; Aviation  
 casualties; Crash injuries; Ditchings; Disaster rescue;  
 Helicopter accidents), IV: 3927; V: 6567
- acceleration, V: 6557; VI: 8070
- analysis (see also Post-mortem examination), I: 522,  
 698, 818, 843; II: 1212, 1337, 1354, 1399,  
 1544, 1928, 2261; III: 2848, 2894, 2954; IV:  
 4172, 4320, 4321, 4395, 4677, 4798; V: 6544,  
 6558; VI: 8113; VII-X: 12372, 12419, 12420,  
 12436
- cause of:  
 fat embolism, VII-X: 12395  
 injuries, VII-X: 12392, 12398, 12400  
 neuroses, IV: 4060  
 spine injuries, VII-X: 12380  
 tissue embolism, VII-X: 12995
- caused by:  
 anoxia, V: 6436  
 birds, VII-X: 12396  
 blinking, VI: 8085; VII-X: 12383  
 carbon monoxide poisoning, V: 6436; VII-X: 12157  
 dazzle, II: 2059  
 diseases, VII-X: 12421  
 disturbances of spatial orientation, VI: 8082, 8093,  
 8119, 8124; VII-X: 12389, 12399, 12417  
 fainting, VI: 8112  
 fascination, II: 2059  
 heart pathology, I: 9, 248; VII-X: 12388  
 poisonous substances, VI: 8089; VII-X: 12421  
 sensory illusions, II: 1250  
 visual illusions, II: 1251; III: 3422
- classification, VI: 8122
- congresses, meetings, and symposia, VII-X: 8411,  
 12173
- engineering factors, I: 466, 603, 852; II: 1299, 2164,  
 2227; III: 2310, 3471; IV: 3708, 4586, 4656,  
 5119; V: 6568; VI: 7369, 8095; VII-X: 12419,  
 12422, 12428, 12432, 12436
- environmental factors, IV: 4586; VI: 8104, 8121;  
 VII-X: 12375
- general physiological effects, VII-X: 12408
- general psychological effects, II: 1874; III: 2639,  
 2796; VII-X: 12408
- human factors (see also Pilot error), I: 145, 211, 212,  
 213, 248, 249; II: 1085, 1237, 1239, 1251,  
 1299, 1337, 1398, 2059, 2164, 2214; III: 2331,  
 2339, 2612, 3226, 3271, 3320, 3334, 3471,  
 3494; IV: 3705, 3970, 3971, 3973, 4193, 4395,  
 4466, 4474, 4488, 4582, 4586, 4657, 4675,  
 4738, 4755, 4887, 4993, 5042, 5083, 5117,  
 5119; V: 6418, 6542, 6543, 6547, 6549, 6559,  
 6562, 6565, 6568, 6571, 6573, 6574; VI: 7253,  
 7698, 8071, 8073, 8074, 8077, 8083, 8086,  
 8089, 8095, 8097, 8099, 8101, 8104, 8105,  
 8106, 8110, 8111, 8114, 8115, 8116, 8120,  
 8121, 8122, 8126, 8172; VII-X: 10385, 11611,  
 11635, 11636, 11827, 12172, 12373, 12376,  
 12377, 12378, 12381, 12385, 12386, 12402,  
 12404, 12409, 12412, 12416, 12419, 12421,  
 12422, 12426, 12428, 12429, 12430, 12431,  
 12432, 12433, 12434, 12436, 12438, 12439
- analysis, IV: 4058
- in instrument flight, VII-X: 12436
- investigation, IV: 4567; 4677; V: 6444, 6545, 6551,  
 6555; VI: 7971, 8072, 8087, 8091, 8098, 8102,  
 8103, 8117, 8118; VII-X: 10631; 12382, 12386,  
 12390, 12392, 12405, 12406, 12409, 12425,  
 12430, 12431
- prevention (see also entries under Safety), I: 660, 661,  
 818; III: 2391; IV: 4466, 4754, 5119; V: 5504,  
 6541, 6543, 6548, 6570, 6637; VI: 8076, 8078,  
 8079, 8081, 8088, 8089, 8092, 8097, 8108, 8109,  
 8112; VII-X: 12171, 12374, 12378, 12392,  
 12398, 12401, 12402, 12404, 12405, 12407,  
 12419, 12427, 12438, 12581
- administrative and organizational aspects,  
 VI: 8100; VII-X: 12379, 12432

- bibliography, II: 1503  
 relation to:  
   arteriosclerosis, VII-X: 11951, 12168  
   climate, III: 2339  
   depth perception, I: 249  
   diurnal cycle, VII-X: 12424  
   hyperventilation, IV: 4392; V: 6546  
   pilot physical fitness, VII-X: 12053  
   statistics, I: 40, 60, 169, 207, 208, 209, 210, 211, 212, 213, 482, 577, 660, 765, 852; III: 2371, 2391, 2685, 3322; IV: 3705, 4083, 4466, 4577, 4784, 4993, 5119; V: 6544, 6560, 6565; VI: 8074, 8095, 8107, 8113; VII-X: 12372, 12374, 12379, 12385, 12428
- ACCLIMATIZATION** see Altitude acclimatization; Carbon dioxide a.; Carbon monoxide a.; Cold a.; Heat a. Also see entries under Adaptation; Adjustment; and Habituation
- ACCOMMODATION** see Visual accommodation
- ACETYLCHOLINE**  
 effects on:  
   circulation V: 5998  
   hypothermia tolerance, V: 5430
- ACETYLCHOLINE METABOLISM**  
 role in color vision, II: 1948, 1949
- ACETYSALICYLIC ACID**  
 effects on:  
   labyrinth, II: 2859  
   reaction time, VII-X: 11981
- ACHIEVEMENT TESTS**, I: 295, 833, 848; II: 2178, 2197; III: 3175, 3176
- ACID-BASE BALANCE** see entries under pH
- ACIDOSIS** (see also Hypercapnia)  
 caused by:  
   apnea, V: 5352  
   hypothermia, V: 5395; VI: 6896  
 effects on:  
   cerebral circulation, II: 2060  
   voluntary apnea, III: 3510
- ACOUSTICAL COMFORT**, I: 576; II: 1951
- ACOUSTICAL FILTERS**, IV: 4646
- ACOUSTICAL TRAUMA** see Deafness. Also see Effects on hearing under Aerotitis media; Airplane flight; Airplane noise; Blast; Engine noise; Jet engine noise; Jet plane noise; Noise; Sound; Ultrasonic vibrations
- ACROBATIC FLIGHT** (see also Flight maneuvers)  
 effects on:  
   circulation, VII-X: 10128  
   labyrinth, VII-X: 10036  
   respiration, VII-X: 10128
- ACTH** see Adrenocorticotrophic hormone
- ACTION POTENTIALS** see under Auditory nerve; Carotid sinus nerve; Myocardial tissue; Nerves; Phrenic nerve; Spinal cord. Also see Electrocardiogram; Electroencephalogram; Electromyogram; Electrooculogram; Electroretinogram. Also see entries under Electrical potentials
- ACTIVITY CYCLE** (see also Work-rest cycle)  
 effects on biological rhythms, IV: 4834  
 relation to:  
   aldosterone excretion, VII-X: 8609  
   metabolic rhythm, VII-X: 8621  
   steroid excretion, VII-X: 8618
- ACTIVITY RHYTHM**  
 effects of:  
   environmental temperature, III: 3462  
   illumination, III: 2403; IV: 3746, 4169; V: 5257; VII-X: 8565  
   starvation, VII-X: 11490  
   water deprivation, VII-X: 11471  
 relation to:  
   body temperature rhythm, III: 3013; VI: 6769  
   cosmic ray cycle, VII-X: 8552  
   diurnal cycle, III: 2402, 3013, 3154; IV: 3746, 4169, 4799; V: 5257; VI: 6767, 6775, 7596; VII-X: 8559, 8565, 8603  
   animal experiments, VII-X: 8615  
   electroencephalogram, VII-X: 8559  
   hibernation, VII-X: 8638  
   lunar cycle, V: 5257  
   physical fitness, IV: 4799  
   pulse rate rhythm, III: 3013
- ACUITY** see Visual acuity
- ADAPTABILITY**  
 to emergencies, V: 6242  
 to isolation  
   test methods, VII-X: 11197  
   to temperature changes, VII-X: 10660
- ADAPTATION** see Acceleration adaptation; Auditory a.; Color a.; Dark a.; General adaptation syndrome; Respiratory a.; Restraint a.; Retinal a.; Rotation a.; Stress a.; Vibration a. Also see entries under Acclimatization; Adjustment; Habituation; Lack of adaptation; and Preadaptation
- ADAPTATION TO ENVIRONMENT**, VII-X: 9939
- ADAPTATION SYNDROME** see General adaptation syndrome
- ADAPTINOL** see Xanthophyll and derivatives
- ADENOIDS**, II: 2083
- ADENOSINE MONOPHOSPHATE**  
 effects on blood plasma, II: 1820
- ADENOSINE TRIPHOSPHATE**  
 effects on heart, VI: 7342
- ADENYL-PYROPHOSPHORIC ACID** see Adenosine triphosphate
- ADJUSTMENT** (see also entries under Acclimatization; Adaptation; Habituation; and Readjustment)  
 to flight duty, VII-X: 9733  
 to military service  
   relation to personality, V: 5725; VI: 7158  
 to social isolation, VI: 7610  
 to starvation, VII-X: 11491  
 to training, V: 6238  
   relation to galvanic skin response, IV: 3845  
   test methods, VI: 7676
- ADMINISTRATIVE AND ORGANIZATIONAL ASPECTS** see under Accidents, prevention; Aerospace medicine; Air evacuation; Aviation medicine; Dental service; Personnel, medical care; Space medicine
- ADRENAL ACTIVITY RHYTHM**  
 relation to:  
   blood cell rhythm, V: 5258, 5264  
   diurnal cycle, IV: 4294; V: 5264; VII-X: 8570, 8602  
   electrolyte excretion, V: 5264
- ADRENAL GLANDS** (see also Cortisone; Epinephrine; Norepinephrine; Prednisone; Steroids)  
 ascorbic acid content, II: 1012; III: 2417  
 effects of:  
   chlorpromazine, VII-X: 10810  
   cold, VII-X: 10810, 10870  
   heat, VII-X: 10810  
   reserpine, VII-X: 10810
- effects of:  
   adrenocorticotrophic hormone, IV: 4085; VII-X: 10455  
   airplane flight, III: 3233; VII-X: 9883  
   altitude, I: 227, 539; III: 3022  
   altitude acclimatization, V: 5838  
   anoxia, I: 611, 614; II: 1582; III: 2527, 2936; IV: 5041, 5108; VII-X: 9829, 9832, 10627  
   ascorbic acid, IV: 4085  
   carbon dioxide, III: 3429; IV: 4462, 4914; V: 6443  
   cold, II: 1842; III: 2645, 2646, 2995, 3193; IV: 4085; V: 5985, 6029; VII-X: 10662, 10710, 10727, 10831, 10868, 10869

- cold acclimatization, IV: 4019; VI: 7476; VII-X: 10837
- cold pressor test, VII-X: 9928
- environmental temperature, VII-X: 9999
- heat, III: 2568, 3193; IV: 5041
- high speed flight, VII-X: 9877
- hypercapnia, III: 3003, 3004, 3428
- hyperoxia, II: 1054; IV: 4214, 4216
- hyperthermia, V: 5377, 5461
- hypocapnia, VII-X: 9829
- hypothermia, IV: 4102, 4103, 4198; V: 5287, 5431, 5445; VII-X: 9030, 9055, 9066, 9088, 9114
- mental stress, III: 2770
- microwave radiation, VII-X: 11351
- noise, I: 449; II: 1519; IV: 3739; VII-X: 10929, 10930
- physical work, II: 2220; V: 6102; VI: 7543; VII-X: 9928, 9999
- positive acceleration, VII-X: 9928
- stress, II: 1462, 1691; III: 2417
- tumbling, V: 5813
- metabolism
- effects of cold, IV: 4710; V: 5967, 6030; VI: 7453
- relation to diurnal cycle, VII-X: 8573
- relation to:
- blood pressure, III: 2770
- cardiovascular system, III: 2938
- role in:
- acceleration tolerance, VII-X: 10148
- altitude acclimatization, I: 491; II: 1411
- anoxia, I: 491, 539, 611, 614; IV: 4693; VII-X: 10491, 10506, 10532
- anoxia tolerance, III: 2937, 3239
- cold acclimatization, III: 2657, 2917, 2918, 2919, 3169, IV: 4048; V: 5403, 6044; VII-X: 10757, 10760, 10769
- cold tolerance, III: 2512; IV: 3862, 4346; V: 5973, 5986, 6034; VII-X: 10723
- fatigue, II: 1690, 1797
- heat acclimatization, III: 2917
- hematopoiesis, IV: 4801; VII-X: 10489
- hibernation, III: 2646; VII-X: 8645, 8655, 8657, 10921
- hyperoxia, III: 2799
- hyperoxia tolerance, IV: 4215, 4971
- lipid metabolism, IV: 4728; V: 5274
- liver metabolism, V: 5274
- mental stress, VII-X: 11178
- metabolism, III: 2513
- potassium metabolism, IV: 4602, 4187
- stress tolerance, V: 5769; VII-X: 9832
- temperature regulation, IV: 3946, 4564; V: 5432, 5759; VII-X: 9029
- ADRENALINE *see* Epinephrine
- ADRENOCROME
- effects on blood cells, V: 6125
- ADRENOCORTICOTROPIC HORMONE
- cause of fatigue, VI: 7606
- effects on:
- adrenal glands, IV: 4085; VII-X: 10455
- altitude tolerance, VII-X: 9133
- anoxial tolerance, II: 2121; IV: 4598; VII-X: 10584
- blood cells, VI: 7459
- carbohydrate metabolism, VII-X: 10589
- cold tolerance, VII-X: 9133, 10726
- metabolism, VII-X: 9133, 9878
- ADVANCE INFORMATION
- effects on:
- mental performance, II: 1809, 1810
- psychomotor performance, II: 1720; III: 2758, 3077, 3336; IV: 4323
- spatial orientation, II: 1789
- speech intelligibility, IV: 3851
- AERIAL GUNNERS
- training, II: 1160, 1466, 2007
- AERIAL GUNNERY, II: 1046, 1410
- effects of vestibular stimulation, VI: 7097
- training devices, II: 1160
- AERIAL PHOTOINTERPRETATION, V: 6602
- AERIAL SEARCHING, II: 1360, 1751; VII-X: 12067
- use of instrumental magnification, VI: 8171
- AERODONTALGIA *see* Dental disturbances caused by altitude
- AEROEMBOLISM *see* Decompression sickness
- AEROMEDICAL FIELD LABORATORY (U. S. AIR FORCE), VII-X: 8429
- AEROMEDICAL LABORATORY *see* Aerospace Medical Laboratory (U. S. Air Force)
- AEROMETEORITES *see* Aircraft debris
- AEROPAUSE *see* High altitude
- AEROPLAST, I: 238; II: 2101
- AEROSOLS, VII-X: 8470
- AEROSPACE MEDICAL LABORATORY (U. S. AIR FORCE), VI: 6759
- AEROSPACE MEDICINE (*see also* Aviation medicine; Space medicine), VI: 6711; VII-X: 8281, 8371, 8378, 9840, 9983
- administrative and organizational aspects, VII-X: 8415
- bibliography, VII-X: 8363, 8366, 8369, 8372
- congresses, meetings, and symposia, VI: 6743, 6746, 6749; VII-X: 8374, 8375, 8377, 8379, 8381, 8382, 8383, 8386, 8393, 8400, 8403, 8406, 8407, 8408
- handbooks and treatises, VI: 6735; VII-X: 8346, 8348, 8350, 8352, 8354, 8356, 8358, 8359, 8360
- history, VII-X: 8301, 8309, 8318, 8320, 8341
- medical problems, VII-X: 8318
- motion pictures
- bibliography, VII-X: 8368
- research, VII-X: 8309, 8430, 8438, 8443, 8453, 8458, 8460, 8469, 8485
- history, VII-X: 8302
- use of motion pictures, VII-X: 8464
- research methods, VII-X: 8433
- reviews, VII-X: 8343
- terminology, VII-X: 8460
- AEROTITIS MEDIA, I: 48, 185, 292, 510, 511; II: 1206, 1302, 1381, 1702, 1940, 2045; III: 2575, 2666, 2984, 3054, 3063, 3242, 3372, 3567, 3632; IV: 3924, 4399; VI: 7839, 7856, 7859; VII-X: 11948, 11958, 11959, 11978
- effects on hearing, II: 1381; VII-X: 9419
- incidence, II: 2042
- relation to:
- dental anomalies, II: 2244
- Valsalva maneuver, VII-X: 11977
- treatment, IV: 4057, 4495; V: 6343, 6350
- AFTEREFFECTS *see under* Acceleration; Acceleration (Negative); Acceleration (Positive); Anoxia; Blackout; Blast; Dazzle; Decompression sickness; Explosive decompression; Hypercapnia; Hypothermia; Immersion (Continuous); Ionizing radiations; Motion perception; Noise; Nuclear radiations; Space flight; Space flight (Suborbital); Starvation
- AFTERIMAGES *see* Visual afterimages
- AFTER-SOUND, I: 343
- AGE (*see also* Age factors *under* Aviators; Personnel; Pilot candidates; Pilots)
- general physiological effects, III: 3138; V: 6292, 6305; VII-X: 11784
- general psychological effects, V: 6305; VII-X: 11776
- relation to:
- abnormalities in electrocardiogram, VII-X: 8742, 11904
- acceleration tolerance, VII-X: 10165

- accident proneness, II: 1771; VI: 7785, 8125; VII-X: 12435  
 air transportability, II: 1746; V: 6391  
 altitude tolerance, IV: 4164; VI: 7784  
 anoxia tolerance, II: 1626; V: 5912, 5918, 6289; VII-X: 11759, 11791  
 arteriosclerosis, I: 678; VII-X: 12168  
 attrition of pilot candidates, VII-X: 11795  
 aviator performance, II: 2093  
 behavior, II: 1298  
 blood lipid content, I: 644, 645; IV: 4218; VII-X: 10408, 11758, 11777  
 blood pressure, VI: 7285  
 body measurements, I: 656  
 body weight, VII-X: 11756  
 bone conduction, II: 2171  
 brain activity, VII-X: 11761  
 brain metabolism, VII-X: 11759  
 carbohydrate metabolism, VI: 7474  
 cardiovascular diseases, VII-X: 12059  
 cerebral circulation, II: 2061  
 circulation, III: 2559, 3324; VII-X: 8758, 10614, 11773, 12152  
 cochlear physiology, VII-X: 11775  
 cold acclimatization, VI: 7401  
 cold tolerance, IV: 4164; V: 5995; VI: 7401, 7469, 7780; VII-X: 10914  
 color vision, VI: 7779  
 dark adaptation, IV: 4584; V: 5497; VII-X: 9234, 11766  
 decompression sickness, I: 270  
 diffusion of respiratory gases, III: 2602  
 electroencephalogram, I: 282; VII-X: 10602  
 flicker fusion frequency, VII-X: 9321  
 form perception, VII-X: 11762  
 hearing, II: 976, 2171; IV: 3861; V: 6074; VII-X: 9378, 9395, 9444, 9450, 11768, 11785, 12073  
 heat tolerance, V: 6296; VII-X: 10734  
 hematopoiesis, VI: 7348  
 hemoglobin composition, III: 3580  
 hypothermia tolerance, IV: 4599  
 interpretation of visual displays, V: 6286  
 kidney function, VI: 6931  
 mechanical properties of aorta, VII-X: 8748  
 mental ability, VI: 7783  
 mental performance, V: 6294; VI: 7771, 7776; VII-X: 11767  
 metabolism, V: 5995; VI: 7334  
 muscular function, II: 1137  
 neuromuscular performance, II: 1892  
 neuropsychiatric fitness, III: 3223  
 oxygen consumption, V: 6307  
 perspiration, V: 6295  
 physical fitness, II: 1298; III: 3272; IV: 4096; V: 6308; VII-X: 11771, 11778  
 pilot performance, II: 1822; III: 3110; IV: 4921; V: 6302; VI: 8081; VII-X: 11778  
 positive acceleration tolerance, VII-X: 10193, 11668  
 psychomotor performance, III: 3476  
 pupillary reactions, V: 6297, 6298, 6299  
 reaction time, III: 3163, 3476; IV: 3844, 3869; V: 6283; VI: 7770; VII-X: 11755, 11757  
 respiration, II: 2091; V: 6293, 6303; VI: 7572  
 retinal circulation, II: 2096  
 saliva composition, VII-X: 12059  
 sensory perception, VII-X: 11767  
 starvation tolerance, VII-X: 11470  
 stress tolerance, II: 1145; III: 3026; VII-X: 11784  
 temperature regulation, VI: 6879  
 time estimation, VI: 7778  
 vibration perception, VII-X: 9669  
 vibration tolerance, VII-X: 11037  
 visual accommodation, I: 258; V: 6284  
 visual acuity, II: 2298; VII-X: 9264, 11763, 11783  
 visual searching, VI: 7781  
 visual thresholds, II: 1926  
 work capacity, III: 2613; V: 6291; VI: 7772; VII-X: 11083, 11754  
 AGRICULTURE *see* Hydroponics; Space agriculture  
 AIMING *see* Target practice  
 AIR *see* Air conditioning; Air purification; Cold air breathing; Gas in body cavities; Respiratory gases; Survival in the air; Warm air breathing. *Also see* entries under atmosphere  
 AIR AMBULANCE SERVICE (*see also* Ambulance helicopters; Ambulance planes)  
   Canada, VI: 7884  
 AIR BASE NOISE *see* Airport noise  
 AIR BLAST *see* Blast  
 AIR CONDITIONING *see under* Airplanes; Animal containers (Sealed); Cabins; Cockpits; Pressure cabins. *Also see* Air purification; Temperature control; Ventilation. *Also see* entries under Regeneration  
 AIR CREWS (*see also* Combat crews)  
   attitudes, I: 147, 695; II: 1080, 1231, 1722, 2010; III: 2651; V: 6264  
   duties, V: 6311  
   nutrition, I: 35; II: 1083  
   performance, I: 471, 473, 540, 624; II: 950, 1038, 1338, 1417, 1558, 1559, 1616, 1722, 2010, 2013; III: 2651; IV: 4779, 5074; V: 6247, 6255; VI: 7736, 7740  
   psychological factors, V: 5742  
   social factors, IV: 4146  
   test methods, I: 471, 472, 695; II: 1246, 1675  
   tests, II: 2182; III: 2733, 2744, 3688; VI: 8181  
   rating, IV: 4191; V: 6200; VI: 7652  
   selection, II: 2011; III: 3380; V: 6203, 6276; VI: 7660, 7734, 7937  
   training, I: 298, 472; II: 1338, 1602, 1722, 2012; IV: 4824; VI: 7684, 7708; VII-X: 11630  
   prediction of success, V: 6200  
 AIR EMBOLISM *see* Blood, gas bubble formation  
 AIR EVACUATION (*see also* Air ambulance service; Air transportation of patients), III: 3546; IV: 4567; V: 6393, 6408  
   administrative and organizational aspects, VI: 7892; VII-X: 12033  
   congresses, meetings, and symposia, V: 6378  
   history, V: 6402  
   medical problems, VII-X: 12014  
   role of flight surgeons, III: 3639  
   statistics, VII-X: 12014  
   use of:  
     airplanes, III: 2953; IV: 4985; V: 6398  
     helicopters, I: 8, 16, 72, 302, 490, 528, 541, 580, 626, 897; III: 2311, 2389, 2953, 3520; IV: 4699; V: 6390, 6396, 6397, 6398, 6404, 6411; VI: 7889, 7890, 7891; VII-X: 12015, 12022, 12031, 12032, 12033  
 AIR EVACUATION (by country)  
   Algeria, VI: 7880; VII-X: 12024  
   Canada, IV: 4652  
   French East Africa, IV: 4514  
   Honduras, IV: 4569  
 AIR PRESSURE *see* Barometric pressure; Explosive decompression, Explosive recompression; Intrapulmonary pressure; Overpressure; Pressure cabins  
 AIR PURIFICATION *see* Deodorization  
 AIR SICKNESS *see* Altitude sickness; Decompression sickness; Motion sickness  
 AIR TRAFFIC CONTROL OPERATORS *see* Traffic control operators  
 AIR TRANSPORTATION *see under* Medical personnel; Medical teams; Radioactive substances. *Also see* Air

- evacuation; Air transportation of patients; Pregnancy, relation to air transportability
- AIR TRANSPORTATION OF PATIENTS** (see also Air ambulance service; Air evacuation; Ambulance helicopters; Ambulance planes; Royal Flying Doctor Service, Australia), I: 5, 26, 387, 526, 573, 580, 626, 807, 887; II: 1078, 1736, 2016, 2259, 2260; III: 2379, 2654, 3033; IV: 3995, 4260, 4507, 4567, 4922, 4969; V: 6312, 6379, 6381, 6389, 6405, 6408, 6412; VI: 7883, 7887, 7895, 7898, 7937; VII-X: 11986, 12012, 12017, 12025, 12028
- Australia, III: 2379; VII-X: 12029
- congresses, meetings, and symposia, V: 6378
- Europe, I: 717
- France, VII-X: 12035
- Great Britain, I: 59; IV: 3701, 4930
- Indochina campaign, V: 6384
- Italy, VII-X: 12036
- Korean campaign, I: 8, 54, 72, 95, 96, 528, 541, 723, 786, 897; II: 970; V: 6396, 6404; VII-X: 12031, 12032
- legal aspects, I: 319; VII-X: 8416
- medical problems, IV: 4310; VII-X: 11809
- safety, I: 25, 519, 739; III: 3658
- use of:
- airplanes, VI: 7894
  - electrocardiogram, VII-X: 12026
  - helicopters, III: 3313; VII-X: 12019
  - mechanical respirators, II: 2265; VII-X: 12038
- World War II, II: 1207
- AIR TRANSPORTATION OF PATIENTS** (by pathological condition), I: 526, 887; II: 1746; IV: 5022; V: 6337, 6379, 6383, 6384, 6391, 6406, 6407, 6412; VI: 7886; 7897; VII-X: 8271, 12023, 12028, 12034, 12039
- asthma, VII-X: 12037
- battle wounds, V: 6385; VII-X: 12015
- burns, V: 6400; VI: 7893
- cardiovascular diseases, I: 303, 387, 704, 785; II: 1600, 1790, 1791, 1792; III: 2315; 3464, 3508; IV: 3872, 4035, 4298, 4888; V: 6388, 6395, 6410; VI: 7882, 7885; VII-X: 12013, 12021, 12041
- cold, VII-X: 11985
- communicable diseases, I: 319; II: 2008; V: 6431
- eye diseases, V: 6399
- fever, IV: 4485
- gas in body cavities, I: 12, 215, 715; II: 1153
- head injuries, I: 215; IV: 4220, 5077; V: 6386; VII-X: 12027
- kidney pathology, V: 6400
- leukemia, VII-X: 10367
- mental diseases, I: 808; III: 2419, 3509; IV: 3854; V: 6409; VI: 7881, 7888; VII-X: 12020
- neck injuries, IV: 4220
- oral surgery, VI: 7896
- poliomyelitis, I: 507; II: 932, 2265; III: 3490; IV: 5177; V: 6381, 6403; VII-X: 12040
- respiratory diseases, I: 303, 387, 785; II: 1153, 2160; III: 3508; IV: 4888, 5043; V: 5889, 6388, 6392; VII-X: 12016, 12021, 12037, 12038, 12041
- sicklelema, III: 2607, 2611, 2670, 2890, 3228; IV: 3798, 4308, 4557, 4974; VII-X: 11932
- tuberculosis, V: 6394
- AIRBORNE BACTERIA** see Bacteria (Airborne)
- AIRBORNE MICROORGANISMS** see Microorganisms (Airborne)
- AIRCRAFT** (see also Airplanes; Balloons; Helicopters; Insects on aircraft; Man-propelled aircraft; Nuclear propelled aircraft)
- human engineering, I: 3, 123, 202, 281, 50c, 515; II: 1569, 2136; IV: 3709, 3882, 4045; V: 6554; VI: 8037; VII-X: 12418
- AIRCRAFT BRIGHTENERS**
- toxic effects, I: 229
- AIRCRAFT CONTROLS** (see also Helicopter controls; Instrument panels; Pedals)
- human engineering, I: 29; II: 1201, 1213, 1214, 1299, 1603, 1762, 1802, 2021, 2072, 2236; III: 2327, 2968, 3387; IV: 3740, 3907, 4275, 4348, 4431, 4672, 4703, 4877; V: 6451, 6635, 6671; VI: 7229, 8211, 8232; VII-X: 10111, 12611, 12647, 12656, 12702, 12707, 12712
- AIRCRAFT DEBRIS**
- hazards, III: 2837; VII-X: 12448
- AIRCRAFT INDUSTRY**
- relation to aviation medicine, VI: 6705
  - role of human engineering, III: 2870, 2949
- AIRCRAFT LANDINGS**, V: 6250; VI: 8185; VII-X: 12424
- hazards, IV: 4993
  - human factors, VI: 8178
  - role of motion perception, IV: 4224
  - training devices, IV: 4961; V: 6611
  - use of visual cues, IV: 4224; V: 6600, 6611; VII-X: 12564
- AIRCRAFT NOISE** (see also Airplane noise; Airport noise; Helicopter noise; Rocket noise)
- analysis, IV: 3982
  - effects on auditory thresholds, VII-X: 9394
- AIRCRAFT TAKE-OFF**, VI: 8233
- AIRPLANE CONTROLS** see Aircraft controls
- AIRPLANE CRASHES** see Accidents; Crash injuries
- AIRPLANE FLIGHT** (see also Acrobatic flight; Diving f.; Flight duty; Flight maneuvers; High altitude f.; High speed f.; Jet plane f.; Low altitude f.)
- cause of:
- eye diseases, III: 3300
  - fatigue, I: 77, 889; III: 3043, 3139, 3156, 3668; IV: 4180; V: 6121, 6128
  - phlebitis, VII-X: 11941
  - pneumothorax, VI: 7848; VII-X: 11943, 11979
  - stress, III: 3043; VI: 8148; VII-X: 9919, 9949
- disturbances of spatial orientation, VII-X: 9468
- effects on:
- adrenal glands, III: 3233; VII-X: 9883
  - auditory perception, V: 5772
  - blood cells, II: 1461; III: 2678, 2890, 3233; V: 5773
  - blood pressure, I: 844; VII-X: 11590
  - cardiovascular system, II: 1306; III: 2306, 3521; IV: 4257
  - catecholamine excretion, III: 2718
  - circulation, II: 1743; IV: 4553; VII-X: 9910
  - retinal circulation, VII-X: 10212, 10213
  - digestive system function, V: 5761
  - ear, IV: 4862
  - electrocardiogram, II: 1942
  - hearing, II: 1301, 1302, 1379; III: 3377; VII-X: 12061, 12079
  - labyrinth, II: 1439; III: 2401; V: 5772
  - paranasal sinuses, II: 1302; VII-X: 11878
  - respiration, II: 1743; IV: 4553
  - speech intelligibility, IV: 4359
  - steroid excretion, VII-X: 9927
  - teeth, IV: 4429; VII-X: 11898
  - whooping cough, I: 769, 867; IV: 4316; V: 6336, 6348, 6349
- fatigue, VII-X: 11154
- field of vision, II: 926, 1360; III: 3636; VI: 8204
- general physiological effects, II: 1870, 1942; VII-X: 9977
- general psychological effects, VI: 7169; VII-X: 9977
- hazards, II: 2099
- human factors, VII-X: 12492

- medical problems, II: 1113, 1429; III: 2420, 2985, 3079; IV: 3826, 4151, 4260, 5195; VI: 6707, 7190, 7804; VII-X: 8350, 9840, 9864, 9955, 11805  
 nutritional requirements, IV: 4768  
 pathological effects, IV: 4803  
 relation to:  
   dental disturbances, II: 1788; III: 2571; VI: 7830; VII-X: 11898  
   stress tolerance, V: 5750  
 safety (see also Accidents), I: 577; II: 1071, 1360, 1773, 2272; III: 2314, 2661, 3406; IV: 3987, 4893, 4950; V: 6427, 6448, 6450; VI: 7989, 8183; VII-X: 11629, 11746, 12170, 12171, 12172  
   congresses, meetings, and symposia, IV: 4681; VII-X: 12173  
   handbooks and treatises, VI: 7988  
   sanitary aspects, II: 1357, 2008; V: 6425, 6427; VI: 7939  
   terminology, V: 5220  
   vigilance, VII-X: 12581  
**AIRPLANE FLIGHT (SIMULATED)** (see also Flight simulators)  
   effects on catecholamine excretion, VII-X: 9987  
   use of visual displays, VII-X: 12756  
**AIRPLANE NOISE** (see also Airport noise; Engine noise; Jet engine noise; Jet plane noise), IV: 4842; VII-X: 10950  
   analysis, II: 1455, 1967, 2019, 2040, 2157; III: 2507, 3283; IV: 4245, 4438; V: 6090; VI: 7490, 7525, 8167, 8174; VII-X: 10936, 10964, 11019, 11059, 12592, 12068  
   effects on:  
     hearing, I: 28, 777; II: 1429, 1871; III: 2663, 3009, 3215, 3405; IV: 4496, 4717; VII-X: 9419, 10960, 11000, 11019  
     speech intelligibility, II: 1108; III: 3308  
     swine, VII-X: 11056  
   general physiological effects, IV: 4245, 4246, 4496; VI: 7522; VII-X: 10960  
   general psychological effects, II: 1116, 1358; III: 2507; IV: 4246, 4875; VI: 7515; VII-X: 10939, 10940, 10951, 10960  
   legal aspects, VI: 7511, 7516  
   protection, III: 3285  
   reduction, I: 500; II: 1074, 1116, 1358, 2157; III: 3308; IV: 4245, 4246, 4875; VI: 7490, 8167; VII-X: 10964, 11000, 12601  
**AIRPLANE NOISE (INTERIOR)**, IV: 3965  
   analysis, I: 296, 668; V: 6615; VII-X: 10936, 12588  
   effects on speech intelligibility, VII-X: 10962  
   reduction, I: 296, 788; 893; II: 1735, 2019; IV: 3924  
**AIRPLANES** (see also Ambulance planes; Gliders; Jet planes; Man-propelled aircraft; Training planes; see also parts of airplanes, e.g., Aircraft controls; Cabins)  
   air conditioning, III: 3459  
   human engineering, I: 114, 274, 288, 466, 661, 852; II: 1071, 1295, 1544, 1762, 2075, 2136; III: 2870; 2894, 3182, 3406, 3459; IV: 3891, 4159, 4320, 4541, 5074, 5162; V: 6585; VI: 8096, 8134, 8151, 8154, 8155; VII-X: 12039, 12392, 12393, 12490  
   kitchen facilities, I: 66, 484; IV: 3770, 4356; VI: 8261; VII-X: 12845  
   sanitary aspects (see also Insects on aircraft, control), I: 313, II: 1773, 1970; IV: 4934, 4942; V: 6426, 6428; VII-X: 11354  
   sanitary facilities, III: 3145; IV: 4595, 4596, 5033; VI: 8260  
   use in:  
     air evacuation, III: 2953; IV: 4985; V: 6398  
     air transportation of patients, VI: 7894  
     emergency medical service, VII-X: 11798  
**AIRPORT NOISE** (see also entries under Aircraft noise)  
   II: 1074, 1358; IV: 4875; VII-X: 10939, 10940, 10951, 12595, 12601  
   analysis, IV: 4875; VI: 7515; VII-X: 12595  
   reduction, IV: 4875; VII-X: 12595  
**AIRPORTS** (see also Landing strips)  
   hospital facilities, I: 600; II: 1344; VII-X: 12030  
   human engineering, I: 301; IV: 4045, 4245; VI: 8166; VII-X: 11000  
   sanitary aspects, II: 1970; V: 6433, 6434  
   use of visual signals, III: 2675  
**ALBUMINURIA** see Urine, protein content  
**ALCOHOL (ETHYL)**  
   effects on:  
     altitude tolerance, I: 349; IV: 4659  
     anoxia tolerance, II: 1400; III: 3385; IV: 4659  
     blood lipid content, VII-X: 8773, 11777  
     color vision, II: 2064; IV: 4859  
     depth perception, I: 242  
     flicker fusion frequency, III: 3385; VI: 6998  
     neuromuscular performance, III: 3136  
     pilot performance, I: 804; II: 936; III: 2360; VI: 7980  
     psychomotor performance, IV: 3938  
     visual perception, I: 242, 339  
     work capacity, III: 3220  
   general physiological effects, IV: 3938  
   general psychological effects, III: 3667; IV: 5190  
**ALCOHOL TOLERANCE**  
   animal experiments, VII-X: 8585  
   relation to diurnal cycle, VII-X: 8585  
**ALDOSTERONE EXCRETION** (see also Steroid excretion)  
   effects of:  
     heat, IV: 3985  
     posture, VII-X: 8609, 11449  
   relation to:  
     activity cycle, VII-X: 8609  
     diurnal cycle, VII-X: 8609  
**ALERTNESS** (see also Consciousness; Vigilance)  
   effects of:  
     fatigue, VII-X: 11173  
     illumination, VII-X: 9788  
     ionizing radiations, VII-X: 11293  
     motion sickness drugs, III: 3062  
     noise, VII-X: 10994  
     nuclear radiations, VII-X: 11357  
     sleep deprivation, IV: 3954  
   effects on:  
     optokinetic nystagmus, VII-X: 9471  
     psychomotor performance, IV: 4591; V: 5715  
     reaction time, V: 5714  
     speech intelligibility, III: 2533  
   measurement, II: 1659; VII-X: 9753, 9800, 9802  
   psychological factors, IV: 3885  
   relation to:  
     anoxia, II: 1325  
     electroencephalogram, II: 1659; V: 5714; VII-X: 9165  
     electromyogram, II: 1659, 2044  
     galvanic skin response, VII-X: 9694, 9793  
     personality, VII-X: 9753  
**ALGAE**  
   culturing, VII-X: 8543  
   reviews, VI: 6765, 6766; VII-X: 8517  
   photosynthesis, IV: 3793; V: 5253, 5254, 5255, 5256  
   protein content, VII-X: 12865  
   use as:  
     food, II: 1133; VI: 6765, 8250, 8266; VII-X: 8507, 8508, 8516, 8517, 8524, 8526, 8529, 8531, 8537, 8539, 9125, 12852, 12861, 12862, 12865, 12866, 12876, 12877

- gas exchanger, II: 1133; III: 3236; VI: 6765, 8250, 8266; VII-X: 8508, 8509, 8511, 8512, 8514, 8515, 8516, 8517, 8518, 8519, 8521, 8524, 8526, 8528, 8529, 8530, 8531, 8539, 8543, 8544, 12468, 12539, 12788, 12849, 12852, 12862, 12876
- ALGERIA** *see under* Air evacuation
- ALKALI RESERVE** (*see also* entries *under* pH)
- effects of:
- physical training, VI: 7583
  - physical work, VI: 7583
- ALKALOIDS** *see* Aminophylline; Atropine, Belladonna; Caffeine; Cocaine; Codeine; Ergotamine; Hydergine; Mescaline; Morphine; Nicotine, Opium; Physostigmine; Quinine; Reserpine; Scopalamine; Veratrine
- ALKALOSIS** (*see also* Hypocapnia)
- caused by:
- altitude, VI: 7265
  - high speed flight, VII-X: 9877
- effects of:
- oxygen breathing, VII-X: 8887
  - respiration, VII-X: 8887
- effects on cerebral circulation, II: 2060
- ALPHA-TOCOPHEROL** *see* Vitamin E
- ALTIMETERS** *see* Instrument dials
- ALTITUDE** (*see also* Anoxia; Bailout at low altitude; Ejection from aircraft at low altitude; High altitude flight; Inhabitants of mountains; Low altitude flight; Surgery at altitude)
- acclimatization *see* Altitude acclimatization
- cause of:
- alkalosis, VI: 7265
  - dental disturbances, I: 48, 871; IV: 4017, 4429; V: 6430; VI: 7324, 7809, 7831, 7835; VII-X: 11901, 11930
  - fainting, VII-X: 10434
  - fat embolism, VII-X: 10454
  - gas bubble formation in blood, VI: 7307
  - gas in body cavities, VI: 7267
  - hypocapnia, I: 898
  - peptic ulcer, VII-X: 11899
  - polycythemia, V: 5953
  - pulmonary edema, VII-X: 11875, 11906, 11907
  - tissue emphysema, VII-X: 10332, 11831, 11839
- effects on:
- adrenal glands, I: 227, 539; III: 3022
  - alveolar carbon dioxide tension, I: 898, 899; V: 6489; VI: 6852
  - anaphylactic tolerance, VII-X: 10352
  - anesthesia, V: 5885
  - appetite, III: 3178; IV: 4254
  - auditory perception, V: 5842; VII-X: 9365, 10313
  - autonomic nervous system, II: 1518; V: 5851
  - blood, I: 355, 452, 625, 828, 899; II: 1169; III: 3370, 3545; V: 5895; VII-X: 10309, 10392, 10441, 10445, 10459, 10474
  - blood carbon dioxide tension, VII-X: 10324
  - blood catalase content, III: 3197
  - blood cell metabolism, V: 5881
  - blood cells, I: 348, 419, 448, 733, 791, 865; II: 1741, 2006, 2215; III: 2527, 3022; IV: 4781, 4801; V: 5850, 5879, 5882, 5939; VI: 7274, 7311; VII-X: 10371
  - blood cholinesterase content, IV: 4491
  - blood coagulation, IV: 3950
  - blood glucose content, III: 3218
  - blood lactic acid content, VI: 7272
  - blood lipase content, IV: 4542
  - blood lipid content, V: 5900; VI: 7273
  - blood oxygen tension, VI: 7245; VII-X: 10304, 10374, 10439, 10453, 10494
  - blood pH, VII-X: 10346, 10347
  - blood phosphate content, IV: 4610
  - blood plasma, I: 539, 554, 731, 761, 854; II: 1392; V: 5752; VII-X: 10636
  - blood plasma proteins, V: 5900; VI: 7257; VII-X: 10344, 10345
  - blood plasma volume, III: 2705
  - blood potassium content, IV: 4817; V: 5844; VI: 7261, 7265
  - blood pressure, II: 1169; IV: 4464
  - blood sodium content, VI: 7261
  - blood steroid content, VI: 7178
  - blood vessel permeability, VII-X: 10440
  - blood volume, III: 2705, 2706, 3544
  - body temperature, V: 5846
  - body temperature rhythm, IV: 5172
  - bone marrow, III: 2986; VII-X: 10392
  - bones, VII-X: 10306
  - brain activity, I: 681; II: 1677; III: 3021, 3523; V: 5821
  - brain lactic acid content, VII-X: 10464, 10465
  - brain oxygen tension, VII-X: 10372
  - carbon dioxide tolerance, V: 5834
  - central nervous system, IV: 4325
  - cerebral cortex, VII-X: 10545
  - chronaxia, V: 5909; VII-X: 10442
  - circulation, I: 290, 381, 527, 621; II: 1456, 1518, 1546, 1790, 1791, 1792, 2151; III: 2634, 2896; IV: 3942, 4509; V: 5830; VI: 7252, 7253, 7264, 7539; VII-X: 8848, 10292, 10364, 10435, 10436
  - cerebral circulation, I: 223
  - cutaneous circulation, III: 2986
  - retinal circulation, VII-X: 10314
  - dark adaptation, II: 1963
  - digestive system function, I: 267, 513, 798, 799; II: 1265, 2092; IV: 5004
- diseases
- arthritis, I: 521
  - asthma, III: 3269; V: 6347
  - leukemia, VII-X: 10367
  - malaria, V: 6345
  - pneumonia, VI: 7308
  - whooping cough, VI: 7938; VII-X: 11975
- drug action, I: 863; II: 953; III: 3106; IV: 4696; VII-X: 10417
- ear pressure gradient, VII-X: 9392, 10366, 10405
  - electrolyte distribution, VII-X: 10347, 10464
  - electromyogram, VII-X: 9143, 10442
  - embryonic development, I: 512; VI: 7305
  - endocrine system I: 345; III: 3411
  - explosive decompression tolerance, VII-X: 10474
  - fertility, I: 11
  - flatus, I: 797, 799
  - galvanic skin response, VII-X: 10476
  - gastric secretion, VII-X: 10324
  - glucose content of blood plasma, VII-X: 10329
  - gustatory perception, VI: 7135; VII-X: 10337
  - heart, III: 3447; VI: 7318; VII-X: 10280
  - heart function, II: 1944; VII-X: 11447
    - electrocardiogram, IV: 3805; V: 5887; VII-X: 10368, 10374, 10409, 10479
  - hematopoiesis, II: 999; III: 2367, 2473; VII-X: 10323, 10392, 10422
  - heterophoria, I: 640
  - immunity to infectious diseases, II: 1538, 2106; IV: 4352, 5107; VI: 7283
  - insects, II: 1907; IV: 4744
  - kidney, II: 1169
  - kidney function, I: 625; II: 1392
  - liver, III: 3437
  - lung, II: 1169; VII-X: 12085
  - mental performance, VII-X: 10315, 10359
  - metabolism, III: 3080, 3543; IV: 4632; V: 5845



- enzyme activity, V: 5858, 5860; VII-X: 10381, 10391
- oxygen consumption, VII-X: 10418
- metabolism of organs:
- heart, V: 5860
  - liver, I: 362
  - muscles, V: 5860
  - tissues, III: 2467
- metabolism of substances: VII-X: 10394
- ascorbic acid, VII-X: 10433
  - carbohydrates, I: 362; VII-X: 10384, 10457, 10470, 10471
  - carotenes, VI: 7293
  - electrolytes, VII-X: 10420, 10475
  - iron, V: 5881; VII-X: 10342, 10421, 10422
  - potassium, II: 2206; V: 5843
  - proteins, II: 1794; VII-X: 10471
  - sodium, II: 2206
- middle ear, I: 48; V: 5902
- muscle tissue, I: 257
- myoglobin, VI: 7284
- nervous system activity, IV: 3942, 4509
- neuromuscular performance, II: 1892; VI: 7090, 7255; VII-X: 10320
- nitrogen elimination, II: 1756; V: 6327; VII-X: 11847
- ocular rhythms, IV: 5172
- ovulation, VII-X: 8560
- perspiration, VII-X: 10349, 10388
- plant growth, VII-X: 12870
- pneumothorax, I: 12, 715; II: 1153; V: 6337; VII-X: 11893
- potassium content of blood plasma, VII-X: 10329, 10346
- psychomotor performance, VII-X: 10315
- pulse rate, I: 591; VII-X: 10293, 10374
- reaction time, III: 3539; VI: 7291
- reflexes, V: 5821
- conditioned reflexes, III: 3355; VII-X: 10282, 10286, 10290
- reproductive system, VI: 7303
- respiration, I: 451, 726; II: 1523; III: 2618, 2652, 2727, 2872, 2873, 3370, 3523, 3543; IV: 3943; V: 5830, 5888; VI: 7252, 7254, 7288, 7295 VII-X: 10326, 10373, 10418, 10435
- reticulo-endothelial system, IV: 5107
- riboflavin excretion, VI: 7314
- saliva composition, V: 5877
- salivary sodium-potassium ratio, VII-X: 10472
- speech intelligibility, I: 104; III: 3248
- spleen, VI: 7250
- steroid excretion, V: 5874; VI: 7313
- teeth, VII-X: 10478, 10751
- temperature regulation, I: 345
- thiamine excretion, VI: 7314
- time reserve, VI: 7281
- tissue composition, I: 278
- tissues, V: 5828
- toxicity of poisons, II: 953; VI: 7256
- traumatic shock, VI: 7862
- urine composition, VII-X: 9930, 10350, 10395, 10438
- visual accommodation, IV: 3904
- visual afterimages, VI: 7320
- vital capacity, VII-X: 10407
- water exchange, II: 1938, 2206
- work capacity, III: 3604
- X-ray tolerance, I: 791; II: 2117
- general physiological effects, II: 1429, 1562, 1841, 2006, 2107, 2223, 2286; III: 2802, 3214, 3678, 3680; IV: 4206, 4295, 4515, 4623, 4907, 5187, 5194; V: 5825; VI: 7323, 7796; VII-X: 10335, 10361, 10437, 10517
- handbooks and treatises, V: 5883
- general psychological effects, IV: 4515, 4623
- nutritional requirements, IV: 4856; V: 5863; VII-X: 9123, 10444
- oxygen breathing, III: 2580; VI: 8004; VII-X: 12091, 10305
- pathological effects, IV: 3993; VI: 7172; VII-X: 10341, 10357
- relation to:
- diurnal cycle, VII-X: 8630
  - heart abnormalities, I: 291; III: 2369; IV: 4614; V: 5864; VII-X: 10287, 10353
  - research centers, I: 266; IV: 4255; VII-X: 8480
  - tolerance *see* Altitude tolerance
- ALTITUDE ACCLIMATIZATION (*see also* Inhabitants of mountains; Readjustment after altitude acclimatization), IV: 4663, 4704, 4857; V: 5849; VI: 7259; VII-X: 10318
- animal experiments, VII-X: 10356
- bibliography, VII-X: 10400
- caused by intermittent anoxia, VII-X: 10435
- effects on:
- adrenal glands, V: 5838
  - altitude tolerance, II: 2107, 2264, 2286; III: 2518, 2794, 3185, 3680; IV: 4377, 5194; V: 5859; VII-X: 10297, 10432
  - anoxia tolerance, IV: 4238, 4598; VII-X: 10466, 10467, 10586
  - arsenite tolerance, VII-X: 10307
  - blood, I: 827; III: 3401; V: 5840, 5852, 5884, 5890; VII-X: 10398, 10408, 10448, 10525
  - blood bilirubin content, V: 5823
  - blood cells, I: 356, 557, 826; II: 2207; III: 2473, 2527, 2696, 3342, 3364, 3569; IV: 4781; V: 5823, 5841, 5847; VI: 7246, 7287; VII-X: 10319, 10458
  - blood coagulation, V: 5857
  - blood glucose content, II: 1263
  - blood hemopoietin content, VI: 7249
  - blood lipid content, VI: 7282; VII-X: 10336
  - blood plasma, V: 5867
  - blood plasma proteins, V: 5873; VII-X: 10446
  - blood pressure, III: 3131; VI: 7285
  - blood vessel permeability, VII-X: 10468
  - blood vessels, III: 3294; IV: 3803; V: 5833, 5899; VII-X: 10463
  - blood volume, VII-X: 9845, 10288
  - body fat, III: 3478
  - body weight, VI: 7312
  - brain activity, I: 681; II: 3021
  - carbon monoxide tolerance, III: 3657; VII-X: 12158, 12159
  - chemoreceptors, VI: 7276
  - circulation, II: 1055, 1057, 1838; III: 3294; IV: 4662; V: 5868; VI: 7287; VII-X: 10370, 10461
    - pulmonary circulation, VI: 7301; VII-X: 10281, 10402  - cold tolerance, III: 2756
  - digestive system function, VI: 7262
  - electrocardiogram, IV: 3723; V: 5839, 5872; VI: 7292, 7300; VII-X: 10368, 10410, 10411, 10431
  - endocrine system, V: 5896
  - explosive decompression tolerance, VII-X: 10473
  - fertility, IV: 4663
  - galvanic skin response, VII-X: 10476
  - glucose tolerance, V: 5875
  - heart, I: 291; III: 3400; IV: 3804, 4880, 4881, 5053; VI: 7317; VII-X: 10281, 10447
  - hemoglobin composition, III: 3581; VI: 7271; VII-X: 10419
  - immunity to infectious diseases, I: 148, 149, 150;

- III: 2476; IV: 3830, 3831; V: 5822, 5829, 5847, 6338; VI: 7247  
 kidney function, II: 974; V: 5827; VI: 7244  
 liver, I: 237  
 malaria, IV: 5143  
 metabolism, III: 3574; IV: 3976, 4633; V: 5890, 5893; VI: 6858, 7974; VII-X: 10363; 10396, 10415  
   enzyme activity, V: 5893; VI: 7309, 7368; VII-X: 10355, 10423  
   oxygen consumption, V: 5928; VII-X: 10317  
 metabolism of organs:  
   brain, II: 966, 968, 1321  
   heart, VII-X: 10450  
   liver, VII-X: 10340, 10450  
   tissues, II: 1241; III: 2593; V: 5898; VII-X: 10377  
 metabolism of substances: VII-X: 10308  
   carbohydrates, V: 5826, 5876; VII-X: 10307, 10427, 10457  
   citrates, IV: 3830; V: 5829; VI: 7247  
   glucose, VII-X: 10360  
   iron, II: 2223  
   lactic acid, IV: 3830  
   lipids, VII-X: 10397  
   oxygen, VII-X: 9846  
   potassium, II: 2206  
   sodium, II: 2206  
 muscular system, I: 257; VII-X: 10328  
 myoglobin, I: 257; IV: 4013, 5109; V: 5894, 5901; VII-X: 10289, 10451, 10452  
 nervous system activity, III: 2823  
 nuclear radiation tolerance, IV: 3775  
 organ weight, VII-X: 9881  
 organs, VII-X: 10311  
 pregnancy, VI: 7302  
 psychomotor performance, III: 2794  
 pulse rate, III: 3131; VII-X: 10293  
 reflexes, II: 1782  
 reproductive rhythm, VII-X: 8568  
 respiration, II: 1055, 1057, 1416, 1980, 1981, 2165; III: 2380, 2405, 2554, 2580, 3179; IV: 4780; V: 5835, 5903, 6441; VI: 7254, 7276, 7277; VII-X: 10316, 10317, 10363, 10436, 10461, 11119  
 retinal blood vessels, I: 680  
 steroid excretion, V: 5886; VI: 7313; VII-X: 10399, 10455  
 temperature regulation, II: 1411; III: 3179  
 tissues, VII-X: 10311  
 toxicity of poisonous substances, VI: 7974  
 urine composition, II: 974; III: 3415, 3569; VI: 7185; VII-X: 10296, 10351  
 vectorcardiogram, VII-X: 10410, 10411  
 water exchange, II: 1938, 2206; III: 3478  
 work capacity, III: 2874, 3604; V: 5825, 5830, 5890; VII-X: 10356  
 X-ray tolerance, V: 5856; VII-X: 10404  
 general physiological effects, I: 88, 479, 586, 861, 862; II: 988, 1036, 1275, 1782, 1931, 2223; III: 2681, 3214, 3216, 3374, 3678; IV: 4255, 4388, 4389, 5130; V: 5825, 5833, 5853, 5861, 5880, 5898, 6322; VI: 7248, 7310, 7312, 7553; VII-X: 10295, 10361, 10362, 10363, 10383, 10456  
 pathological effects, I: 237, 583; IV: 4389; V: 6322; VII-X: 10362  
 relation to:  
   arteriosclerosis, VII-X: 10285  
   diet, IV: 4254  
   surgery, VII-X: 10353, 11811  
 research, I: 10, 64; IV: 4255  
 role of:  
   adrenal glands, I: 491; II: 1411  
   autonomic nervous system, VII-X: 10488  
   brain, II: 1931  
   spleen, V: 5924  
   thyroid gland, I: 866  
   test methods, III: 2939, 3131  
 ALTITUDE CHAMBERS *see* Decompression chambers  
 ALTITUDE CLOTHING (*see also* Altitude suits; Pressure helmets), V: 6481  
 ALTITUDE SICKNESS (*see also* Decompression sickness; Space sickness), I: 84; II: 1562, 2006; III: 3214, 3523; IV: 4015, 4389, 4544, 4668, 4857; V: 5849, 6322; VI: 7807, 7810, 7811; VII-X: 10361, 10362, 10456, 11821, 11823, 11869  
   bibliography, VII-X: 10400  
   prevention and treatment, II: 2107, 2200; III: 2924, 3643; IV: 3777, 4295  
   reviews, V: 6316  
 ALTITUDE SUITS (*see also* Space suits), I: 51, 55, 71, 476, 477, 504, 506, 533, 643; II: 922, 1107, 1656, 2249; III: 2312, 2567, 3189, 3354; IV: 3984, 4336, 4723, 4753, 5181; VI: 7992; VII-X: 12242, 12339  
   evaluation, I: 857; II: 1191, 1562; III: 2774; IV: 4547; VII-X: 12205, 12206, 12208, 12233, 12256, 12308  
   test methods, VII-X: 12307  
   history, VII-X: 12227  
 ALTITUDE TOLERANCE, I: 122, 205, 349, 421, 422, 450, 453, 509, 889; II: 2264; III: 3354, 3436, 3678; V: 5897; VI: 7258, 7315; VII-X: 9882  
   animal experiments, VII-X: 10283; 10354, 10371, 10414  
   effects of:  
     altitude acclimatization, II: 2107, 2264, 2286; III: 2518, 2794, 3185, 3680; IV: 4377, 5194; V: 5859; VII-X: 10297, 10404, 10432, 10466  
     blood oxygen tension, IV: 4704  
     body fat, VI: 7325, 7817  
     carbohydrates, VII-X: 10354  
     carbon dioxide, II: 1522  
     cardiovascular diseases, VII-X: 10284, 10390  
     cold, I: 421, 422; III: 2756  
     cold acclimatization, III: 2755  
     diet, III: 2629; VII-X: 10403, 10848  
     drugs, I: 122; VII-X: 10325  
       adrenocorticotrophic hormone, VII-X: 9133  
       alcohol, I: 349; IV: 4659  
       analeptics, VII-X: 10294  
       Dibenamine, I: 122  
       dihexyverine, IV: 4176  
       hypnotics, IV: 4436  
       Micoren, VII-X: 10511  
       para-aminobenzoic acid, VII-X: 10462  
       primaquine, III: 2583, 2584  
       procaine, V: 5897; VI: 7315  
       somatropin, VII-X: 9879  
       sulfonamide compounds, IV: 4683  
       tetraethyl pyrophosphate, I: 122  
       thiamine, I: 349  
       vitamin E, III: 3411, 3541; V: 5841  
     environmental temperature, I: 122  
     fatigue, VII-X: 10437  
     gas in body cavities, VII-X: 10406  
     gentling, VII-X: 10414  
     hypothermia, VII-X: 10300  
     lipids, VII-X: 10354  
     nutrition, IV: 4012  
     oxygen breathing, I: 381, 621; III: 3185, 3341; VII-X: 10312, 10333, 10527  
     physical training, VII-X: 10297, 10432  
     pressure breathing, VII-X: 10333  
     respiration, IV: 4377  
     respiratory diseases, VII-X: 10302

- restraint, VII-X: 10300, 10301, 10414, 11268  
 restraint adaptation, VII-X: 10301  
 starvation, V: 5870  
 X-rays, I: 536; IV: 4477; VII-X: 10403  
 general physiological factors, VII-X: 10385  
 of horses, VII-X: 10426  
 of insects, IV: 4743; VII-X: 12098  
 relation to:  
   age, IV: 4164; VI: 7784  
   blood lipid content, VII-X: 10401  
   blood pH, IV: 4780  
   chronaxia, V: 5909  
   iron metabolism, III: 2629  
   polycythemia, IV: 4622  
   pulse rate, II: 2286; III: 3680; IV: 5194; VII-X: 10310  
 role of:  
   endocrine system, VII-X: 10325  
   nervous system, VII-X: 10325  
   spleen, IV: 4034; VII-X: 10310  
   sex factors, VII-X: 10371  
   test methods, VII-X: 11853  
**ALVEOLAR CARBON DIOXIDE TENSION**, II: 1044, 1259, 1322; III: 2541  
 effects of:  
   altitude, I: 898, 899; V: 6489; VI: 6852  
   anoxia, II: 2130  
   carbon dioxide, II: 2143  
   explosive decompression, II: 2130  
   hyperventilation, VI: 6852  
   physical work, II: 1035, 1686  
   speaking, I: 455; VI: 6830  
   voluntary apnea, IV: 5193  
 effects on:  
   heart function, II: 1154  
   respiration, II: 1035; III: 2626; VI: 6818; VII-X: 8821, 8864, 8865  
   measurement, II: 1334, 1507; III: 3261, 3348  
**ALVEOLAR OXYGEN TENSION**, II: 1044, 1045, 1259, 1322  
 effects of:  
   anoxia, II: 2130  
   explosive decompression, II: 2130; III: 2515  
   oxygen breathing, III: 3128; VII-X: 8858  
   voluntary apnea, IV: 5193  
   effects on respiration, VII-X: 8864, 8865  
   measurement, II: 1334, 1507; III: 3348  
   relation to blood oxygen tension, II: 2269; III: 2753; V: 5318; VII-X: 8841  
**AMBULANCE HELICOPTERS**, I: 16, 73; III: 2908, 3313, 3520; V: 6390  
**AMBULANCE PLANES**, VII-X: 12029  
   equipment, I: 26, 519, 715; III: 2326; VI: 7883; VII-X: 12018  
   Great Britain, III: 3487  
   Spain, III: 2746  
**AMBULANCE SERVICE** see Air Ambulance Service  
**AMBULANCES** see Crash ambulances  
**AMEBIASIS**, III: 3607; IV: 3720; VI: 7846; VII-X: 11952  
**AMETROPIA** (see also Myopia)  
   incidence in personnel, VII-X: 9264  
**AMINO ACID METABOLISM**  
   effects of annual cycle, VII-X: 8581  
**AMINO ACIDS** (see also Ethionine; Glycine)  
   effects on fatigue, III: 3213  
   synthesis, VI: 6796, 6798  
**AMINO-ACETIC ACID** see Glycine  
**AMINOPHYLLINE**  
   effects on respiration, IV: 5026  
**AMINOPYRINE** (Pyramidon)  
   effects on anoxia tolerance, II: 1400  
**AMMONIA CONTENT** see under Blood
- AMPHETAMINE AND DERIVATIVES** (Benzedrine, Dexedrine)  
 effects on:  
   anoxia tolerance, VI: 7354  
   fatigue, II: 1915; IV: 4323, 4757, 4758, 4760; V: 6365  
   nystagmus, VII-X: 9481  
   performance, VII-X: 11152  
   pilot performance, I: 353, 804  
   psychomotor performance, I: 353, 804; II: 1549, 1915; VI: 7116  
   work capacity, VI: 7354  
   general physiological effects, II: 1227, 1228  
   general psychological effects, I: 38  
   use in motion sickness, I: 1223  
**AMYL NITRITE** see Nitrites  
**ANABIOSIS** see Life, suspension  
**ANALEPTICS** (see also Amphetamine; Drugs)  
   effects on altitude tolerance, VII-X: 10294  
**ANALGESICS** see Acetylsalicylic acid; Codeine; Meperidine; Methadone; Morphine, Opium  
**ANALOGS** see Machine analogs  
**ANALYSIS** see Computer analysis; Job analysis. Also see under conditions analyzed, e.g., Accidents, analysis  
**ANALYZERS**  
   physiology, II: 1837, 1898, 1939, 2079, 2112; III: 3488  
**ANAPHYLACTIC SHOCK**  
   effects of hypothermia, VI: 6871, 6901  
**ANAPHYLACTIC TOLERANCE**  
   effects of altitude, VII-X: 10352  
**ANATOMY** see under Auditory Cortex; Ear; Labyrinth  
**ANDROSTERONE**  
   effects on fatigue, IV: 4879  
**ANEMIA** see Blood loss  
**ANESTHESIA**  
   effects of altitude, V: 5885  
   effects on cold tolerance, III: 2448  
**ANESTHETICS** (see also names of specific anesthetics, e.g., Barbituric acid derivatives)  
   effects on:  
     anoxia tolerance, IV: 5120; VII-X: 10543  
     blood pressure, I: 196  
     respiration, II: 1276  
**ANGULAR ACCELERATION** see Rotation  
**ANGULAR ESTIMATION**  
   tests, VII-X: 9540, 9578  
**ANIMAL CENTRIFUGES**, VII-X: 12744  
**ANIMAL COMMUNICATION**, VII-X: 8504  
**ANIMAL CONTAINER ATMOSPHERES**  
   regeneration, V: 6694  
**ANIMAL CONTAINERS (SEALED)**, II: 1712; III: 3071, 3234; VII-X: 8439, 8456, 8472, 8541, 12749  
   air conditioning, V: 6694  
   center of gravity, VII-X: 8435  
   moments of inertia, VII-X: 8435  
**ANIMAL DECOMPRESSION CHAMBERS** see Decompression chambers for animal experiments  
**ANIMAL SKIN**  
   acoustical properties, VII-X: 9134  
**ANIMALS** see Birds, Crustacea; Insects; Mammals  
**ANIONS** see Electrolytes  
**ANNUAL CYCLE**  
   effects on:  
     amino acid metabolism, VII-X: 8581  
     blood, VII-X: 8633  
     ketone metabolism, VII-X: 10865  
   relation to:  
     anoxia tolerance, VII-X: 10583  
     blood nucleotide content, VII-X: 8582, 8583  
     cold acclimatization, VII-X: 10709  
     excretory rhythm, VII-X: 8581  
     metabolic rhythm, VII-X: 8641

- perspiration, VII-X: 8584  
 urine composition, VII-X: 8581, 10805  
 water exchange, VII-X: 8633  
**ANOREXIA** *see* Appetite  
**ANOXEMIA** *see* Anoxia  
**ANOXIA** (*see also* Altitude; Asphyxia)  
 aftereffects, V: 5751, 5925  
 cause of:  
   accidents, V: 6436; VI: 8124  
   apnea, I: 321, 608; III: 2489; IV: 3841, 3842, 5031  
   brain pathology, VII-X: 10637  
   fainting, VI: 7328  
   hyperventilation, I: 166, 451; VI: 6836, 6854; VII-X: 10326, 10621, 10633  
   polycythemia, VI: 7364  
 effects on:  
   action potentials of carotid sinus nerve, VII-X: 10557  
   action potentials of spinal cord, IV: 4202  
   adrenal glands, I: 611, 614; II: 1582; III: 2527, 2936; IV: 5041, 5108; VII-X: 9829, 9832, 10627  
   alveolar carbon dioxide tension, II: 2130  
   alveolar oxygen tension, II: 2130  
   auditory fatigue, IV: 4409  
   auditory thresholds, VII-X: 10562, 10563  
   autonomic nervous system, II: 1689; VII-X: 10627, 10635  
   behavior, III: 2506  
   binocular vision, VII-X: 10600  
   blood, I: 98, 256, 545, 630; II: 994, 1045, 1392, 1421, 1783; III: 2398, 2937; IV: 4903; VII-X: 10525, 10568  
   blood catalase content, III: 2801  
   blood cells, I: 306; II: 988, 1479, 1481, 1699, 2207; III: 2368; IV: 5050; VI: 7361, 7372; VII-X: 10379, 10489, 10506, 10558, 10593  
   blood coagulation, IV: 4465; V: 5914; VII-X: 10594, 11965  
   blood distribution, V: 5929; VII-X: 10531  
   blood glucose content, III: 3691; V: 5961; VII-X: 10498, 10532, 10548  
   blood lactate content, VII-X: 10607  
   blood lactic acid content, VII-X: 10480  
   blood lipid content, IV: 4465  
   blood oxygen tension, VII-X: 10483, 10606  
   blood pH, IV: 5050; VII-X: 10537, 10573  
   blood plasma, IV: 4601; VII-X: 10490  
   blood potassium content, V: 5947; VII-X: 9176  
   blood pressure, II: 1476; III: 2825, 3238; IV: 4889; VII-X: 10574, 10588, 10635  
   blood vessel permeability, VII-X: 10611  
   blood vessels; II: 1689; VII-X: 10561  
     retinal blood vessels, I: 680  
   body fluid distribution, VII-X: 10490  
   body fluids, II: 994; III: 2398  
   body temperature, I: 194, 195; IV: 3949, 4794, 4795, 4796; V: 5928, 5949; VII-X: 10591, 10627  
   body weight, III: 3397; VII-X: 10619  
   bone, II: 1421  
   brain, I: 584; II: 2066; III: 2459, 3091, 3099; IV: 5068; V: 5925, 6551; VI: 7378; VII-X: 10608, 12382  
   brain activity, I: 388, 401, 587, 609; II: 981, 1065, 1147, 1328, 1677, 1836, 2283; IV: 5183; V: 5958; VI: 7332; VII-X: 10524  
   brain epinephrine content, VII-X: 10623  
   brain lactic acid content, VII-X: 10499, 10500, 10570  
   brain norepinephrine content, VII-X: 10623  
   brain oxygen tension, VII-X: 8846, 10533  
   catecholamine excretion, V: 5481  
   central nervous system, III: 2509  
   cerebral cortex, VII-X: 10545  
   cerebrospinal fluid pH, III: 2809; VII-X: 10537, 10573  
   cerebrospinal fluid pressure, VI: 7340, 7341  
   chronaxia, VII-X: 10613  
   circulation, I: 129, 194, 195, 386, 569, 803; II: 1055, 1056, 1147, 1601, 2129; III: 2822, 2962, 3083, 3237, 3435, 3444; IV: 4692, 4693, 5111, 5116; V: 5908, 5930, 5931, 5950, 5951; VI: 7357, 7375; VII-X: 9861, 10491, 10500, 10502, 10518, 10526, 10538, 10540, 10559, 10614  
   cerebral circulation, IV: 4645; VI: 6805; VII-X: 8757, 10499  
   coronary circulation, VI: 7330, 7373; VII-X: 10528  
   pulmonary circulation, I: 106, 107, 128, 129, 304, 568, 569; II: 1339, 1340, 1471, 1526, 1979, 2053, 2144, 2145; III: 2413, 2621, 2904, 3240, 3466, 3511, 3647; IV: 4001, 4150, 4328, 4528, 4954; VI: 7327; VII-X: 9854, 10521, 10571, 10598, 10601  
   renal circulation, II: 1101, 1102; VII-X: 10483, 10541  
   retinal circulation, I: 502; II: 1693; VII-X: 8763  
   reviews, V: 5944  
   cochlea, I: 558; VII-X: 9405, 10493  
   digestive system function, II: 1386, 1982, 1983; V: 5935; VII-X: 10535  
   drug action, I: 108, 275, 863; II: 1815; III: 2628  
   electrical potentials of:  
     cerebral cortex, VI: 7336  
     cochlea, I: 896; II: 1118, 2275; III: 2805; IV: 4025, 5070; V: 5940; VII-X: 9404, 10529, 10542, 10565  
     meninges, V: 5346  
   electrical properties of muscle, VII-X: 10487  
   electrical resistance of brain, VII-X: 10582  
   electroencephalogram, I: 282, 413, 821, 823, 906; II: 1591, 2120, 2121, 2279; III: 2469, 2505, 2976, 3335; IV: 4011, 4749; VI: 7326, 7337, 7339, 7349, 7362, 7836; VII-X: 9176, 10492, 10516, 10527, 10554, 10555, 10577, 10588, 10596, 10602, 10617, 12068  
     animal experiments, VII-X: 10514  
   electroretinogram, II: 2112; IV: 4749; V: 5915; VI: 7335; VII-X: 10550  
   eye, II: 1661; VI: 7379  
   fertility, V: 6326  
   food intake, VII-X: 10620  
   heart, III: 2937, 3011; IV: 5108; VI: 7342; VII-X: 10512, 10561  
     myocardial tissue, I: 565, II: 1718  
   heart function, II: 1717; III: 3027, 3524, 3526; IV: 3750, 4444; V: 5952; VII-X: 10483, 10522, 10528, 10625  
   ballistocardiogram, II: 1801; VII-X: 10581  
   electrocardiogram, I: 884; II: 981, 1945, 2283; III: 2344, 2505, 2508, 2818, 3381; IV: 3699, 4059, 4237, 4238, 4288; V: 5937; VII-X: 10479, 10511, 10512  
   pulse rate, II: 1644, 1945; III: 2819, 2936; IV: 4059; VII-X: 9880, 10519, 10609  
   heart glycogen content, VII-X: 10576  
   hematopoiesis, III: 2814; VI: 7348, 7371; VII-X: 9820, 10580, 10612  
   hemoglobins, VII-X: 10547, 10558  
   hyperthermia, IV: 4485  
   hypophysis, IV: 5041  
   hypothermia, V: 5911  
   interoceptors, II: 965  
   intracranial pressure, I: 405; II: 1476

- kidney, V: 5938  
 kidney function, I: 108, 109, 771; II: 974, 1392, 2076, 2205; IV: 3697, 4031, 4032; V: 5913, 5941; VI: 7344, 7350; VII-X: 10539, 10541, 10628  
 liver, III: 2936; V: 5936, 5938  
 lung, I: 404, 470; II: 1264, 1432, III: 2622  
 lymph, V: 5956  
 lymph flow, III: 3028; V: 5956  
 memory, III: 2506; IV: 5068; VII-X: 10527  
 mental performance, I: 164, 167; III: 2486, 2487; IV: 4688, 5024; V: 5933, 5943, 5960; VI: 7353, 7358  
 metabolism, I: 469, 565; II: 1036; VI: 7334, 7352, 7376, 7377  
   carbon dioxide production, I: 187; VII-X: 10515  
   endogenous formation of carbon monoxide, II: 1784; III: 2481  
   enzyme activity, V: 5858, 5936; VI: 7359, 7366, 7368; VII-X: 10482, 10515, 10548, 10629  
   oxygen consumption, I: 187, 469, 565; II: 988, 1036; III: 3289; IV: 4692, 4794, 4795; V: 5928; VI: 7343; VII-X: 10480, 10550, 10556, 10590, 10591  
 metabolism of organs:  
   bone marrow, II: 1984, 1985; IV: 4903  
   brain, II: 967, 969, 971, 1321, 1909, 1910, 2085, 2111; III: 2956, 3549; IV: 5056; V: 5921, 5958; VII-X: 10597  
   central nervous system, VII-X: 10569  
   cochlea, V: 5946; VII-X: 10634  
   heart, I: 565; II: 1261, 1262, 1266, 1267; III: 2362, 2508, 2866, 3525; V: 5917, 5923; VII-X: 10528, 10536, 10578  
   liver, IV: 3794, 4489; V: 5920  
   muscles, II: 1793, 2097; III: 3577; IV: 5104; VI: 7374; VII-X: 10610  
   spleen, II: 1984, 1985  
   tissues, V: 5910; VII-X: 8914  
 metabolism of substances: VII-X: 10552  
   carbohydrates, II: 1261, 1262, 1266, 1267, 1909; IV: 3996, 4489; VII-X: 10503, 10589  
   citrate, VII-X: 10553  
   electrolyte distribution, IV: 4736; V: 5422; VI: 7351; VII-X: 10490, 10605  
   glutamine, II: 2097  
   iron, IV: 4903; V: 5965; VI: 7338; VII-X: 10481  
   ketones, II: 1681  
   lactic acid, III: 3577; IV: 5104  
   lipids, III: 3049  
   nicotinic acid, V: 5964  
   nucleic acid, II: 1984, 1985; V: 5946  
   phosphorus, II: 1496; 1793, 2111; VII-X: 10610, 10611  
   potassium, II: 1266; IV: 4601, 4602; V: 5923; VII-X: 10616  
   proteins, V: 5948; VII-X: 10569, 10620  
   riboflavin, V: 5964  
   sodium, III: 2742  
   thiamine, VII-X: 10560  
 milk composition, II: 1478, 1480; IV: 4253  
 motor activity, VII-X: 10618  
 muscular function, I: 492, 854  
 muscular system, I: 386, 492  
 muscular tonus, VII-X: 10555, 10556  
 nerves, III: 3011  
 neuromuscular performance, II: 1009, 1677; VI: 6854, 7331; VII-X: 10497  
 neuromuscular reactions, III: 2505  
 nuclear radiation tolerance, IV: 3776; VII-X: 10513  
 oxygen tension of cochlea, VII-X: 9906  
 oxygen tension of vitreous humor, V: 5335, 5766  
 pain sensitivity, VII-X: 10510  
 pancreatic secretion, V: 5922  
 performance of aviators, II: 1113  
 plasma hemopoietin content, VI: 7365; VII-X: 10593  
 plasma iron content, VI: 7338  
 positive acceleration tolerance, VII-X: 9834  
 psychomotor performance, II: 1186, 1835; IV: 4239, 5024; V: 5959, 5960, 6365; VII-X: 9809, 10507, 10559, 10609  
 pupil size, I: 312; VII-X: 10588  
 reasoning, III: 3133, 3134  
 reflexes, II: 1782, 2300; III: 2962; IV: 4814; V: 5751; VII-X: 10603  
   carotid sinus reflexes, II: 1345; V: 5916  
   conditioned reflexes, I: 609, 612; II: 1835, 1836, 1933; III: 2388, 3355; VII-X: 10282  
   oculocardiac reflex, VII-X: 10599  
   postural reflexes, VII-X: 10510  
   reproductive system, II: 1678  
 respiration, I: 101, 128, 165, 304, 321, 401, 404, 456, 469, 470, 568, 608, 630, 672, 726, 803; II: 1055, 1056, 1057, 1098, 1143, 1147, 1476, 1839, 1979, 2091, 2129, 2283; III: 2388, 2488, 2587, 2753, 2820, 2962, 3127, 3289, 3371, 3395, 3597; IV: 3997, 4059, 4560, 4574, 5111, 5116; V: 5346, 5908, 5916, 5926, 5927, 5945, 5954; VI: 6808, 6818, 6843, 7168, 7347, 7355, 7367; VII-X: 8865, 8881, 8885, 8886, 9861, 10522, 10551, 10579  
 results of personality tests, IV: 4688  
 sensory perception, V: 5530  
   auditory perception, II: 2179; III: 2729; IV: 4409; VII-X: 10542, 10564  
   brightness discrimination, I: 245; VII-X: 10508  
   color vision, I: 175; II: 2064; III: 2963; VII-X: 10504, 10530  
   dark adaptation, I: 141  
   depth perception, I: 242; II: 1661; IV: 3929  
   flicker fusion frequency, III: 2480, 3385; VII-X: 10613  
   retinal adaptation, I: 243, 247  
   visual perception, I: 192, 312, 339; II: 1088, 1089, 1393, 1941; III: 3414; VII-X: 10508, 10613  
 shivering, V: 5934; VII-X: 10509  
 sound localization, VII-X: 10572  
 spatial orientation, III: 2821; IV: 4831; VII-X: 9472  
 spinal cord, III: 3099  
 spleen, IV: 4418  
 standing potential, I: 217  
 teeth, VII-X: 9998  
 temperature regulation, I: 194, 195, 468; VII-X: 8967, 10624  
 thrombocytes, IV: 4465  
 tissue fluid distribution, II: 1718  
 urine composition, II: 974; IV: 4980, 4981, 4982; V: 5948  
 uterus, I: 859  
 work capacity, II: 1032; III: 3109  
 X-ray tolerance, II: 1913; III: 3352; VII-X: 10501, 10575, 11363  
 general physiological effects, I: 396, 421, 570, 860; II: 938, 988, 1138, 1421, 1782, 1932, 1933; III: 2871, 3024, 3500; V: 5959, 6541; VI: 6888, 7356; VII-X: 10484, 10505, 10507, 10517, 10604, 12266  
 reviews; VII-X: 10485, 10621  
 test methods, IV: 4962  
 general physiological factors, II: 1799; III: 3267, 3500; VII-X: 10291

- general psychological effects, III: 3667; IV: 4347, 5190; VI: 7353
- pathological effects, V: 5957
- post-mortem findings, VII-X: 10465, 10631
- protection, V: 6541; VI: 7356
- relation to:
- alertness, II: 1325
  - carbon monoxide content of blood, VI: 7978
  - fatigue, II: 1325
  - sleep, II: 1325
- resuscitation, III: 2830, 2956; IV: 3841, 5031
- role of:
- adrenal glands, I: 491, 539, 611, 614; IV: 4693; VII-X: 10491, 10506, 10532
  - autonomic nervous system, II: 1479, 1481, 1983
  - chemoreceptors, III: 2406; V: 5950
  - hypophysis, I: 614; II: 2207
  - thymus, I: 491; III: 2936
- terminology, III: 3514
- tolerance *see* Anoxia tolerance
- treatment, I: 400, 570; II: 942, 1933; III: 3500; VII-X: 8911
- warning devices, I: 217, 450, 545; III: 2373, 2703; IV: 3773, 4647; VII-X: 10579, 12674, 12689
- ANOXIA (CONTINUOUS)**
- effects on:
- blood hemoglobin content, VII-X: 10632
  - cerebral circulation, VII-X: 10632
  - heart, VI: 7342
  - muscular system, VII-X: 10630
- ANOXIA (INTERMITTENT)** *see* Intermittent anoxia
- ANOXIA ACCLIMATIZATION** *see* Altitude acclimatization
- ANOXIA TOLERANCE**, I: 205; II: 1517; VII-X: 8514, 10608
- animal experiments, III: 2850, 2962; VI: 7332; VII-X: 10522, 10546, 10583, 10584, 10585, 10586, 10587, 10622
- effects of:
- altitude acclimatization, IV: 4239, 4598
  - blood loss, II: 1252
  - carbon dioxide, VII-X: 10615, 10622
  - cold, II: 1972
  - drugs, I: 608, 821, 823; II: 1400; III: 2488; V: 5955, 5962; VI: 7363, 7877; VII-X: 10622
  - adrenocorticotrophic hormone, II: 2121; IV: 4598; VII-X: 10584
  - alcohol, II: 1400; III: 3385; IV: 4659
  - aminopyrine, II: 1400
  - amphetamine, VI: 7354
  - anesthetics, IV: 5120; VII-X: 10543
  - antihistaminics, I: 165; II: 993, 1099; IV: 4492
  - ascorbic acid, V: 5963
  - barbituric acid derivatives, II: 1400
  - Centropnein, I: 821, 823; III: 3349
  - chlorophyll, II: 1400
  - chlorpromazine, II: 1221; III: 3349; IV: 4029; V: 6354; VII-X: 10585
  - cobalt compounds, IV: 5154
  - coccarboxylase, VI: 7345
  - cortisone, III: 3528; IV: 3743
  - cyanocobalamine, VII-X: 10496
  - Diamox, IV: 3933
  - Dibenamine, I: 321
  - dimenhydrinate, I: 821, 823; III: 3350
  - diphenylhydantoin, II: 1400
  - diphosphopyridine nucleotide, VI: 7346
  - ergotamine, II: 1400
  - flavones, V: 6362, 6366
  - folic acid, III: 2647
  - glucose, I: 821, 823; VII-X: 10636
  - glutamic acid, VII-X: 8918
  - glycyrrhizin, IV: 4309
  - histamine, III: 2775; IV: 3762; V: 5824
  - menthenamine, IV: 3762; V: 5824
  - Metrazol, II: 1400
  - morphine, III: 3529
  - nikethamide, II: 1400
  - pilocarpine, I: 608
  - procaine, I: 398
  - purine, III: 2647
  - pyridine, III: 2647
  - quinhydrone, VII-X: 10595
  - streptomycin, V: 6368; VI: 7870
  - urethane, VI: 7868
  - vasopressin, I: 608
  - vitamin E, III: 2469, 2817, 2818, 2819
- environmental temperature, I: 122; II: 1307, 1520; V: 5957; VII-X: 10546
- fuels, VII-X: 12119
- heat acclimatization, IV: 4350
- hypocapnia, III: 3051
- hypothermia, III: 2850; V: 5919; VII-X: 8929, 9113, 9114, 10543
- physical training, VII-X: 10534
- sensory deprivation, V: 5933
- starvation, II: 1873; III: 3251
- water intake, V: 5918
- X-rays, I: 536; II: 1668, 1873; III: 3251
- evolutionary aspects, II: 2108
- general physiological factors, VII-X: 10506
- psychological factors, III: 3596
- relation to:
- age, II: 1626; V: 5912, 5918, 6289; VII-X: 11759, 11791
  - annual cycle, VII-X: 10583
  - body temperature, II: 1400; III: 3230; VII-X: 10520
  - carbohydrate metabolism, III: 3191
  - hemoglobin composition, IV: 4308
  - oxygen consumption, VII-X: 10587
  - phosphorus metabolism, III: 2776
  - polycythemia, III: 3582
  - renal circulation, II: 1102
- role of:
- adrenal glands, III: 2937, 3239
  - autonomic nervous system, III: 3239; VI: 7329; VII-X: 10486, 10488, 10567
  - blood glucose content, III: 3051
  - central nervous system, II: 2086; VI: 7360; VII-X: 10566
  - chemoreceptors, II: 1221
  - spleen, IV: 4344
  - test methods, VI: 7370
- ANTHROPOMETRY** *see* Body measurements
- ANTIBIOTICS** *see* Chloramphenicol; Streptomycin; Terramycin
- ANTIBODIES**
- effects of:
- altitude, VII-X: 9990
  - cold acclimatization, VI: 7464; VII-X: 9990
  - hypothermia, IV: 3797
- ANTICHOLINESTERASE**
- effects on nystagmus, III: 3241
- ANTI-G DEVICES**, IV: 3881, 4719, 5173; VII-X: 10189, 12190, 12191, 12231
- ANTI-G PROCEDURES** (Crouching, Straining, Valsalva maneuver), I: 902; IV: 4531
- ANTI-G SUITS** (*see also* Space suits), I: 51; III: 2312; IV: 4205, 4719, 5181; V: 5784, 5786, 6459, 6469; VI: 7993; VII-X: 8474, 10067, 12434
- effects on:
- acceleration tolerance, V: 5785
  - ballistocardiogram, IV: 5049
  - electrocardiogram, VII-X: 11458
  - positive acceleration tolerance, IV: 4531, VII-X: 10124, 10137

- psychomotor performance, VII-X: 12288  
 respiration, IV: 5049  
 evaluation, I: 902; II: 1749, 1829; III: 2599, 3468;  
 IV: 3808, 4533  
 thermal properties, VII-X: 12294  
**ANTI-G VALVES**, II: 2150; III: 2453, 3517  
**ANTIHISTAMINICS** (*see also* Antistine; Benadryl;  
 Cyclisine; Dimenhydrinate; Promethazine)  
 administration, II: 1438  
 effects on:  
   anoxia tolerance, I: 165; II: 993, 1099; IV: 4492  
   circulation, IV: 5167  
   congestion of nasal passages, II: 1438  
   electroencephalogram, IV: 4716  
   hyperoxia tolerance, IV: 4281  
   nystagmus, III: 3373  
   respiration, I: 165; II: 993, 1098, 1099  
   sedative effects, IV: 4716  
   use in motion sickness, II: 1372, 1509; V: 6323  
**ANTISTINE**  
 use in motion sickness, I: 142  
**ANXIETY** (*see also* Claustrophobia; Mental stress),  
 I: 496  
 caused by:  
   acceleration, II: 1474  
   avoidance conditioning, V: 5710  
   blast, II: 1859  
   flight duty, I: 21, 41, 767; II: 1435; III: 2719,  
     2763, 2781, 2782, 3092, 3593, 3595;  
     IV: 5125; V: 5723, 5729, 5732; VI: 7152,  
     7764  
   jet plane piloting, IV: 3799; V: 5734, 5739; VII-X:  
     9691, 9751  
   parachute jumping, V: 5735  
   sensory deprivation, VII-X: 11199  
   social isolation, VII-X: 11199  
   stress, IV: 3791  
 effects of rest, II: 1097  
 effects on:  
   acceleration tolerance, V: 5777; VI: 7201  
   auditory perception, III: 3470  
   behavior, IV: 4661; VII-X: 11177  
   circulation, II: 1691  
   decision making performance, VII-X: 9750  
   equilibrium, II: 1609  
   finger tremor, II: 1991  
   flicker fusion frequency, II: 1609; III: 3394  
   galvanic skin response, VII-X: 9711  
   learning, II: 1292, 2163; III: 3159; IV: 4661;  
     V: 5722; VII-X: 9727  
   mental performance, II: 1647; III: 3159; VI: 7146;  
     VII-X: 11184  
   neuromuscular performance, III: 3394  
   perspiration, II: 1766, 1767  
   psychomotor performance, I: 718; III: 2642,  
     3159; IV: 4276, 4603; VI: 7094; VII-X: 11177  
   pulse rate, VII-X: 9684  
   reaction time, IV: 4276; VI: 7609  
   reasoning, II: 1761; VII-X: 9725  
   time estimation, VII-X: 11179  
   visual perception, III: 3470  
 general physiological effects, IV: 4813; VII-X: 9697  
 general physiological factors, II: 1719  
 psychological factors, II: 1437, 1719; III: 3664  
 relation to:  
   blinking, VI: 7150  
   mental ability, IV: 4453  
   personality, II: 1632  
   pilot candidate training, VI: 7159, 7685  
   salivary pH, VII-X: 9747  
   test methods, IV: 4453; V: 5731  
   treatment, II: 1437; III: 2782; V: 5724; VII-X: 9751  
**ANXIETY PRONENESS**, I: 496  
 relation to:  
   electroencephalogram, I: 853; II: 2204; V: 6422  
   galvanic skin response, VII-X: 9761  
   hippuric acid metabolism, II: 1053  
   personality, V: 5735  
 test methods, I: 168, 853; II: 1459, 1557, 2203, 2204;  
   III: 2372, 2807, 3572, 3573; IV: 4437, 4568,  
   5124, 5125, 5155; V: 5732, 5733; VI: 7149;  
   VII-X: 9717  
 tests, II: 2202; VII-X: 9746, 9748  
**AORTA**  
 mechanical properties, VII-X: 8749, 8750  
 effects of:  
   drugs, VII-X: 8748  
   physical work, VII-X: 8748  
   relation to age, VII-X: 8748  
 pathology, VII-X: 11949  
**APNEA**  
 cause of acidosis, V: 5352  
 caused by:  
   anoxia, I: 321, 608; III: 2489; IV: 3841, 3842, 5031  
   hypercapnia, VII-X: 8872  
   hyperoxia, VII-X: 8872  
   hyperventilation, III: 2653; IV: 4071; VII-X: 8872,  
     8890  
   time factors, III: 2872, 2873  
   pressure breathing, IV: 5160  
 effects on:  
   action potentials of phrenic nerve, IV: 4071  
   circulation, IV: 4173; V: 5310  
   kidney function, IV: 4173  
   pulse rate, V: 5352  
   general physiological effects, III: 3635  
   resuscitation, VII-X: 8890  
   time factors, IV: 3842  
**APNEA (VOLUNTARY)**  
 cause of fainting, VII-X: 8734  
 effects of:  
   acidosis, III: 3510  
   hypercapnia, II: 1100  
   hyperoxia, II: 1100  
   hyperventilation, II: 1100  
   physical work, IV: 5163  
 effects on:  
   alveolar carbon dioxide tension, IV: 5193  
   alveolar oxygen tension, IV: 5193  
   blood carbon dioxide tension, II: 1418  
   blood oxygen tension, I: 403, 544, 705; II: 1418,  
     1943; IV: 4137; V: 5332; VII-X: 8871  
   blood pressure, V: 5332  
   circulation, I: 705; II: 1943  
   electrocardiogram, V: 5331  
   pulse rate, I: 705; II: 1943; III: 3515  
   reaction time, V: 5678  
   respiratory gases, II: 1100  
 tests *see* Apnea test  
 time factors, II: 1418; IV: 5193  
**APNEA TEST**, II: 1976  
**APOMORPHINE** *see* Morphine and derivatives  
**APPETITE**  
 effects of altitude, III: 3178; IV: 4254  
**APTITUDE TESTS**, I: 49, 272, 347, 389, 390, 391, 394,  
   594, 604, 690, 708, 833, 841, 842, 912, 915;  
   II: 1007, 1197, 1277, 1336, 1414, 1415, 1595,  
   1618, 1716, 1780, 1947, 2073, 2189, 2190,  
   2191, 2194, 2197, 2290, 2291, 2294, 2295,  
   2296; III: 2816, 2867, 3101, 3297; IV: 4386,  
   5067; V: 6209, 6210; VII-X: 11534, 11547  
 analysis, II: 1059, 1469, 2018, 2292, 2293; III: 2422,  
   2668, 2764, 2854, 2926; V: 6217; VII-X: 9724  
**AQUEOUS HUMOR**  
 effects of hypothermia, VII-X: 8945

## ARAMINE

## effects on:

circulation, IV: 4898

pressure breathing tolerance, V: 5351; VI: 6815

ARCTIC see under Parachute jumping; Rescue; Survival

ARCTIC AEROMEDICAL LABORATORY, I: 268; V: 5246

ARM MOVEMENTS (see also Arm tremor)

analysis, VI: 6935

## effects of:

clothing, VI: 8009

positive acceleration, II: 1206

training, VII-X: 9146

time factors, VI: 6935

ARM TREMOR (see also Finger tremor)

## effects of:

cold, V: 6032

heat, V: 6032

physical work, V: 6032

sleep deprivation, VII-X: 11160

ARMED FORCES INSTITUTE OF PATHOLOGY, Washington, D. C., VII-X: 12423

ARMOR see Body armor

## AROUSAL

## effects on:

galvanic skin response, V: 5720

nystagmus, VII-X: 9481, 9482, 9483, 9485, 9486

general physiological effects, VII-X: 9753

## ARSENITE TOLERANCE

effects of altitude acclimatization, VII-X: 10307

ARTERENOL see Norepinephrine

ARTERIAL HYPERTENSION, VII-X: 11927

incidence in inhabitants of mountains, VI: 7784

## relation to:

arteriosclerosis, VII-X: 11935

flying ability, VII-X: 11971

ARTERIAL PRESSURE see Blood pressure

## ARTERIAL PULSE

telemetry, VII-X: 12722

ARTERIES see Blood vessels

ARTERIOSCLEROSIS, VII-X: 11713, 11904, 12065

caused by cold, V: 6040

## incidence in:

aviators, VII-X: 11951, 11954

jet plane pilots, VII-X: 11916

## relation to:

accidents, VII-X: 11951, 12168

age, I: 678; VII-X: 12168

altitude acclimatization, VII-X: 10285

arterial hypertension, VII-X: 11935

blood lipid content, VII-X: 8788, 10336, 11900, 11917

diet, VII-X: 10285

flying ability, VII-X: 11954

lipids, VII-X: 10285

## ARTHRITIS

## effects of:

altitude, I: 521

barometric pressure, I: 521

ARTIFICIAL GRAVITY, VI: 8244; VII-X: 11889, 12514, 12755

ARTIFICIAL HIBERNATION see HypothermiaARTIFICIAL RESPIRATION (see also Electrophrenic

respiration; Pressure breathing; Respirators

(Mechanical); Resuscitation), II: 1355, 1576, 2122,

2155; VII-X: 8805, 8890

animal experiments, III: 3686

## effects on:

blood, II: 1578

circulation, III: 3158

equipment, VII-X: 12186

ASCORBIC ACID (Vitamin C)

## effects on:

adrenal glands, IV: 4085

anoxia tolerance, V: 5963

cold acclimatization, IV: 4048; VI: 7394; VII-X: 10769

cold tolerance, III: 2512, 2688, 2689, 2747, 2991, 3070, 3642; IV: 3862; V: 5983; VII-X: 10662, 10726

dark adaptation, II: 1458

liver metabolism, III: 2658

metabolism, VI: 7395

oxygen consumption, III: 2658

ASCORBIC ACID CONTENT see under Adrenal glands; Blood plasma

ASCORBIC ACID METABOLISM, VI: 7437

## effects of:

altitude, VII-X: 10433

cold, II: 1842; III: 2689, 2995; IV: 4049; VI: 7394

heat, VII-X: 10894

hormones, IV: 4664

hyperoxia, IV: 4214

physical work, VI: 7549

stress, IV: 4664

role of thyroid gland, III: 3193

ASPHYXIA (see also Anoxia), II: 1433ASPIRIN see Acetylsalicylic acid

## ASTHMA

effects of altitude, III: 3269; V: 6347

effects on air transportability, VII-X: 12037

ASTRAGALUS INJURIES see Leg injuriesASTRONAUTS (see also Space crews)

body measurements, VII-X: 11760

contraindication of drugs, VII-X: 11980

duties, VII-X: 11725, 11726, 11737, 11744

medical histories, VII-X: 12082

neuropsychiatric fitness, VII-X: 9964, 11242, 11591

performance, VII-X: 8314, 11692, 11723, 11725, 11726, 11727, 11728, 12367, 12498, 12543, 12566, 12584

psychological factors, VII-X: 9759

personality, VII-X: 9759, 11502, 11583

physical fitness, VII-X: 11710

selection, VI: 7641; VII-X: 9852, 9914, 11496, 11502,

11509, 11525, 11527, 11528, 11542, 11557,

11558, 11583, 11585, 11586, 11589, 11592,

11641, 11694, 11730

training, VI: 7641; VII-X: 8292, 8408, 9816, 9914,

11496, 11592, 11633, 11637, 11641, 11649,

11653, 11671, 11675, 11676, 11682, 11683,

11684, 11694, 11728, 12526, 12544

use of motion pictures, VII-X: 11646

ATHEROSCLEROSIS see ArteriosclerosisATHLETIC ACTIVITIES see Sport activitiesATMOSPHERE see under Mars, Moon; Venus. Also see

Animal container atmospheres; Balloon cabin a.; Cabin

a.; Helicopter cabin a.; Ionized a.; Planetary a.; Pres-

sure cabin a.; Sealed cabin a.; Space cabin a.; Upper a.

ATMOSPHERIC PRESSURE see Altitude; Barometric

pressure

## ATOMIC EXPLOSIONS

cause of injuries, VII-X: 9996

## effects on:

skin temperature, VII-X: 11339

visual perception, I: 886

ATP see Adenosine triphosphate

ATROPINE AND DERIVATIVES

administration, II: 1612

## effects on:

dark adaptation, V: 6371

electrocardiogram, I: 392; VI: 7578; VII-X: 8765

heat tolerance, V: 5976

salivary glands, II: 1612

temperature regulation, VI: 7878

general psychological effects, V: 6373



- use in motion sickness, IV: 4715  
 vasoconstrictor effects, I: 566
- ATTENTION** *see* Alertness; Arousal
- ATTITUDES** (*see also under* the various personnel categories, e.g., Officers, attitudes; *see also* Behavior; Motivation; Religious attitudes; Space vehicle attitude) test methods, IV: 4185
- ATTRITION** *see under* Aviators, training; Personnel, training; Pilot candidates, training; Pilots; Pilots, training
- AUDIOMETRY** *see* Hearings, test methods
- AUDITORY ADAPTATION** (*see also* Auditory fatigue; Tympanic muscle reflexes), I: 917; II: 1174, 1540, 1650, 1701; IV: 4098, 4415, 5156, 5158, 5159; V: 5551, 5572, 5581; VI: 7028, 7031; VII-X: 9379, 9402, 9422, 9425, 9443, 9448, 10867, 11058  
 effects of quinine, VII-X: 12011  
 relation to electrical potentials of cochlea, VI: 7038, VII-X: 9427  
 tests, VII-X: 9364, 9370, 9371, 9373
- AUDITORY CANAL** *see* External ear
- AUDITORY CORTEX**  
 anatomy, IV: 4284; 4701  
 electrical potentials  
   effects of sound, VI: 7021  
 physiology, IV: 4284, 4701
- AUDITORY CUES**  
 effects on:  
   speech intelligibility, IV: 4561  
   visual searching, VII-X: 9801
- AUDITORY DEPTH PERCEPTION** *see* Sound, localization
- AUDITORY DISTANCE ESTIMATION** *see* Distance estimation (Auditory)
- AUDITORY FATIGUE**, I: 292, 360, 488, 489, 663, 728, 729, 777, 917; II: 941, 1301, 1536, 1537, 1540, 1541, 1650, 1704, 1868, 1871, 1934, 1990, 2178, 2179; III: 2886, 2932, 3094, 3196; 3420; IV: 3934; 4099, 4101, 4537, 4538, 5059; V: 5556, 5566, 5571; VI: 7025, 7030, 7928; VII-X: 9388, 10932, 10974, 12590  
 caused by:  
   electrical stimuli, V: 5601; VII-X: 9377  
   intermittent sound, VII-X: 10985  
   jet plane noise (interior), III: 2665  
 effects of:  
   anoxia, IV: 4409  
   auditory stimuli, III: 3196  
 effects on mental performance, V: 5760  
 relation to:  
   deafness, IV: 4140; VII-X: 10973  
   electrical potentials of cochlea, VI: 7038  
   personality, VII-X: 12077  
 test methods, IV: 4539  
 tests, IV: 4360; V: 5568; 5569, 5573; VI: 7018; VII-X: 9397  
 time factors, IV: 4413, 4414
- AUDITORY FLUTTER**, II: 1950  
 perception  
   tests, VII-X: 9157
- AUDITORY HABITUATION**, IV: 4345; VII-X: 10958
- AUDITORY NERVE**  
 action potentials, I: 917  
   effects of sound, VII-X: 9425  
   relation to hearing, VI: 7-15
- AUDITORY PERCEPTION** (*see also* Auditory adaptation; Auditory fatigue; Auditory flutter; Binaural hearing; Loudness discrimination; Pitch discrimination), I: 542, 721, 722  
 effects of:  
   airplane flight, V: 5772  
   altitude, V: 5842; VII-X: 9365, 10313  
   anoxia, II: 2179; III: 2729; IV: 4409; VII-X: 10542, 10564  
   anxiety, III: 3470  
   barometric pressure, I: 669; V: 5878  
   binaural hearing, III: 2482; IV: 3838; VI: 7014  
   dimenhydrinate, II: 1389; III: 3661  
   ear pressure gradient, IV: 4312; VII-X: 9365  
   earphones, IV: 5205  
   environmental temperature, VII-X: 9853  
   humidity, VII-X: 9853  
   hyperventilation, VII-X: 8889  
   illumination, V: 5638  
   jaw movements, II: 1420  
   jet engine noise, VII-X: 10947  
   light stimuli, II: 1489; IV: 4884  
   monaural hearing, III: 2482; IV: 3838  
   noise, II: 1003, 1110, 1301, 1536, 1868, 2178, 2179; IV: 4099, 4538, 4708; V: 5567, 5574; VII-X: 10932, 10988, 11014  
   rotation, II: 1837; V: 5793  
   side-tone, III: 3648  
   sleep deprivation, VII-X: 9366  
   sound, II: 1540, 1541; III: 2886; IV: 4415; VI: 7017  
   speaking, IV: 3754  
   starvation, II: 1663; IV: 3903  
   vibration, VII-X: 11013  
 follow-up studies, VII-X: 11776  
 general physiological factors, III: 2912; IV: 4339  
 handbooks and treatises, V: 5595; VII-X: 9677  
 of electromagnetic energy, VII-X: 9374  
 of partially deaf, I: 462, 837  
 physical factors, V: 6609  
 psychological factors, III: 2912; IV: 4339  
 relation to:  
   bone conduction, I: 918, II: 1317, 1420, 1454, 1542, 2303; III: 2496  
   electrical potentials of cochlea, V: 5878  
   pain, III: 2788  
 research, II: 1969; VI: 7024  
 research centers, IV: 4832  
 role of cochlea, V: 5547  
 tests, II: 1950; VII-X: 11570  
 thresholds, I: 669, 917; II: 1730, 1912  
 effects of:  
   aircraft noise, VII-X: 9394  
   anoxia, VII-X: 10562, 10563  
   auditory signals, VII-X: 9381  
   auditory stimuli, VII-X: 9429  
   carbon dioxide, VII-X: 9408  
   illumination, VII-X: 9409  
   light stimuli, VII-X: 9386  
   noise, VI: 7489; VII-X: 9372, 9447, 10562, 11051, 11055  
   oxygen breathing, VII-X: 9408  
   practice, VII-X: 9400  
   sound, VI: 7027; VII-X: 9385  
   tympanic muscle reflexes, VII-X: 9416  
   vestibular stimulation, V: 5793; VII-X: 9368  
 measurement, VII-X: 12050  
 relation to:  
   color vision, V: 5482  
   personality, VII-X: 12077  
   time factors, IV: 5153
- AUDITORY SIGNALS** (*see also* Warning devices (Acoustical))  
 effectiveness, V: 5564, 6456  
 effects on:  
   auditory thresholds, VII-X: 9381  
   psychomotor performance, IV: 4844  
   reaction time, II: 2123  
   vigilance, VII-X: 9803  
 intelligibility, I: 189; II: 1151, 1178, 1336, 1959, 1960,

- 1961; III: 2536, 2555; V: 5588; VI: 7020;  
VII-X: 9376
- effects of:  
noise, II: 940; V: 5560; VII-X: 9428, 10965,  
10982  
visual stimuli, II: 1856
- reaction time, VII-X: 9564
- relation to:  
cutaneous signals, VII-X: 9597  
visual signals, V: 6657; VI: 8219; VII-X: 9798,  
12552, 12710
- use in piloting, IV: 4092
- AUDITORY STIMULI** (see also Auditory signals;  
Noise)
- analysis, VII-X: 9410
- cause of deafness, III: 2364
- effects on:  
auditory fatigue, III: 3196  
auditory thresholds, VII-X: 9429  
brain activity, V: 6080  
coronary circulation, VII-X: 9810  
electrical potentials of cochlea, V: 5570; VII-X:  
9377  
electroencephalogram, III: 3199; V: 5384, 5570;  
VII-X: 9159, 9440  
electromyogram, V: 6067  
endocrine system, VII-X: 11034  
intelligibility of visual signals, II: 1856  
labyrinth, V: 6085  
muscular function, VII-X: 9648  
organ weight, VII-X: 11034  
pitch discrimination, VI: 7029  
psychomotor performance, IV: 4375  
sound localization, II: 995  
spatial orientation, VII-X: 9477  
tissues, VII-X: 11034  
visual acuity, IV: 4884  
visual illusions, II: 2119; VII-X: 9533  
general physiological effects, IV: 4026  
idiophonic effect, I: 343  
intensity  
effects on reaction time, III: 2994
- AUDITORY THRESHOLDS** see Auditory perception  
thresholds
- AUDITORY TUBE** see Eustachian tube
- AUSTRALIA** see under Air transportation of patients;  
Aviation medicine; Flight surgeons
- AUSTRIA** see under Psychomotor performance,  
research
- AUTOHYPNOSIS** (see also Fascination)  
caused by piloting, V: 5746
- AUTOKINETIC PHENOMENON** see Visual illusions
- AUTOMATIC PILOT**, VI: 8131
- AUTONOMIC NERVOUS ACTIVITY RHYTHM**  
effects of stress, IV: 4242  
relation to diurnal cycle, IV: 4242
- AUTONOMIC NERVOUS SYSTEM** (Parasympathetic  
nervous system; Sympathetic nervous system)  
effects of:  
altitude, II: 1518; V: 5851  
anoxia, II: 1689; VII-X: 10627, 10635  
blast, II: 2050  
carbon dioxide, VII-X: 12155  
continuous immersion, VII-X: 10266  
hyperoxia, II: 2057  
hyperthermia, IV: 4207  
hypothermia, IV: 4207  
physical work, VI: 7541  
rotation, II: 1666  
sleep deprivation, VII-X: 11139  
examination, I: 564  
relation to motion sickness, I: 738
- role in:  
altitude acclimatization, VII-X: 10488  
anoxia, II: 1479, 1481, 1983  
anoxia tolerance, III: 3239; VI: 7329; VII-X: 10486,  
10488, 10567  
circulation, II: 1546; V: 6005  
hematopoiesis, II: 1904, 1905; VII-X: 10489  
hyperoxia tolerance, III: 2845  
motion sickness, VI: 7821, 7823  
peripheral circulation, VII-X: 8785  
potassium metabolism, IV: 4602  
temperature regulation, VI: 6878; VII-X: 8969,  
9029  
time estimation, VII-X: 9161
- AUTOPSY** see Post-mortem examination
- AVIATION CASUALTIES** (see also Accidents; Crash  
injuries)  
identification, I: 698; III: 2749, 2981; IV: 4393  
post-mortem findings, VI: 8072; VII-X: 12342, 12423  
World War II, II: 1383, 1483
- AVIATION DENTISTRY** see Dental care; Dental  
disturbances
- AVIATION GASOLINE** see Gasoline
- AVIATION MEDICAL ACCELERATION LAB.,  
JOHNSVILLE, PA.,** IV: 3759
- AVIATION MEDICINE** (see also Aviation psychology;  
Dental service; Military medicine; Space medicine),  
I: 100, 531, 559, 636, 678, 805, 811; II: 934,  
1707, 1744; III: 2838, 3186, 3353, 3671;  
IV: 4078, 4543, 5127; V: 5214, 5217, 5218,  
5219, 5750, 6245; VI: 6702, 6704, 6713, 6720;  
VII-X: 8270, 8280, 8289, 8365, 8445, 11805,  
12492  
administrative and organizational aspects, II: 1773;  
III: 2734; IV: 4378, 4384, 4634, 4790, 4791,  
4825; V: 5240, 5242, 5244, 5245; VI: 6750,  
6751, 6752, 6754; VII-X: 8414, 8417, 8482  
bibliography, IV: 4241; VI: 6737, 6738; VII-X: 8373  
congresses, meetings, and symposia, II: 1270, 1571;  
III: 2833; VI: 6739, 6745; VII-X: 8376, 8401,  
8411  
handbooks and treatises, I: 97; II: 955, 1858;  
III: 2345, 2793, 2857, 3293; IV: 3807, 3926,  
4908; V: 5227, 5234, 5235, 5236, 6426;  
VI: 6731, 6732, 6734, 7799; VII-X: 8347,  
8353, 8355, 8357  
history, I: 315, 598, 679; II: 934, 1430, 1508, 1621,  
1923, 2270; III: 2667, 2980; IV: 3819, 3820,  
4196, 4451, 4558, 4600, 4849, 5020, 5096;  
V: 5223; VI: 6725, 6727; VII-X: 8299, 8307,  
8310, 8323, 8343, 8440, 10050  
World War II, IV: 5166  
relation to:  
aircraft industry, VI: 6705  
human engineering, VII-X: 12510  
psychosomatic medicine, IV: 4991  
research, I: 6, 19, 748; II: 937, 1180, 1434, 1499,  
1583, 1708; III: 2844, 2980; IV: 3759, 4165,  
4732, 5013, 5034; V: 5212, 5242, 5250, 5251;  
VI: 6714, 6747, 6759, 7753; VII-X: 8422,  
8440, 8452, 8462, 8482, 8483, 11732  
bibliography, II: 1867  
use of electronic equipment, IV: 4905  
research centers (see also Aerospace Medical Labo-  
ratory (U. S. Air Force); Arctic Aeromedical Labo-  
ratory; Armed Forces Institute of Pathology,  
Washington, D.C.; Aviation Medical Acceleration  
Lab., Johnsville, Pa.; Laboratoire Medicophysio-  
logique de Bretigny; Royal Canadian Air Force  
Institute of Aviation Medicine; School of Aviation  
Medicine (U. S. Air Force); School of Aviation  
Medicine (U. S. Navy)), IV: 4823; V: 5243  
research methods, IV: 4759

- schools (see also Centro di Studi e Ricerche di Medicina Aeronautica; Royal Canadian Air Force Institute of Aviation Medicine; School of Aviation Medicine (U. S. Air Force); School of Aviation Medicine (U. S. Navy)), VI: 6763
- societies, I: 1, 50; IV: 3819
- use of computers, VII-X: 11813
- AVIATION MEDICINE (by country)**
- Australia, II: 1260; III: 2636; VII-X: 8269
- Belgium, I: 283; II: 1377
- Brazil, I: 637; II: 998, 1508
- Canada, II: 2240, 2271; III: 2316
- Czechoslovakia, VII-X: 8286
- Denmark, III: 3486; V: 5211
- France, I: 702; IV: 3947; VII-X: 8315, 9685
- French West Africa, I: 563
- Germany, IV: 4885
- Great Britain, II: 1260
- India, III: 3463
- Indochina, I: 182, 665
- Italy, II: 920; III: 3108, 3319; VII-X: 8323
- Netherlands, III: 3666
- Sweden, I: 102; II: 1312, 1757; III: 2322, 2494, 3455; VI: 6756
- Switzerland, II: 2001, 2261; III: 3645; VII-X: 11536
- Thailand, III: 3345
- United States, I: 639; II: 937, 1180, 1499, 1899; III: 2390, 2992; IV: 4451, 4698, 4733, 4825; VII-X: 8275, 8288, 8291
- AVIATION PERSONNEL** see Personnel
- AVIATION PSYCHOLOGY**, II: 1621; III: 2789, 3281; IV: 4277, 4278; V: 6177; VI: 7140, 7142; VII-X: 9682, 9699, 9712
- research, VII-X: 9701
- AVIATORS** (see also Aerial gunners; Air crews; Astronauts; Bombardiers; Navigators; Pilots; Space crews)
- age factors, I: 644, 645, 684; II: 1313, 1483, 1824, 1906
- attitudes, I: 592; II: 1017, 1020, 1022, 1023; III: 2370, 3596, 3608, 3617, 3664
- test methods, II: 1011
- classification, I: 272; II: 2073, 2194, 2196; III: 2854; VII-X: 11513, 11518, 11545, 11553, 11555, 11556
- testing conditions, II: 1711
- contraindication of drugs, III: 2831; IV: 4248; VII-X: 11987, 1202
- chlorpromazine, V: 5962
- quinine, IV: 4289
- follow-up studies, VI: 7642
- hearing requirements, III: 3055; IV: 4500, 4654; VII-X: 9421
- incidence of:
- abnormalities in electrocardiogram, VI: 7863; VII-X: 8742, 8756
- arteriosclerosis, VII-X: 11951, 11954
- bone abnormalities, VII-X: 11774
- brain pathology, VI: 7851
- cardiovascular diseases, VII-X: 11974
- dental disturbances, VI: 7809
- diseases, VI: 7847; VII-X: 11797, 11888, 11933, 11964
- fainting, VI: 7818; VII-X: 11841
- glaucoma, VII-X: 11895
- glycosuria, VII-X: 11910, 11950
- heterophoria, VII-X: 9327
- hyperlipemia, VI: 7828; VII-X: 11917
- intestinal diseases, IV: 3720; VII-X: 11952
- malaria, IV: 3720
- peptic ulcer, IV: 4131, 4556; V: 6352
- psychoses, V: 5744
- pulmonary diseases, VII-X: 11963
- respiratory diseases, VII-X: 11995
- retinal pathology, VII-X: 11945
- tuberculosis, IV: 4131; V: 6342; VII-X: 11896
- life expectancy, I: 685; IV: 4593
- medical care, VI: 7794; VII-X: 11797
- medical histories, II: 1483, 1906; VII-X: 12082
- morale, II: 1588; VII-X: 11749
- test methods, III: 3069, 3610; V: 6280
- neuropsychiatric care, IV: 4630; VII-X: 11801
- neuropsychiatric fitness, III: 3157, 3319, 3595; VII-X: 9772, 9955, 11909
- nutrition, IV: 4434
- nutritional requirements, VI: 8264
- occupational deafness, I: 292, 777; II: 997, 1301, 2042; III: 3009, 3052, 3405; IV: 3719, 4495, 4862, 5170; V: 5565; VI: 7719, 7842; VII-X: 9419, 9420, 11885, 12096
- follow-up studies, IV: 4886
- occupational diseases, II: 2047; III: 3377; IV: 3719; V: 6550; VII-X: 9773, 11882, 11885, 11931, 11953, 11957
- legal aspects, VII-X: 11953
- occupational hazards, III: 3221; V: 6550
- performance, II: 1038, 1589; III: 2945, 3608; V: 6190
- effects of:
- anoxia, II: 1113
- diseases, II: 3607
- hot climates, V: 6025; VII-X: 10829
- intestinal diseases, VI: 7846
- stress, I: 33; II: 1113; IV: 5011
- relation to age, II: 2093
- test methods, II: 1824; VII-X: 11647
- personality, II: 1587, 1632, 2280; III: 3072, 3389, 3614
- physical fitness, II: 1077, 1138; III: 2843; IV: 3947, 4813; VII-X: 9955, 11720, 12051, 12172
- effects of intestinal diseases, VII-X: 11952
- rating, II: 1231, 1327, 1648; III: 2946, 3329, 3612, 3614; IV: 5137; V: 6190; VI: 7670; VII-X: 11521, 11524, 11539, 11574
- selection, I: 31, 137, 140, 403, 774, 822, 905; II: 1007, 1022, 1138, 1236, 1378, 1557, 1588, 1610, 1618, 1762, 1773, 1870, 1899, 1946, 1976, 2078, 2181, 2268, 2293; III: 2521, 2668, 2827, 2867, 3187, 3188, 3319, 3530, 3565; IV: 4162, 4163, 4168, 4243; V: 5722, 6182, 6205, 6419; VI: 7179, 7222, 7643, 7647, 7651, 7653, 7654, 7655, 7659, 7662, 7666, 7900, 7916; VII-X: 8271, 9175, 9421, 9617, 9702, 9737, 9840, 10412, 11493, 11520, 11523, 11532, 11545, 11553, 11559, 11573, 11580, 11581, 11597, 11598, 11603, 11618, 11625, 11631, 11853, 11927, 12056, 12070, 12087
- testing conditions, III: 3609
- use of family histories, VII-X: 11613
- training, I: 335; II: 924, 927, 1017, 1020, 1327, 1377, 1394, 1588, 1590, 1625, 1762, 1773, 2118; III: 2321, 2370, 3190, 3548, 3608, 3617; IV: 3932, 3981, 4243, 4753, 4790, 4791; V: 6223, 6230, 6231, 6235, 6477; VI: 7682; VII-X: 8271, 11493, 11539, 11629, 11630, 12204
- attrition, V: 6214
- handbooks and treatises, IV: 4908; V: 5236
- prediction of success, II: 1589, 1625, 2287; III: 2422, 2744, 3102; IV: 4549, 4697; V: 6217; VII-X: 11516, 11529, 11613, 11631, 11659
- visual requirements, IV: 4188; VII-X: 9243, 9323
- vocational interest, II: 1022, 1028, 1029, 2026, 2181; V: 6184
- AVOIDANCE CONDITIONING**
- cause of anxiety, V: 5710
- BACTERIA** (see also Escherichia coli; Pseudomonas; Salmonella; Staphylococcus)

- effects of:  
 simulated space environment, VII-X: 8679, 8682  
 space flight, VII-X: 8476  
 metabolism  
 effects of space cabin atmospheres, VI: 8253
- BACTERIA (AIRBORNE)**  
 effects of cold, VI: 6764
- BAILOUT** (*see also* Ejection from aircraft; Ejection seats; Escape capsules; Free fall; Parachute jumping),  
 I: 90, 241, 633, 809; III: 2909, 3225, 3314;  
 IV: 5100; V: 6515, 6517; VI: 7802, 8036;  
 VII-X: 12167
- animal experiments, V: 6528  
 at high altitude, I: 359, 435, 476, 634; II: 1514;  
 III: 2332, 3299; IV: 3753, 4143; V: 6513;  
 VII-X: 12339  
 equipment, VII-X: 12346  
 hazards, V: 6528; VII-X: 12355  
 at high speed, I: 173, 752; II: 1514, 2131; IV: 4190,  
 4579, 5001  
 equipment, IV: 5018  
 research, VI: 8032  
 at low altitude, IV: 3865  
 cause of:  
 injuries, V: 6351; VI: 7840, 7851; VII-X: 12379,  
 12400  
 spine injuries, VII-X: 12415  
 equipment, IV: 3837, 4669; VI: 8051  
 from space vehicles, VI: 8017; VII-X: 12310, 12319,  
 12320, 12334, 12351, 12523  
 animal experiments, VI: 7186  
 equipment, VII-X: 12313  
 hazards, V: 6510, 6519, 6526; VII-X: 12385  
 history, VI: 8048  
 research methods, V: 6685  
 statistics, IV: 5098; V: 6519; VII-X: 12379  
 training devices, V: 6507, 6680
- BAILOUT TRAINING**, VII-X: 12311
- BALANCE** *see* Equilibrium
- BALLISTOCARDIOGRAM** (*see also* Ballistocardiography)  
 abnormalities, VII-X: 8779  
 effects of:  
 anoxia, II: 1801; VII-X: 10581  
 anti-g suits, IV: 5049  
 heat, III: 3542  
 hyperthermia, VII-X: 9073  
 hypothermia, V: 5474  
 jet plane piloting, IV: 4642  
 muscular tonus, VII-X: 8776  
 noise, V: 6075  
 physical work, III: 2504; VI: 7535, 7538; VII-X:  
 11072  
 pressure breathing, II: 1191  
 sport activities, VI: 7535  
 tobacco, V: 6446  
 relation to physical fitness, VI: 7718  
 use in:  
 heart examination, VII-X: 12065  
 physical examination, VII-X: 12047
- BALLISTOCARDIOGRAPHY**, I: 901; II: 1801; VII-X:  
 12609
- BALLOON CABIN ATMOSPHERES**, VII-X: 8534  
 composition, VII-X: 12826
- BALLOON CAPSULES**  
 equipment, VII-X: 8345, 12819  
 human engineering, VII-X: 12819
- BALLOON FLIGHT**, III: 2868; V: 5249  
 animal experiments, IV: 3919; V: 5252  
 effects on blood cells, VII-X: 9818, 9819  
 general physiological effects, V: 5252; VII-X: 8333,  
 9818, 9819, 9986  
 general psychological effects, VII-X: 9966
- history, VI: 6728, 6729, 6730; VII-X: 8303, 8334, 8336,  
 8337, 8338, 8343, 8345  
 medical problems, VII-X: 8337, 12819
- BALLOON FLIGHT (by country)**  
 United States, VII-X: 8303, 8333, 8334, 8336, 8338,  
 8345
- BALLOON FLIGHT (SIMULATED)**, VII-X: 12819
- BALLOON LAUNCHING**, II: 1628
- BALLOONS**  
 human engineering, VII-X: 8334  
 use for space flight simulation, VII-X: 12770
- BANTHINE**  
 use in motion sickness, I: 236
- BARBITURATES** *see* Barbituric acid derivatives
- BARBITURIC ACID DERIVATIVES**  
 effects on:  
 anoxia tolerance, II: 1400  
 circulation, II: 1964  
 metabolism, VI: 6925  
 temperature regulation, IV: 5044  
 use in motion sickness, IV: 4715; V: 6323
- BAROMETRIC PRESSURE** (*see also* Altitude; Overpressure)  
 effects on:  
 arthritis, I: 521  
 auditory perception, I: 669; V: 5878  
 circulation, V: 5836; VI: 6800  
 drug action, II: 1205  
 middle ear, II: 2154  
 skin, I: 365
- BAROTRAUMA** *see* Aerotitis media; Sinus barotrauma
- BASAL METABOLISM** *see* Metabolism
- BATTLE WOUNDS**  
 effects on air transportability, V: 6385; VII-X: 12015
- BEARS**, VII-X: 10055
- BEDREST** *see* Physical inactivity
- BEHAVIOR** (*see also under* Chimpanzees; Passengers; Space crews; Teams)  
 analysis, II: 1183; VII-X: 9770  
 animal experiments, VII-X: 9707  
 research methods, VII-X: 8472, 9708  
 test methods, VII-X: 9635  
 effects of:  
 anoxia, III: 2506  
 anxiety, IV: 4661; VII-X: 11177  
 blast  
 animal experiments, VII-X: 10428  
 cold acclimatization, VI: 7443, 7444, 7445  
 dark adaptation, VII-X: 9656  
 drugs, VII-X: 9695, 12000  
 morphine, V: 6375  
 nalorphine, V: 6375  
 noise, VII-X: 10930  
 nuclear radiations, VII-X: 11356, 11359, 11360  
 restraint, VII-X: 8425, 11186, 11190, 11472  
 sensory deprivation, VI: 7613; VII-X: 11191, 11220  
 sleep deprivation, VII-X: 9695, 11167  
 space flight, VII-X: 9707  
 starvation, VII-X: 8425, 11360, 11472  
 in vigilance, VII-X: 9776  
 physiological correlates, VII-X: 9181  
 relation to:  
 age, II: 1298  
 brain activity, VII-X: 9924  
 test methods, IV: 3741, 4843; V: 6183; VI: 7755
- BELGIUM** *see under* Aviation medicine
- BELLADONNA** (*see also* Atropine; Scopolamine)  
 use in motion sickness, V: 6323
- BELTS** *see* Radiation belts; Safety belts
- BENADON** *see* Pyridoxine
- BENADRYL** (Diphenhydramine hydrochloride)  
 effects on:  
 fatigue, IV: 4757

- mental performance, I: 689; II: 1917  
 nystagmus, IV: 3785  
 psychomotor performance, II: 1549, 1914, 1915,  
 1916; VI: 7873  
 use in motion sickness, I: 142, 231, 234, 236, 689,  
 768; II: 1225
- BENDS** see Decompression sickness
- BENTYL**  
 use in motion sickness, I: 236
- BENZEDRINE** see Amphetamine
- BERYLLIUM POISONING**  
 treatment, VII-X: 12161
- BIBLIOGRAPHY** see under Accidents, prevention; Aero-  
 space medicine; Aerospace medicine, motion pictures;  
 Aerospace medicine, Russia; Altitude acclimatization;  
 Altitude sickness; Aviation medicine; Aviation medi-  
 cine, research; Bioelectrical potentials; Cold, patho-  
 logical effects; Cold, protection; Cold acclimatization;  
 Cold climates, general physiological effects; Cold cli-  
 mates, general psychological effects; Cold tolerance;  
 Confinement, general physiological effects; Dark adap-  
 tation; Emergency rations; Form perception; Frost-  
 bite; Human engineering; Human engineering, motion  
 pictures; Hyperoxia; Impact, general physiological  
 effects; Inhabitants of mountains; Jet plane noise,  
 effects on hearing; Job analysis; Leadership; Man-  
 machine systems; Mental stress, general physiological  
 effects; Military medicine; Military psychiatry; Moon,  
 atmosphere; Motion sickness; Night vision; Noise;  
 Noise, general physiological effects; Noise, measure-  
 ment; Noise, reduction; Oxygen sources; Personnel  
 requirements; Planetary atmospheres; Psychology,  
 research; Psychomotor performance; Remote handling  
 equipment; Sensory deprivation, general physiological  
 effects; Sensory deprivation, general psychological  
 effects; Sensory perception, research; Social isolation,  
 general physiological effects; Space cabin atmospheres;  
 Space flight; Space flight, general physiological effects;  
 Space flight, general psychological effects; Space flight,  
 medical problems; Spatial orientation; Stress, general  
 physiological effects; Stress, general psychological  
 effects; Stress sensitivity; Target identification; Tar-  
 get tracking; Thermoreceptors; Ultraviolet rays, gen-  
 eral physiological effects; Vibration, general physio-  
 logical effects; Vibration, general psychological  
 effects; Vibration, pathological effects; Vision; Visual  
 perception; Visual searching
- BILIRUBIN CONTENT** see under Blood
- BINAURAL HEARING**  
 effects on:  
 auditory perception, III: 2482; IV: 3838; VI: 7014  
 speech intelligibility, IV: 3918  
 relation to:  
 loudness discrimination, VII-X: 9393  
 sound localization, VII-X: 9558  
 test methods, VII-X: 9387  
 tests, VI: 7027; VII-X: 9397, 9414
- BINOCULAR DISPARITY**  
 relation to depth perception, VII-X: 9503
- BINOCULAR RIVALRY** see Retinal rivalry
- BINOCULAR VISION** (see also Heterophoria; Ocular  
 convergence; Ocular dominance; Retinal rivalry),  
 II: 979, 1211; VII-X: 9550  
 effects of:  
 anoxia, VII-X: 10600  
 drugs, VII-X: 10600  
 fatigue, VI: 7598  
 image disparity, III: 3117  
 stress, VII-X: 9270  
 relation to:  
 color vision, VII-X: 9349  
 depth perception, II: 975, 1068, 1211, 1233, 1315,  
 1901; III: 2672, 2673, 2811, 2812, 2979, 3268,  
 3480, 3532, 3538; IV: 3962, 4067, 5047;  
 V: 5509; VI: 7083; VII-X: 9504, 9515  
 retinal adaptation, V: 5508  
 size perception, II: 1211; IV: 4870  
 visual acuity, III: 3257
- BINOCULARS** see Instrumental magnification
- BIOASTRONAUTICS** see Space medicine
- BIOCHEMISTRY** (see also Prebiochemistry)  
 research methods, VII-X: 8433
- BIOELECTRICAL POTENTIALS** (see also entries  
 under Electrical potentials)  
 bibliography, VI: 8138  
 research methods, VI: 8210; VII-X: 12659  
 reviews, VI: 8138
- BIOGRAPHICAL INVENTORY** (see also Family histo-  
 ries), I: 311; IV: 3823; VII-X: 11500, 11780
- BIOLOGICAL CLOCK** see Biological rhythms
- BIOLOGICAL CONTAMINATION** see under Earth;  
 Moon; Planets
- BIOLOGICAL EFFECTS** see under Cosmic rays; Ioniz-  
 ing radiations; Nuclear radiations; Space flight; Space  
 flight (Orbital); Subgravity; X-rays
- BIOLOGICAL ORIENTATION** (see also under Birds;  
 Homing pigeons; Migratory birds)  
 effects of rotation, VII-X: 8660  
 research, VII-X: 8659
- BIOLOGICAL RHYTHMS** (see also Activity rhythm;  
 Adrenal activity r.; Autonomic nervous activity r.;  
 Blood cell r.; Body temperature r.; Excretory r.;  
 Galvanic skin response r.; Glutathione r.; Menstrua-  
 tion; Metabolic r.; Mitotic r.; Ocular r.; Pancreatic r.;  
 Pulse rate r.; Reproductive r.; Respiratory r.; Sleep),  
 III: 3020; VII-X: 8540, 8554, 8567, 8623  
 animal experiments, VII-X: 8553, 8571  
 congresses, meetings, and symposia, VII-X: 8550,  
 8565, 8604  
 development, VII-X: 8587  
 effects of:  
 activity cycle, IV: 4834  
 endocrine system, IV: 4852; VII-X: 8591  
 environmental factors, IV: 3747; VII-X: 8555  
 illumination, III: 2961; VII-X: 8546  
 intermedin, III: 2804  
 time estimation, IV: 4105  
 effects on:  
 blood plasma calcium content, VII-X: 8591  
 blood plasma phosphate content, VII-X: 8591  
 general physiological factors, VII-X: 8557, 8578  
 handbooks and treatises, VI: 6776  
 relation to:  
 cosmic ray cycle, IV: 3894  
 diurnal cycle, III: 2530, 2542, 2961; IV: 3895, 4105,  
 4990, 5030; V: 5272; VI: 6773, 6778; VII-X:  
 8545, 8546, 8549, 8553, 8562, 8577, 8578,  
 8579, 8580, 8587, 8599, 8626, 11198  
 lunar cycle, IV: 3895; VII-X: 8558  
 research methods, V: 5268  
 telemetry, VII-X: 8571
- BIOLOGICAL WASTE PRODUCTS** (see also Feces;  
 Skin excretions; Urine)  
 disposal, VI: 8268; VII-X: 8517, 12900  
 oxygen recovery, VII-X: 12889, 12890  
 utilization, VI: 8268; VII-X: 8517, 8521, 8525, 8531,  
 8535, 8536, 8538, 8539, 12849, 12851, 12881,  
 12882, 12883, 12884, 12885, 12888, 12891,  
 12892, 12893, 12894, 12897, 12901  
 water recovery, VII-X: 12889, 12890, 12891, 12896,  
 12899
- BIONICS** see Machine analogs
- BIRDS** (see also Homing pigeons; Migratory birds;  
 Pigeons)  
 biological orientation, VII-X: 8663, 8668  
 cause of accidents, VII-X: 12396

- BLACKOUT**, II: 1331  
 aftereffects, VII-X: 10218  
 effects on enzyme activity, VII-X: 10218  
 electroretinogram, IV: 4532; V: 5523  
 psychological factors, VI: 7224  
 relation to:  
 electroencephalogram, VII-X: 10031  
 retinal adaptation, VII-X: 10216  
 retinal circulation, II: 1693; III: 2682
- BLANKETS**  
 evaluation, VII-X: 12304
- BLAST** (see also Wind blast)  
 aftereffects, VII-X: 10428  
 animal experiments, VII-X: 11468  
 cause of anxiety, II: 1859  
 effects on:  
 autonomic nervous system, II: 2050  
 behavior  
 animal experiments, VII-X: 10428  
 blood oxygen tension, II: 1243  
 brain, I: 226  
 circulation, II: 1242  
 ear, II: 1008, 1329, 2199  
 eye, III: 3386  
 hearing, I: 393  
 heart function, VI: 7486  
 lung, I: 225, 226; III: 2576, 2597  
 nervous system, III: 3386  
 respiration, II: 1242, 1243; VI: 7486  
 general physiological effects, I: 224, 225, 226, 393;  
 II: 1008, 1119; III: 2598; VII-X: 9996, 10972,  
 11468  
 research methods, VII-X: 10424  
 reviews, IV: 4109  
 general psychological effects, II: 1859; VII-X: 10425  
 reviews, IV: 4109  
 post-mortem findings, VI: 8084  
 research methods, IV: 3978; VII-X: 11468
- BLAST INJURIES**, VII-X: 9996  
 first aid, II: 1119  
 relation to body weight, VII-X: 10424
- BLAST TOLERANCE** (see also Wind blast tolerance),  
 V: 5832
- BLEEDING** see Blood loss
- BLINDNESS** see Color blindness
- BLINKING**  
 cause of accidents, VI: 8085; VII-X: 12383  
 effects of light stimuli, VII-X: 9278  
 relation to anxiety, VI: 7150  
 role in visual perception, V: 5513
- BLOOD** (see also Blood cells; Blood plasma)  
 ammonia content  
 effects of physical work, VII-X: 11123  
 bilirubin content  
 effects of:  
 altitude acclimatization, V: 5823  
 food intake, V: 5259  
 relation to diurnal cycle, V: 5259  
 calcium content  
 effects of hypothermia, V: 5401  
 carbon dioxide tension, I: 222, 223, 899; II: 1044  
 effects of:  
 altitude, VII-X: 10324  
 apnea, II: 1418  
 carbon dioxide, II: 1259; III: 3429  
 heat, VI: 7402  
 hyperoxia, II: 1695  
 hyperventilation, VII-X: 10568  
 physical work, VII-X: 11123  
 effects on:  
 cerebral circulation, VII-X: 8746  
 coronary circulation, VII-X: 8833  
 heart function, IV: 4329  
 heart metabolism, VII-X: 8833  
 measurement, II: 1066, 1259, 1694; V: 5316;  
 VII-X: 8888  
 relation to:  
 gastric secretion, VII-X: 10324  
 respiration, III: 2872, 2873  
 carbon monoxide content  
 effects of tobacco, VI: 7978  
 measurement, IV: 3960, 5132  
 relation to anoxia, VI: 7978  
 carboxyhemoglobin content  
 effects of carbon monoxide, VI: 7954; VII-X:  
 12140, 12390  
 measurement, V: 5343, 6442; VI: 7961  
 catalase content  
 effects of:  
 altitude, III: 3197  
 anoxia, III: 2801  
 physical work, III: 2801  
 cholinesterase content  
 effects of:  
 altitude, IV: 4491  
 sound, VII-X: 10997  
 ultrasonic vibrations, VII-X: 10997  
 distribution  
 effects of anoxia, V: 5929; VII-X: 10531  
 effects of:  
 abdominal pressure, VII-X: 8767  
 acceleration, VII-X: 10005, 10166  
 altitude, I: 355, 452, 625, 828, 899; II: 1169;  
 III: 3370, 3545; V: 5895; VII-X: 10309, 10392,  
 10441, 10445, 10459, 10474  
 altitude acclimatization, I: 827; III: 3401; V: 5840,  
 5884, 5890; VII-X: 10398, 10448, 10525  
 annual cycle, VII-X: 8633  
 anoxia, I: 98, 256, 545, 630; II: 994, 1045, 1392,  
 1421, 1783; III: 2398, 2937; IV: 4903;  
 VII-X: 10525  
 artificial respiration, II: 1578  
 blood loss, II: 1252  
 carbon dioxide, II: 1421; III: 3005, 3430  
 carbon monoxide, I: 256; II: 2266  
 chlorpromazine, VI: 7591  
 cold, I: 448; VII-X: 10649, 10892  
 cold acclimatization, V: 5979, 6042, 6043; VII-X:  
 10712, 10744, 10879  
 diffusion respiration, V: 5350  
 environmental temperature, V: 6036, 6049; VII-X:  
 10701  
 explosive decompression, I: 529; II: 1653  
 fatigue, VI: 7591  
 heat, I: 613, III: 2568, 2750, 2751, 3413; IV: 3834;  
 VI: 7410; VII-X: 10722  
 heat acclimatization, VII-X: 11065  
 hibernation, V: 5284  
 humidity, VII-X: 10392  
 hypercapnia, II: 990; 12151  
 hyperoxia, I: 664; II: 990, 1739  
 hypothermia, III: 2626, 2982; IV: 5003; V: 5406,  
 5455, 5466; VI: 6917, 6920; VII-X: 8941,  
 8998, 9023, 9050, 9074, 9089, 9092, 9102,  
 9116  
 mental stress, II: 1925  
 microwave radiation, VII-X: 11329  
 noise, I: 449; II: 1127, 1172  
 oxygen breathing, II: 1578; III: 2752  
 physical training, VII-X: 11065  
 physical work, VI: 7531, 7559; VII-X: 11080, 11107  
 positive acceleration, VII-X: 10007, 10134  
 pressure breathing, II: 1651  
 respiration, II: 990  
 solar radiation, VII-X: 11340  
 sound, VII-X: 10978

- space cabin atmospheres, VII-X: 12781  
starvation, VII-X: 10744  
ultrasonic vibrations, VII-X: 10978, 11048  
vibration, II: 1175, 1176; VI: 7487  
vitamin supplements, V: 6035
- electrolyte content  
effects of:  
carbon dioxide, VI: 7956, 7957  
cold climates, VII-X: 10742  
emergency rations, VII-X: 10742  
hibernation, VI: 4853
- gas bubble formation, VII-X: 10473, 10474  
caused by:  
altitude, IV: 3810, 4301; VI: 7307  
intrapulmonary pressure, VI: 7307  
effects of vascular tonus, VII-X: 10441  
relation to viscosity, VII-X: 11873
- glucose content  
effects of:  
altitude, III: 3218  
altitude acclimatization, II: 1263  
anoxia, III: 3691; V: 5961; VII-X: 10498, 10532, 10548  
carbon monoxide, VII-X: 10532  
cold acclimatization, III: 3169, 3519  
flight duty, VII-X: 9886  
heat, VI: 7420  
hyperthermia, V: 5434; VII-X: 9040  
hyperventilation, II: 2282  
hypocapnia, VII-X: 10498  
jet plane flight, VII-X: 9950  
piloting, I: 589  
starvation, VI: 7640  
stress, III: 2787; IV: 4572  
vestibular stimulation, IV: 4900
- relation to:  
diet, VII-X: 9886  
electroencephalogram, VII-X: 8733  
perspiration, III: 2892
- role in  
anoxia tolerance, III: 3051  
cold tolerance, III: 3051
- glutathione content  
effects of sleep deprivation, VII-X: 11171
- hemoglobin content  
effects of continuous anoxia, VII-X: 10632
- hemopoietin content  
effects of altitude acclimatization, VI: 7249
- iodine content  
effects of cold acclimatization, V: 6017
- lactate content  
effects of:  
anoxia, VII-X: 10607  
physical work, VII-X: 11124
- lactic acid content  
effects of:  
altitude, VI: 7272  
anoxia, VII-X: 10480  
physical work, V: 6117; VI: 7552; VII-X: 11098
- lipase content  
effects of altitude, IV: 4542  
relation to tuberculosis, V: 6342
- lipid content (see also Hyperlipemia)  
effects of:  
alcohol, VII-X: 8773, 11777  
altitude, V: 5900; VI: 7273  
altitude acclimatization, VI: 7282; VII-X: 10336  
anoxia, IV: 4465  
flight duty, IV: 4218; VII-X: 8773  
physical inactivity, VII-X: 8773  
physical training, VII-X: 11121  
physical work, VI: 7552; VII-X: 11099, 11900  
sleep deprivation, VII-X: 11171
- tobacco, VII-X: 8773  
effects on wound healing, VII-X: 11890  
hereditary factors, VII-X: 8773  
relation to:  
age, I: 644, 645; IV: 4218; VII-X: 10408, 11758, 11777  
altitude tolerance, VII-X: 10401  
arteriosclerosis, VII-X: 8788, 10336, 11900, 11917  
blood oxygen tension, VII-X: 10453, 10454  
diet, VII-X: 11121, 11900, 11917  
flying ability, VII-X: 12067  
obesity, VII-X: 11917
- nucleotide content  
race factors, VII-X: 8582, 8583  
relation to annual cycle, VII-X: 8582, 8583
- oxygen tension, I: 155, 222, 316, 403, 450, 452, 544, 545, 821, 823; II: 1044, 1045, 2091; VII-X: 8763  
effects of:  
altitude, VI: 7245; VII-X: 10304, 10374, 10439, 10453, 10494  
anoxia, VII-X: 10483, 10606  
blast, II: 1243  
carbon dioxide, II: 1259  
carbon monoxide, VII-X: 12158  
explosive decompression, VII-X: 10327  
heat, V: 6037; VI: 7402; VII-X: 10865  
hyperoxia, II: 1695; VII-X: 10606  
hyperventilation, II: 1521  
nitrogen breathing, II: 1930  
oxygen breathing, IV: 5126; V: 6093; VI: 6840  
physical work, IV: 5126; V: 6093, 6107; VI: 7530, 7567  
pressure breathing, I: 452; V: 5328  
speaking, VI: 6830  
transversal acceleration, VII-X: 10177  
voluntary apnea, I: 403, 544, 705; II: 1418, 1943; IV: 4137; V: 5332; VII-X: 8871
- effects on:  
altitude tolerance, IV: 4704  
carotid sinus reflexes, IV: 5180; VI: 7245; VII-X: 10304, 10494  
coronary circulation, III: 2361; IV: 3713  
measurement, II: 1066, 1240, 1244, 1259, 1694; III: 3672; V: 5340, 5355, 5357, 6093; VI: 6838; VII-X: 8761, 8781, 8852, 8885, 8888, 8894, 10439
- relation to:  
alveolar oxygen tension, II: 2269; III: 2353; V: 5318; VII-X: 8841  
blood lipid content, VII-X: 10453, 10454  
respiration, VII-X: 8859  
sleep, III: 3598
- pH  
effects of:  
altitude, VII-X: 10346, 10347  
anoxia, IV: 5050; VII-X: 10537, 10573  
carbon dioxide, VI: 7955  
diffusion respiration, V: 5350  
hyperventilation, III: 3137; V: 5327, 5338; VII-X: 8855  
hypothermia, III: 3273; IV: 4002; V: 5420; VII-X: 9106  
physical work, VI: 7579; VII-X: 11098, 11123  
relation to altitude tolerance, IV: 4780
- phosphate content  
effects of:  
altitude, IV: 4610  
cold, VII-X: 8634  
hibernation, VII-X: 8634  
hyperthermia, VII-X: 9039, 9041

- plasmalogen content  
   effects of vestibular stimulation, IV: 4644
- potassium content  
   effects of:  
     altitude, IV: 4817; V: 5844; VI: 7261, 7265  
     anoxia, V: 5947; VII-X: 9176  
     hypercapnia, VII-X: 9176  
     hyperthermia, V: 5442  
   effects on heart function, IV: 3893
- pressure *see* Blood pressure
- protein content *see* Blood plasma proteins
- pyruvate content  
   effects of physical work, VII-X: 11124
- sodium content  
   effects of:  
     altitude, VI: 7261  
     water intake, VII-X: 10896
- steroid content  
   effects of:  
     altitude, VI: 7178  
     heat, VI: 7178  
     tumbling, V: 5799
- sugar content *see* Blood, glucose content
- temperature  
   effects of:  
     cold, VII-X: 10738  
     explosive decompression, II: 2210
- viscosity  
   relation to:  
     decompression sickness, VII-X: 11873  
     gas bubble formation, VII-X: 11873
- volume *see* Blood volume
- BLOOD BANKS, II: 1734**
- BLOOD CELL RHYTHM**  
   relation to:  
     adrenal activity rhythm, V: 5258, 5264  
     diurnal cycle, V: 5258
- BLOOD CELLS** (*see also* Blood cell rhythm; Erythrocytolysis; Hematopoiesis; Hemoglobins; Polycythemia; Sicklemia; Thrombocytes)
- distribution  
   effects of cold, V: 6021
- effects of:  
     adrenochrome, V: 6125  
     adrenocorticotrophic hormone, VI: 7459  
     airplane flight, II: 1461; III: 2678, 2890, 3233  
     altitude, I: 348, 419, 448, 733, 791, 865; II: 1741, 2006, 2215, 3022; IV: 4781, 4801; V: 5850, 5879, 5882, 5939; VI: 7274, 7311; VII-X: 10371  
     altitude acclimatization, I: 356, 557, 826; II: 2207; III: 2473, 2696, 3342, 3364, 3569; IV: 4781; V: 5823, 5841, 5847; VI: 7246, 7287; VII-X: 10319, 10408, 10458  
     anoxia, I: 306; II: 988, 1479, 1481, 1699, 2207; III: 2368; IV: 5050; VI: 7361, 7372; VII-X: 10379, 10489, 10506, 10558, 10593  
     balloon flight, VII-X: 9818, 9819  
     carbon monoxide, III: 2757  
     cold, II: 1691; V: 5767; VII-X: 8635  
     cold acclimatization, III: 2657, 3519  
     combat stress, II: 1318, 1319  
     conditioned reflexes, II: 1741, 1933  
     explosive decompression, VII-X: 10393  
     fatigue, II: 1461  
     flight duty, IV: 4072; V: 5754  
     food intake, VI: 7548  
     heat, III: 2748, 3093; IV: 4302; VI: 6918, 7459  
     hesperidin, IV: 5103  
     hibernation, V: 5275, VII-X: 8635  
     hypercapnia, III: 3003, 3428  
     hypothermia, IV: 4334; V: 5275, 5475; VI: 6887; VII-X: 8994, 8995, 9088, 9111
- jet plane piloting, V: 5768  
     mental stress, II: 1320; VI: 7175  
     noise, II: 1171, 1172; IV: 3738, 3739  
     nuclear radiations, VII-X: 11350  
     physical work, I: 348; II: 2220; III: 2748; V: 6102, 6113; VI: 7548, 7584; VII-X: 11081, 11096, 11102, 11105, 11106  
     piloting, V: 6174  
     positive acceleration, VII-X: 10062, 10063  
     restraint, V: 5767  
     sound, V: 6061, 6062  
     starvation, III: 3030  
     stress, II: 1318, 1319, 1320, 1462, 1691; V: 5771  
     ultrasonic vibrations, I: 417; II: 1171, 1172, 1498; III: 2829; VII-X: 10990, 10991  
     vibration, VII-X: 11014
- metabolism  
   effects of altitude, V: 5881
- BLOOD CHOLESTEROL** *see* Blood, lipid content
- BLOOD CLOTTING** *see* Blood coagulation
- BLOOD COAGULATION**  
   effects of:  
     altitude, IV: 3950  
     altitude acclimatization, V: 5857  
     anoxia, IV: 4465; V: 5914; VII-X: 10594, 11965  
     explosive decompression, VII-X: 10378  
     heat, VI: 7398  
     hypothermia, V: 5404, 5449; VI: 6905  
     microwave radiation, VII-X: 11379  
     phenolamine, VII-X: 10594  
     stress, VII-X: 8752  
   relation to diurnal cycle, VII-X: 8586
- BLOOD DONATION** *see* Blood banks; Blood loss
- BLOOD FLOW** *see* Circulation
- BLOOD GROUPS** *see* Blood types
- BLOOD LOSS**  
   effects on:  
     anoxia tolerance, II: 1252  
     blood, II: 1252  
     carbohydrate metabolism, VII-X: 10503  
     circulation, II: 1056  
     hematopoiesis, II: 1904, 1905  
     respiration, II: 1056  
     work capacity, II: 1032; III: 2874
- BLOOD PLASMA** (incl. serum)
- ascorbic acid content  
     effects of cold climates, VII-X: 10847
- calcium content  
     effects of biological rhythms, VII-X: 8591
- effects of:  
     adenosine monophosphate, II: 1820  
     altitude, I: 539, 554, 731, 761, 854; II: 1392; V: 5752; VII-X: 10636  
     altitude acclimatization, V: 5867  
     anoxia, IV: 4601; VII-X: 10490  
     carbon dioxide, IV: 3892  
     cold, II: 1992, 1993; III: 3547; V: 5284  
     cold climates, VII-X: 9887  
     cosmic rays, I: 204  
     heat, III: 2989  
     heparin, II: 1820, 1992  
     hibernation, V: 5289  
     hyperthermia, V: 5377  
     hyperventilation, V: 5323  
     hypothermia, V: 5374; VII-X: 8995  
     lipoic acid, VII-X: 12005  
     physical work, VII-X: 11096  
     sleep deprivation, VII-X: 11166  
     solar radiation, V: 5752  
     starvation, VII-X: 9887
- epinephrine content  
     effects of stress, VII-X: 9929



- glucose content  
 effects of altitude, VII-X: 10329
- hemopoietin content, VII-X: 10612  
 effects of anoxia, VI: 7365; VII-X: 10593
- histamine content  
 effects of hypothermia, VII-X: 9103
- iron content, IV: 3868  
 effects of anoxia, VI: 7338
- lipid content  
 effects of injuries, VII-X: 11892  
 relation to heart pathology, VI: 7656
- norepinephrine content  
 effects of stress, VII-X: 9929
- phosphate content  
 effects of biological rhythms, VII-X: 8591
- potassium content  
 effects of altitude, VII-X: 10329, 10346
- sodium content  
 effects of physical work, VII-X: 11097
- BLOOD PLASMA PROTEINS**  
 effects of:  
 altitude, V: 5900; VI: 7257; VII-X: 10344, 10345  
 altitude acclimatization, V: 5873; VII-X: 10446  
 heat acclimatization, VII-X: 10702  
 hibernation, VII-X: 8654  
 hypothermia, VI: 6865; VII-X: 9077  
 injuries, VII-X: 11892  
 mental stress, V: 6130  
 physical work, VI: 7536, 7574, 7636  
 posture, VI: 7636  
 relation to diurnal cycle, VII-X: 8576
- BLOOD PLASMA VOLUME**  
 effects of:  
 altitude, III: 2705  
 hibernation, VII-X: 8654
- BLOOD PLATELETS** see Thrombocytes
- BLOOD PRESSURE** (see also Arterial hypertension;  
 Cold pressor test; Vascular tonus)  
 effects of:  
 abdominal pressure, II: 1106; III: 3085  
 airplane flight, I: 844; VII-X: 11590  
 altitude, II: 1169; IV: 4464  
 altitude acclimatization, III: 3131; VI: 7285  
 anoxia, I: 196; II: 1476; III: 2825, 3238; IV: 4889;  
 VII-X: 10574, 10588, 10635  
 carbon monoxide, VII-X: 12117  
 carotid occlusion, I: 719  
 cold, IV: 3888  
 cold acclimatization, VII-X: 10795  
 drugs, I: 196, 608, 719; IV: 3888  
 anesthetics, I: 196  
 chlorpromazine, VII-X: 10795  
 epinephrine, III: 2825; VII-X: 10795  
 norepinephrine, III: 2825; VI: 6922; VII-X: 10795  
 environmental temperature, VII-X: 10895  
 explosive decompression, II: 2023; IV: 3774;  
 VI: 7316  
 Flack test, III: 3326; VII-X: 8769  
 flight duty, III: 3399  
 heat, IV: 3888  
 hyperthermia, V: 6024; VII-X: 10779  
 hyperventilation, V: 5322; VII-X: 8778  
 hypothermia, III: 2881; VII-X: 8966, 9006  
 impact, VII-X: 10121  
 intrapulmonary pressure, II: 1106; VI: 6799  
 oxygen breathing, IV: 4889  
 physical work, IV: 4464, 4481; VII-X: 8778, 8784  
 positive acceleration, IV: 4506; V: 5797; VI: 7213;  
 VII-X: 10118, 10122  
 postural change, III: 3131; VII-X: 11438  
 posture, IV: 4481  
 pressure breathing, I: 131, 397, 399, 406, 452;  
 II: 1657, 1968; III: 2827, 2835, 2951; IV: 4249;  
 V: 5351; VI: 6815, 6827; VII-X: 8837, 8850,  
 8897  
 proprioception, VII-X: 9456  
 respiration, III: 3443  
 rotation, II: 1348  
 sensory deprivation, VII-X: 11235  
 tilting, VII-X: 11435  
 tobacco, VI: 7979  
 Valsalva maneuver, II: 1106, 1965  
 vestibular stimulation, VI: 7047  
 vibration, VII-X: 10989  
 voluntary apnea, V: 5332  
 follow-up studies, VII-X: 11776  
 measurement, IV: 5204; V: 5313; VI: 6802; VII-X:  
 8741, 8770  
 relation to:  
 adrenal glands, III: 2770  
 age, VI: 7285  
 flying ability, VII-X: 11960  
 physical fitness, III: 2648; VII-X: 11711  
 positive acceleration tolerance, VII-X: 10216  
 pulmonary circulation, II: 2048  
 respiration, VII-X: 8905  
 telemetry, VII-X: 8772
- BLOOD SUGAR** see Blood, glucose content
- BLOOD SUPPLY** see Circulation
- BLOOD TRANSFUSION**  
 equipment, IV: 3829
- BLOOD TYPES**  
 in inhabitants of mountains, VI: 7297
- BLOOD VESSELS** (see also Aorta; Carotid; Coronary  
 blood vessels; Hemorrhoids; Pulmonary blood vessels;  
 Retinal blood vessels; Vascular tonus. See also en-  
 tries under Vasoconstrictor effects)  
 effects of:  
 altitude acclimatization, III: 3294, IV: 3803;  
 V: 5833, 5899; VII-X: 10463  
 anoxia, II: 1689; VII-X: 10561  
 cold acclimatization, V: 6002; VII-X: 10750  
 explosive decompression, VII-X: 10348  
 heat acclimatization, V: 6002  
 mechanical properties, I: 305  
 pathology see Arteriosclerosis; Cardiovascular  
 injuries  
 permeability  
 effects of:  
 altitude, VII-X: 10440  
 altitude acclimatization, VII-X: 10468  
 anoxia, VII-X: 10611  
 hyperthermia, VII-X: 9101
- BLOOD VOLUME** (see also Blood plasma volume)  
 effects of:  
 altitude, III: 2705, 2706, 3544  
 altitude acclimatization, VII-X: 9845, 10288  
 heat, III: 3093  
 heat acclimatization, VII-X: 9845  
 hypothermia, III: 2637; VII-X: 9050  
 pressure breathing, VII-X: 8897  
 in hibernation, VII-X: 8636  
 measurement, III: 3441
- BODY ARMOR**  
 evaluation, V: 6485
- BODY CAVITIES** see Gas in body cavities
- BODY COMPOSITION** see under Inhabitants of moun-  
 tains; Mammals
- BODY FAT** (see also Obesity)  
 effects of:  
 altitude acclimatization, III: 3478  
 cold, VI: 7415  
 cold climates, VII-X: 10802  
 heat, I: 670  
 physical work, I: 670

- effects on:  
 altitude tolerance, VI: 7325, 7817  
 cold tolerance, V: 5376; VII-X: 10672, 10691  
 motor performance, VI: 6938  
 oxygen consumption, VI: 6859  
 skin temperature, IV: 3769  
 measurement, VII-X: 11765  
 relation to:  
 body measurements, VII-X: 11499  
 cold water immersion tolerance, VII-X: 10782  
 decompression sickness, VI: 7325  
 role in:  
 hibernation, V: 5291, 5292  
 temperature regulation, IV: 3769; V: 5376, 5459  
 thermal properties, VII-X: 9144  
**BODY FLUIDS** (see also Blood; Cerebrospinal fluid; Lymph; Tissue fluids; Water exchange)  
 distribution  
 effects of:  
 acceleration, I: 368; II: 1441; III: 2786  
 anoxia, VII-X: 10490  
 cold acclimatization, V: 5979; VII-X: 10645  
 hypothermia, VII-X: 8993  
 pressure breathing, IV: 4116  
 restraint, III: 2786  
 effects of:  
 anoxia, II: 994; III: 2398  
 environmental temperature, V: 5969  
 gas bubble formation, V: 5311  
 thermal properties, VII-X: 8740  
**BODY GASES** (see also Flatus)  
 effects of explosive decompression, II: 2218  
**BODY MEASUREMENTS** (see also Body surface; Body volume; Body weight; Foot measurements; Hand measurements; Head measurements; Somatotype), I: 228;  
 II: 1278, 1280; III: 2925; IV: 4039; VI: 7773;  
 VII-X: 12220, 12485  
 of astronauts, VII-X: 11760  
 of chimpanzees, VII-X: 11786, 12548  
 of inhabitants of mountains, I: 861, 862; IV: 4880;  
 VI: 7263  
 relation to:  
 age, I: 656  
 body fat, VII-X: 11499  
 body surface, VII-X: 11789  
 body weight, VI: 7769, 7993; VII-X: 11765  
 clothing, VII-X: 12178  
 human engineering, III: 3144; IV: 4670; V: 6472,  
 6589; VI: 8141, 8151  
 work space, VII-X: 12321, 12457, 12495  
 statistics, II: 2280; III: 3072; IV: 4082; V: 6290, 6589,  
 6607; VII-X: 11497, 11764, 12321, 12457,  
 12779  
 variability, VII-X: 8737  
**BODY MEASUREMENTS (FEMALE)**, II: 1279; VI: 7775  
**BODY MOTION PERCEPTION** see Motion perception (Passive)  
**BODY MOVEMENTS** (see also entries under Movements)  
 effects of clothing, VI: 8011  
 effects on electrocardiogram, VII-X: 8792  
**BODY MOVEMENTS (PASSIVE)** (see also Visceral displacement)  
 caused by:  
 transversal acceleration, VII-X: 10045  
 vibration, VII-X: 10155, 10953, 10954, 10955,  
 10957, 10961, 10980, 10981, 11041, 11053  
 effects on:  
 oxygen consumption, VI: 6936  
 respiration, VI: 6936; VII-X: 8825, 8826  
**BODY SIZE** see Body measurements  
**BODY SURFACE**  
 measurement, VII-X: 11788, 11789, 11790  
 relation to:  
 body measurements, VII-X: 11789  
 body weight, VII-X: 11789  
 heat loss, II: 1504  
**BODY TEMPERATURE** (see also Hyperthermia; Hypothermia; Precooling; Temperature regulation)  
 effects of:  
 altitude, V: 5846  
 anoxia, I: 194, 195; IV: 3949, 4794, 4795, 4796;  
 V: 5928, 5949; VII-X: 10591, 10627  
 climate, III: 2337  
 clothing, VII-X: 9046  
 cold; I: 194, 195; III: 2448; IV: 3912, 3945, 4261;  
 V: 5429, 5432, 5759, 5977, 5994, 6007, 6009;  
 VI: 7413; VII-X: 10740, 10828  
 cold acclimatization, IV: 3778; V: 6138; VII-X:  
 10733, 10790, 10825, 10827  
 cold air breathing, IV: 4517  
 cold water immersion, VII-X: 10780, 10782  
 drugs, VII-X: 9060  
 chlorpromazine, IV: 3945  
 environmental temperature, VII-X: 10739, 10839  
 heat, III: 2892, 3675; IV: 3856; V: 6016; VII-X: 9069  
 heat acclimatization, VII-X: 10733  
 humidity, IV: 3912  
 hypercapnia, VII-X: 10627  
 immersion, VII-X: 9036, 9046, 10675  
 microwave radiation, V: 6145; VII-X: 11413  
 physical work, II: 1812; III: 2617, 2892, 3674;  
 V: 5400, 6109; VII-X: 9046  
 pyrogenic agents, IV: 3949  
 restraint, III: 2448; IV: 3788; V: 5759, 6136, 6137,  
 6138; VII-X: 9069, 11269, 11271, 11272,  
 11282  
 thermal radiation, VI: 7628  
 vibration, VII-X: 9069  
 water deprivation, V: 6109  
 effects on:  
 heart function, V: 5279  
 nerve function, VII-X: 9168  
 neuromuscular performance, VII-X: 10728, 10729  
 respiration, V: 5407; VI: 6819; VII-X: 8820  
 in hibernation, V: 5282; VII-X: 8647  
 measurement, VII-X: 8990  
 relation to:  
 anoxia tolerance, II: 1400; III: 3230; VII-X: 10520  
 cold water immersion tolerance, VII-X: 10780  
 heat tolerance, VII-X: 10688  
 metabolism, IV: 4219  
 oxygen consumption, IV: 4794, 4795  
 sleep, VII-X: 8590, 8597, 10790  
 temperature regulation, IV: 4219  
**BODY TEMPERATURE GRADIENT**  
 effects of:  
 cold, VII-X: 10648  
 immersion, VII-X: 10684  
 restraint, VII-X: 10648  
 ultrasonic vibrations, VII-X: 11006  
 in hypothermia, V: 5458, 5471  
 relation to shivering, VII-X: 8987  
**BODY TEMPERATURE RHYTHM**  
 effects of:  
 altitude, IV: 5172  
 environmental temperature, VI: 7424  
 food intake, VI: 6771  
 heat, VII-X: 8608  
 illumination, VII-X: 8569  
 physical work, VII-X: 8608, 8625  
 sensory deprivation, VII-X: 8569  
 work-rest cycle, VII-X: 8601, 8619  
 in hibernation, VII-X: 8653  
 relation to:  
 activity rhythm, III: 3013; VI: 6769

- diurnal cycle, VI: 6768; VII-X: 8561, 8569, 8571, 8588, 8592, 8601, 8608, 8619  
 metabolic rhythm, VII-X: 8592  
 performance, VII-X: 8594
- BODY TYPE** *see* Somatotype
- BODY VOLUME**  
 measurement, VII-X: 11788
- BODY WEIGHT**  
 effects of:  
 altitude acclimatization, VI: 7312  
 anoxia, III: 3397; VII-X: 10619  
 carbon dioxide, III: 3429  
 cocaine, III: 3106  
 cold, IV: 4049; V: 5968; VI: 7467; VII-X: 9130, 9897, 10806  
 cold acclimatization, VII-X: 10762  
 cold climates, VII-X: 10802  
 diet, V: 5968; VII-X: 9121  
 flight duty, II: 1875; V: 5763  
 somatropin, III: 3397  
 starvation, VII-X: 9897  
 follow-up studies, VII-X: 11776  
 relation to:  
 age, VII-X: 11756  
 blast injuries, VII-X: 10424  
 body measurements, VI: 7769, 7993; VII-X: 11765  
 body surface, VII-X: 11789  
 decompression sickness, I: 270; VI: 7817  
 metabolism, VII-X: 8917, 8922  
 work capacity, VI: 6937
- BOMBARDIERS**  
 occupational diseases, II: 2277
- BONAMINE** *see* Meclizine and derivatives
- BONE** (*see also* Pelvis; Skull)  
 abnormalities  
 incidence in aviators, VII-X: 11774  
 effects of:  
 altitude, VII-X: 10306  
 anoxia, II: 1421  
 carbon dioxide, II: 1421  
 explosive decompression, VII-X: 10393  
 ultrasonic vibrations, II: 1865  
 vibration, II: 2089, 2090
- BONE CONDUCTION**, VII-X: 10562  
 measurement, IV: 4625  
 relation to:  
 age, II: 2171  
 auditory perception, I: 918; II: 1317, 1420, 1454, 1542, 2303; III: 2496
- BONE INJURIES** (*see also* Spine injuries), II: 2047
- BONE MARROW** (*see also* Hematopoiesis)  
 effects of:  
 altitude, III: 2986; VII-X: 10392  
 anoxia, II: 1984, 1985; IV: 4903  
 humidity, VII-X: 10392  
 metabolism  
 effects of anoxia, II: 1984, 1985  
 pathology *see* Leukemia
- BOOTS** (*see also* Magnetic shoes), I: 655; II: 978  
 evaluation, VII-X: 12290
- BORANES**  
 effects on electroencephalogram, VII-X: 12115, 12124  
 toxic effects, VII-X: 12115, 12120, 12124, 12126, 12129
- BRAIN** (*see also* Brain activity; Cerebellum; Cerebral circulation; Cerebral cortex; Cerebral stimulation; Cerebrospinal fluid; Hypophysis; Hypothalamus; Intracranial pressure; Meninges; Pineal gland; Respiratory center; Visual cortex; Vomiting center)  
 action potentials *see* Electroencephalogram  
 effects of:  
 anoxia, I: 584; II: 2066; III: 2459, 3099; IV: 5068; V: 5925; VII-X: 10608  
 post-mortem findings, III: 3091; V: 5921, 6551; VI: 7378; VII-X: 12382  
 blast, I: 226  
 carbon monoxide, III: 2459  
 cosmic rays, III: 3475; V: 6156  
 explosive decompression, I: 418  
 hyperthermia, V: 5970  
 hyperventilation  
 post mortem findings, VI: 7378  
 hypothermia, VII-X: 9091  
 impact, IV: 4287; VII-X: 10081  
 negative acceleration, IV: 3809  
 noise, III: 2553  
 sound, IV: 4734; VII-X: 11022  
 ultrasonic vibrations, II: 1566, 1865; III: 2829  
 electrical resistance  
 effects of anoxia, VII-X: 10582  
 epinephrine content  
 effects of:  
 anoxia, VII-X: 10623  
 carbon dioxide, VII-X: 10623  
 glycogen content  
 relation to diurnal cycle, VII-X: 8624  
 lactic acid content, VII-X: 12382  
 effects of:  
 altitude, VII-X: 10464, 10465  
 anoxia, VII-X: 10499, 10500, 10570  
 hypocapnia, VII-X: 10499, 10500  
 oxygen breathing, VII-X: 10465  
 metabolism (*see also* Brain, sodium-potassium ratio)  
 effects of:  
 altitude acclimatization, II: 966, 968, 1321  
 anoxia, II: 967, 969, 971, 1321, 1909, 1910, 2085, 2111; III: 2956, 3549; IV: 5056; V: 5958; VII-X: 10597  
 carbon dioxide, V: 5439  
 hyperoxia, II: 1695  
 hypothermia, III: 3393; IV: 4469; V: 5385, 5470; VII-X: 8934, 8951, 9075  
 ischemia, III: 3549  
 mental work, IV: 4989  
 mescaline, IV: 4093  
 physical work, III: 3432  
 positive acceleration, IV: 3910  
 sensory deprivation, VII-X: 11262  
 stress, VII-X: 9822  
 tumbling, VII-X: 10143  
 ultrasonic vibrations, VII-X: 11047  
 relation to age, VII-X: 11759  
 norepinephrine content  
 effects of:  
 anoxia, VII-X: 10623  
 carbon dioxide, VII-X: 10623  
 oxygen tension  
 effects of:  
 altitude, VII-X: 10372  
 anoxia, VII-X: 8846, 10533  
 carbon dioxide, VI: 7962; VII-X: 10533  
 hyperoxia, VII-X: 8846  
 hyperventilation, VII-X: 8870  
 hypothermia, VII-X: 9049  
 oxygen breathing, VII-X: 10372  
 measurement, VII-X: 12696  
 pathology, V: 6341; VII-X: 10597, 11940  
 caused by:  
 anoxia, VII-X: 10637  
 hyperoxia, VII-X: 10544  
 incidence in aviators, VI: 7851  
 pH  
 effects of carbon dioxide, VI: 7955  
 role in altitude acclimatization, II: 1931

- sodium-potassium ratio  
 effects of:  
 acceleration, III: 2786; IV: 4204; VII-X: 10034  
 restraint, III: 2786; IV: 4204
- temperature  
 effects of cold, V: 5991; VII-X: 10703  
 effects on:  
 circulation, VII-X: 8732, 8964  
 metabolism, VII-X: 8963  
 oxygen consumption, VII-X: 8732  
 respiration, VII-X: 8732, 8963  
 general physiological effects, VII-X: 9091  
 role in temperature regulation, VII-X: 8948, 8962, 9005
- BRAIN ACTIVITY** (see also Electroencephalogram)  
 effects of:  
 acceleration, VI: 7228  
 altitude, I: 681; II: 1677; III: 3021, 3523  
 altitude acclimatization, I: 681; III: 3021; V: 5821  
 anoxia (see also Time reserve), I: 388, 401, 587, 609; II: 981, 1065, 1147, 1328, 1677, 1836, 2283; IV: 5183; V: 5958; VI: 7332; VII-X: 10524  
 auditory stimuli, V: 6080  
 carbon dioxide, IV: 5183  
 cyclizine, VII-X: 11992  
 epinephrine, V: 6369  
 heat, III: 3502  
 hyperoxia, III: 2455; IV: 5183  
 hyperthermia, VII-X: 10731  
 hypothermia, V: 5447; VI: 6912; VII-X: 8957  
 ischemia, II: 1328  
 meclizine, VII-X: 11992  
 microwave radiation, VI: 7625  
 positive acceleration, V: 5810; VII-X: 10131  
 sleep deprivation, VII-X: 11142  
 vestibular stimulation, II: 1669  
 machine analogs, VII-X: 12626, 12763  
 relation to:  
 age, VII-X: 11761  
 behavior, VII-X: 9924  
 nystagmus, II: 1819  
 psychological disturbances, VII-X: 9682  
 role in:  
 heat acclimatization, VII-X: 10732  
 optokinetic nystagmus, VII-X: 9552  
 respiration, II: 1799; VII-X: 8834, 8861  
 shivering, VI: 6941, 6942; VII-X: 9000, 9001, 9035, 9101  
 temperature regulation, V: 5949; VII-X: 8973, 8977, 8999  
 thermoreception, VII-X: 9667
- BRAIN INJURIES**  
 caused by:  
 impact, VII-X: 10069  
 positive acceleration, VII-X: 11946
- BRAIN WAVES** see Electroencephalogram
- BRAZIL** see under Aviation medicine; Flight surgeons, training
- BREAK-OFF EFFECT**, V: 6131; VI: 7059; VII-X: 11187, 11205
- BREATHING** see Carbon dioxide breathing; Cold air b.; Negative pressure b.; Nitrogen b.; Oxygen b.; Pressure b.; Respiration; Warm air b.
- BREATHING APPARATUS (UNDERWATER)**, V: 6531, 6532
- BRIGHTNESS ADAPTATION** see Retinal adaptation
- BRIGHTNESS DISCRIMINATION**, I: 346, 658; III: 2858; VII-X: 9355  
 effects of:  
 anoxia, I: 245; VII-X: 10508  
 fatigue, IV: 3767  
 illumination, IV: 3835, 4330, 4522; VII-X: 9316  
 intermittent light, VII-X: 9316  
 light stimuli, II: 1051, 1300  
 motion, V: 5630  
 noise, I: 193  
 retinal image position, IV: 4358  
 visual fatigue, VII-X: 9361  
 X-rays, II: 1431  
 general physiological factors, II: 1713; VII-X: 9352  
 relation to:  
 color vision, II: 1121; VI: 6980  
 contour perception, II: 1753  
 depth perception, III: 3232; IV: 4000; V: 5640  
 flicker fusion frequency, VI: 7013  
 form perception, II: 1864  
 radar operation, IV: 4212; VII-X: 12570  
 retinal adaptation, III: 3227; IV: 3877; VII-X: 9198  
 test methods, II: 1039  
 tests, II: 1310; VI: 6999; VII-X: 9192, 9235, 9261  
 thresholds, II: 1124  
 time factors, III: 2922; IV: 3835; V: 5515
- BROMIDES**  
 effects on psychomotor performance, VI: 7875; VII-X: 9629, 9631
- BUBBLE FORMATION** see entries under Gas bubble formation
- BURNS**  
 effects on air transportability, V: 6400; VI: 7893  
 prevention, V: 6496  
 treatment, I: 238; III: 3618
- BUSCOPAN**  
 use in motion sickness, I: 236
- CABIN ATMOSPHERES** (see also Balloon cabin atmospheres; Helicopter cabin a.; Pressure cabin a.; Sealed cabin a.; Space cabin a.)  
 composition, V: 6445  
 relation to decompression sickness, VII-X: 10430  
 congresses, meetings, and symposia, VII-X: 8402  
 contamination, VII-X: 12105, 12106, 12808  
 purification, VII-X: 12821
- CABINS** (see also Balloon cabins; Cockpits; Pressure c.; Sealed c.; Space c.)  
 air conditioning, I: 697; II: 1692, 1740; VII-X: 12782, 12787  
 atmosphere see Cabin atmosphere  
 cooling, IV: 4132  
 deodorization, I: 366, 367; II: 1692; IV: 4365  
 human engineering, I: 174, 285, 395, 593, 697, 779; II: 1635, 1755, 1997; VII-X: 12166, 12825  
 humidity, III: 3045  
 sanitary aspects, V: 6438  
 temperature, II: 1491, 1492, 1635, III: 3045  
 effects of high speed flight, III: 2960  
 temperature control, II: 1635, 1692; VII-X: 12783  
 ventilation, II: 1692
- CAFFEINE AND DERIVATIVES**  
 effects on:  
 color vision, II: 2064  
 electroencephalogram, IV: 4716  
 fatigue, IV: 4323  
 psychomotor performance, II: 1549; VI: 7875; VII-X: 9629, 9631  
 vibration tolerance, VII-X: 11050
- CALCIUM METABOLISM** (see also Calcium content under Blood; Blood plasma)  
 effects of carbon dioxide, VII-X: 12149
- CALORIC STIMULI** (see also Thermal radiation)  
 effects on labyrinth, III: 3059; VII-X: 9460
- CANADA** see under Air ambulance service; Air evacuation; Aviation medicine; Ground crews, selection; Rescue medical teams; Space medicine
- CANADIAN AIR FORCE INSTITUTE OF AVIATION MEDICINE** see Royal Canadian Institute...
- CANAL SICKNESS** see Motion sickness

- CANCER *see* Tumors
- CANDIDATES *see* Helicopter pilot candidates; Officer candidates; Pilot candidates
- CAPACITY *see* Vital capacity; Work capacity
- CAPILLARIES *see* Blood vessels
- CAPSULES *see* Encapsulation; Escape capsules; Space capsules
- CARBOHYDRATE METABOLISM (*see also* Glucose metabolism)  
 effects of:  
 adrenocorticotrophic hormone, VII-X: 10589  
 altitude, I: 362; VII-X: 10384, 10457, 10472  
 altitude acclimatization, V: 5826, 5876; VII-X: 10307, 10427, 10457  
 anoxia, II: 1261, 1262, 1266, 1267, 1909; IV: 3996, 4489; VII-X: 10503, 10589  
 blood loss, VII-X: 10503  
 carbon dioxide, III: 3429; IV: 4914  
 cold, III: 3642; V: 5989; VI: 7474; VII-X: 10903  
 cold acclimatization, III: 3280; IV: 4747; VII-X: 10713  
 diet, IV: 4139  
 flight duty, VII-X: 9813  
 glycine, VII-X: 9129  
 hibernation, V: 5290  
 hypercapnia, II: 1266, III: 3428  
 hyperoxia, III: 3301  
 hypothermia, V: 5479; VII-X: 9058, 9075  
 physical work, VI: 755, 7561  
 relation to:  
 age, VI: 7474  
 anoxia tolerance, III: 3191  
 diurnal cycle, III: 3020; V: 5265  
 electroencephalogram, IV: 5189; VI: 6947
- CARBOHYDRATES (*see also* Glucose)  
 effects on:  
 altitude tolerance, VII-X: 10354  
 work capacity, VII-X: 9132
- CARBON DIOXIDE (*see also* Alveolar carbon dioxide tension; Hypercapnia; Hypocapnia. *See also* Carbon dioxide tension *under* Blood; Tissues)  
 effects on:  
 adrenal glands, III: 3429; IV: 4462, 4914; V: 6443  
 altitude tolerance, II: 1522  
 alveolar carbon dioxide tension, II: 2143  
 anoxia tolerance, VII-X: 10615, 10622  
 auditory thresholds, VII-X: 9408  
 autonomic nervous system, VII-X: 12155  
 blood, II: 1421; III: 3005, 3430  
 blood carbon dioxide tension, II: 1259; III: 3429  
 blood electrolyte content, VI: 7956, 7957  
 blood oxygen tension, II: 1259  
 blood pH, VI: 7955  
 blood plasma, IV: 3892  
 body weight, III: 3429  
 bone, II: 1421  
 brain activity, IV: 5183  
 brain epinephrine content, VII-X: 10623  
 brain metabolism, V: 5439  
 brain norepinephrine content, VII-X: 10623  
 brain oxygen tension, VI: 7962; VII-X: 10533  
 brain pH, VI: 7955  
 chemoreceptors, II: 1368; III: 2587; VI: 7133; VII-X: 9653  
 circulation, II: 1570; III: 2902; V: 5336; VII-X: 8764, 10502, 12141, 12145, 12152  
 cerebral circulation, II: 2061; V: 5439; VII-X: 8757, 8911, 12153  
 peripheral circulation, VI: 7964; VII-X: 8753  
 pulmonary circulation, II: 2145  
 retinal circulation, VII-X: 12134  
 drug action, IV: 4457  
 electrical potentials of cochlea, I: 896; II: 2275  
 electrical potentials of meninges, V: 5346  
 electroencephalogram, I: 758; II: 2058; III: 3431; VII-X: 12147  
 electromyogram, I: 758  
 endocrine system, VII-X: 12155  
 flicker fusion frequency, II: 2058; III: 3431  
 heart function, IV: 3893; VII-X: 9095  
 electrocardiogram, I: 884  
 pulse rate, III: 3430  
 kidney function, VI: 6927; VII-X: 12142  
 lung, V: 5358  
 metabolism, III: 2447; VII-X: 12135  
 endogenous formation of carbon monoxide, II: 1784  
 oxygen consumption, IV: 4947; VI: 7958  
 metabolism of organs:  
 heart, II: 1266  
 liver, IV: 4457  
 metabolism of substances:  
 calcium, VII-X: 12149  
 carbohydrates, III: 3429; IV: 4914  
 electrolytes, VI: 7965  
 phosphorus, VII-X: 12149  
 potassium, II: 1266; IV: 3892  
 muscular system, I: 758  
 nitrogen elimination, II: 1522  
 psychomotor performance, I: 881; II: 2243  
 respiration, I: 101, 672, 757, 822, 881; II: 1208, 1259, 1368, 1433, 1522, 1523, 1697, 2143, 2243; III: 2436, 2617, 3084, 3129, 3430, 3633; IV: 3997, 4947, 4949, 5026; V: 5346, 6441; VI: 6808, 6819, 6843, 7277, 7370; VII-X: 8865, 8885, 8900, 12138  
 respiratory dead space, V: 5325  
 shivering, VII-X: 12135  
 temperature regulation, V: 5994; VI: 7970; VII-X: 8967, 9085  
 tissue carbon dioxide content, VI: 7972  
 visual perception, II: 1393  
 elimination *see* Carbon dioxide elimination  
 general physiological effects, II: 1421; III: 3005, 3635; V: 6440; VI: 7969; VII-X: 12148, 12154, 12822  
 in respiratory gases  
 measurement, II: 1323; III: 2551; IV: 4621, 5164; V: 5345, 5364; VII-X: 8836  
 inducing hypothermia, VII-X: 9085  
 oxygen recovery, VI: 8267; VII-X: 8517  
 pathological effects, V: 6440  
 production *see* Carbon dioxide production  
 removal from atmosphere, VII-X: 12797, 12831, 12842  
 role in central nervous system activity, VII-X: 9182  
 tolerance *see* Carbon dioxide tolerance
- CARBON DIOXIDE ACCLIMATIZATION, VII-X: 8738, 12148
- CARBON DIOXIDE BREATHING  
 effects on cerebral circulation, VI: 6801
- CARBON DIOXIDE DEFICIENCY *see* Hypocapnia
- CARBON DIOXIDE ELIMINATION  
 effects of:  
 Diamox, II: 1060; III: 2573  
 drugs, VII-X: 9124  
 physical work, VI: 7540
- CARBON DIOXIDE PRODUCTION (*see also* Carbonic anhydrase), I: 187  
 effects of:  
 anoxia, I: 187; VII-X: 10515  
 cold, V: 5987  
 oxygen breathing, VII-X: 8913  
 work-rest cycle, VII-X: 11091
- CARBON DIOXIDE (STORED IN BODY), VII-X: 8738
- CARBON DIOXIDE TENSION *see under* Blood; Tissues.  
 Also *see* Alveolar carbon dioxide tension
- CARBON DIOXIDE TOLERANCE, I: 881; II: 2243;

- III: 3633; IV: 3875, 4296, 4297; VII-X: 12148  
 effects of:  
 altitude, V: 5834  
 heat, VI: 7968  
 hyperthermia, V: 5393
- CARBON MONOXIDE** (see also Blood, carbon monoxide content; Blood, carboxyhemoglobin content)  
 acclimatization see Carbon monoxide acclimatization  
 detection, II: 1510; IV: 3994; VI: 7959  
 diffusion in lung, VI: 6847  
 effects on:  
 blood, I: 256; II: 2266  
 blood carboxyhemoglobin content, VI: 7954; VII-X: 12140, 12390  
 blood cells, III: 2757  
 blood glucose content, VII-X: 10532  
 blood oxygen tension, VII-X: 12158  
 blood pressure, VII-X: 12117  
 brain, III: 2459  
 catecholamine excretion, VII-X: 12117  
 chemoreceptors, I: 316  
 circulation, VII-X: 12137, 12156  
   pulmonary circulation, II: 1339  
 electroencephalogram, VII-X: 12133  
 respiration, VI: 6843; VII-X: 12137, 12156  
 X-ray tolerance, IV: 4476  
 endogenous formation, III: 2745; IV: 5061  
 effects of:  
 anoxia, II: 1784; III: 2481  
 carbon dioxide, II: 1784  
 hyperoxia, II: 1784  
 general physiological effects, II: 2267; VII-X: 12144  
 reviews, IV: 5061; VII-X: 12143  
 hazards (see also Carbon monoxide poisoning),  
 II: 1786; IV: 4119, 4206, 4861; VI: 7966;  
 VII-X: 10517, 12106  
 measurement, VI: 7960  
 protection, VI: 7953  
 tolerance see Carbon monoxide tolerance
- CARBON MONOXIDE ACCLIMATIZATION**  
 effects on:  
 carbon monoxide tolerance, III: 3657  
 circulation, III: 3088  
 hemoglobin composition, III: 3581
- CARBON MONOXIDE CONTENT** see under Blood;  
 Sealed cabin atmospheres
- CARBON MONOXIDE ELIMINATION**, VI: 7973
- CARBON MONOXIDE POISONING** (see also Carbon monoxide, hazards), II: 1811  
 cause of accidents, V: 6436; VII-X: 12157  
 caused by helicopter flight, VII-X: 9936  
 effects of oxygen breathing, III: 2757  
 post-mortem findings, V: 6444; VI: 7971; VII-X: 12157  
 resuscitation, VI: 7967; VII-X: 12133  
 reviews, IV: 5061  
 role of tobacco, III: 2740  
 treatment, II: 942; VI: 7966; VII-X: 12146
- CARBON MONOXIDE TOLERANCE**, III: 3046  
 animal experiments, VII-X: 12144  
 effects of:  
 altitude acclimatization, III: 3657; VII-X: 12158, 12159  
 carbon monoxide acclimatization, III: 3657
- CARBON TETRACHLORIDE**  
 effects on:  
 fertility, I: 11  
 hematopoiesis, VI: 7951  
 toxic effects, I: 11, 27, 263; III: 2885; VI: 7948, 7952;  
 VII-X: 12131, 12132
- CARBOXYHEMOGLOBIN CONTENT** see under Blood
- CARBOXYHEMOGLOBINEMIA** see Blood, carboxyhemoglobin content; Carbon monoxide poisoning
- CARBOXYPEPTIDASE**, I: 338
- CARCHOLIN**  
 effects on dark adaptation, II: 1385
- CARDIAC** . . . see Heart
- CARDIAC FREQUENCY** see Pulse rate
- CARDIAZOL** see Metrazol
- CARDIOGRAM** see Ballistocardiogram; Electrocardiogram; Phonocardiogram; Pneumotachocardiogram; Vectorcardiogram
- CARDIOVASCULAR DISEASES** (see also Arteriosclerosis; Heart, pathology; Phlebitis)  
 effects on:  
 air transportability, I: 303, 387, 704, 785; II: 1600, 1790, 1791, 1792; III: 2315, 3464, 3508;  
 IV: 3872, 4035, 4298, 4888; V: 6388, 6395, 6410; VI: 7882, 7885; VII-X: 12013, 12021, 12041  
 altitude tolerance, VII-X: 10284, 10390  
 incidence in:  
 aviators, VII-X: 11974  
 pilot candidates, VII-X: 11925  
 relation to:  
 age, VII-X: 12059  
 flying ability, VII-X: 11787  
 lipid metabolism, II: 1820; III: 3203  
 saliva, VI: 7838
- CARDIOVASCULAR INJURIES**  
 caused by impact, VII-X: 11884
- CARDIOVASCULAR SYSTEM** (see also Blood; Blood vessels; Circulation; Heart; Lymph; Reticuloendothelial system; Spleen)  
 effects of:  
 airplane flight, II: 1306; III: 2306, 3521; IV: 4257  
 high speed flight, III: 3521  
 intrapulmonary pressure, III: 2999  
 jet plane piloting, III: 3398  
 postural change, III: 3606  
 sport activities, VI: 7587  
 subgravity, VII-X: 10229  
 examination, I: 684; II: 1743; IV: 4257, 4553, 5025, 5171; VI: 7908, 7913; VII-X: 11538, 11927, 11957, 12047, 12059  
 function tests, IV: 4907; V: 6307; VI: 7903; VII-X: 8768, 8775, 8780, 8793, 12046, 12080, 12081, 12091  
 relation to adrenal glands, III: 2938
- CARIES** see Dental caries
- CAROTENE METABOLISM**  
 effects of:  
 altitude, VI: 7293  
 starvation, VI: 7293
- CAROTID OCCLUSION**  
 effects on blood pressure, I: 719
- CAROTID SINUS NERVE**  
 action potentials  
 effects of:  
 anoxia, VII-X: 10557  
 hypercapnia, VII-X: 10557
- CAROTID SINUS REFLEXES**  
 effects of:  
 anoxia, II: 1345; V: 5916  
 blood oxygen tension, IV: 5180; VI: 7245; VII-X: 10304, 10494  
 hyperthermia, VI: 6890  
 hypothermia, VII-X: 9052
- role in:  
 circulation, V: 5804  
 heart function, V: 5952  
 respiration, VII-X: 10551
- CASUALTIES** see Aviation casualties; Patients
- CATALASE** see Blood, catalase content
- CATAPULTS** (see also Ejection seats; Escape capsules), I: 474; IV: 4337

## CATECHOLAMINE EXCRETION

- effects of:
- acceleration, VII-X: 10077
  - airplane flight, III: 2718
  - anoxia, V: 5481
  - carbon monoxide, VII-X: 12117
  - clothing, VII-X: 9987
  - cold, VII-X: 10798
  - cold acclimatization, VII-X: 10798
  - confinement, VII-X: 11254
  - environmental temperature, VII-X: 9890
  - physical work, VII-X: 9890
  - posture, IV: 4128; V: 6170
  - psychomotor stress, V: 5481
  - simulated airplane flight, VII-X: 9987
  - simulated space flight, VII-X: 11254
  - sleep deprivation, VII-X: 9890
  - social isolation, VII-X: 11228
  - stress, VII-X: 9915, 9928
  - tilting, VII-X: 10185
  - psychological factors, VII-X: 10077
  - relation to diurnal cycle, IV: 4127
- CATECHOLAMINES see Epinephrine; Norepinephrine
- CATIONS see Electrolytes
- CATS, VII-X: 9518
- restraining methods, VII-X: 12469
- CELL DIVISION (see also Mitotic rhythm)
- effects of:
- sound, VII-X: 11018
  - ultrasonic vibrations, VII-X: 11018
- CELLS see Blood cells; Emergency pressure cells; Mast cells
- CENTER OF GRAVITY see under Animal containers (Sealed)
- CENTIMETER WAVES see Microwave radiation
- CENTRAL NERVOUS SYSTEM (see also Brain; Spinal cord)
- effects of:
- altitude, IV: 4325
  - anoxia, III: 2509; VII-X: 10566
  - cosmic rays, VII-X: 11415
  - ultrasonic vibrations, III: 2761
- metabolism
- effects of anoxia, VII-X: 10569
  - role in anoxia tolerance, II: 2086; VI: 7360
- CENTRAL NERVOUS SYSTEM ACTIVITY
- effects of hypothermia, V: 5450
- role of carbon dioxide, VII-X: 9182
- CENTRIFUGAL FORCE see Acceleration
- CENTRIFUGATION
- effects on isolated organs, VII-X: 10113
- CENTRIFUGES see Animal centrifuges; Human centrifuges
- CENTRO DI STUDI E RICERCHE DI MEDICINA AERONAUTICA, V: 6231
- CENTROPNEIN
- effects on anoxia tolerance, I: 821, 823; III: 3349
- CEREBELLUM
- role in:
- equilibrium, VII-X: 9493, 9652
  - motion sickness, V: 6334
  - nystagmus, VII-X: 9493
  - vestibular reflexes, VII-X: 9652
- CEREBRAL CIRCULATION
- effects of:
- acceleration, I: 875
  - acidosis, II: 2060
  - alkalosis, II: 2060
  - altitude, I: 223
  - anoxia, IV: 4645; VI: 6805; VII-X: 8757, 10495
  - blood carbon dioxide tension, VII-X: 8746
  - carbon dioxide, II: 2061; V: 5439; VI: 6801; VII-X: 8757, 8911, 12153
  - carbon dioxide breathing, VI: 6801
  - continuous anoxia, VII-X: 10632
  - drugs, VII-X: 8746
  - fatigue, IV: 4606
  - hypercapnia, III: 3292
  - hyperoxia, II: 1695; IV: 4645; VI: 6805
  - hypothermia, III: 3393; IV: 4469; V: 5439, 5470; VII-X: 9096
  - mental work, IV: 4989
  - mescaline, IV: 4093
  - negative acceleration, I: 307, 308, 309
  - oxygen breathing, VI: 6801; VII-X: 8911
  - physical work, III: 3432
  - positive acceleration, III: 2461
  - sleep deprivation, IV: 4606
  - sound, VI: 7506; VII-X: 11002
  - visual stimuli, VII-X: 8757
  - measurement, I: 222, 875; VII-X: 8757, 8774
- relation to:
- age, II: 2061
  - electroencephalogram, VII-X: 8746, 10031, 11446
  - positive acceleration tolerance, VII-X: 10118
  - retinal circulation, II: 1570
  - sleep, IV: 4606
- CEREBRAL CONCUSSION see Brain injuries
- CEREBRAL CORTEX (see also Auditory cortex; Visual cortex)
- effects of:
- altitude, VII-X: 10545
  - anoxia, VII-X: 10545
  - electrical potentials
    - effects of anoxia, VI: 7336  - sensory areas, III: 3198
  - vestibular area, III: 3200
- CEREBRAL STIMULATION
- cause of nystagmus, VII-X: 9526
- effects on electroencephalogram, VII-X: 8971, 10083
- CEREBROSPINAL FLUID
- oxygen tension
- effects of hypothermia, VII-X: 9096
- pH
- effects of anoxia, III: 2809; VII-X: 10537, 10573
- CEREBROSPINAL FLUID PRESSURE (see also Intracranial pressure)
- effects of:
- anoxia, VI: 7340, 7341
  - hypothermia, VI: 7341
  - postural change, III: 2725, 2726
  - tilting, VII-X: 11435
- CERTIFICATION see under Flight surgeons; Pilots
- CHAIRS see Revolving chairs; Seats
- CHANGE OF ACCELERATION
- cause of space sickness, VII-X: 10233
- effects on:
- acceleration tolerance, VII-X: 10011, 10012
  - neuromuscular performance, VII-X: 10085
  - posture, VII-X: 10085
- CHANGES see Change of acceleration; Personnel changes; Postural change. Also see under Diurnal cycle.
- CHAPPING see under Skin
- CHARTS
- legibility, III: 3454; IV: 4263
  - test methods, II: 1861
- CHEMICAL GAS EXCHANGERS
- effectiveness, VII-X: 12468
- CHEMISTRY see Biochemistry; Prebiochemistry
- CHEMORECEPTORS
- effects of:
- altitude acclimatization, VI: 7276
  - carbon dioxide, II: 1368; III: 2587; VI: 7133; VII-X: 9653
  - carbon monoxide, I: 316

- physiology, II: 1739; III: 2413  
 role in:  
 anoxia, III: 2406; V: 5950  
 anoxia tolerance, II: 1221  
 hematopoiesis, IV: 5050  
 reflexes, VII-X: 10603  
 respiration, VII-X: 8813
- CHIMPANZEES (see also Work space for chimpanzees),  
 VII-X: 9546, 9709, 10184  
 behavior, VII-X: 9568, 9673, 9705  
 body measurements, VII-X: 11786, 12548  
 mental performance, VII-X: 9706  
 psychomotor performance, VII-X: 12703  
 restraining devices, VII-X: 12658  
 space flight feeding, VII-X: 12860  
 target tracking, VII-X: 9633  
 training, VII-X: 9568
- CHLORAMPHENICOL  
 effects on visual perception, VII-X: 12006
- CHLORELLA see Algae
- CHLORIDE EXCRETION  
 effects of hot climates, VI: 7431
- CHLORIDE METABOLISM (see also Sodium chloride)  
 effects of:  
 heat, III: 2911, 3622  
 humidity, III: 2911
- CHLOROPHYLL  
 effects on anoxia tolerance, II: 1400
- CHLOROQUINE see Quinine and derivatives
- CHLORPROMAZINE AND RELATED DRUGS  
 contraindication for aviators, V: 5962  
 effects on:  
 anoxia tolerance, II: 1221; III: 3349; IV: 4029;  
 V: 6354; VII-X: 10585  
 ascorbic acid content of adrenal glands, VII-X: 10810  
 blood, VI: 7591  
 blood pressure, VII-X: 10795  
 body temperature, IV: 3945  
 cold tolerance, V: 6361  
 electrocardiogram, V: 6355  
 galvanic skin response, IV: 3979  
 hyperoxia tolerance, III: 2832, 2845, IV: 4282  
 metabolism, IV: 5044  
 nystagmus, V: 5603, 6357  
 oxygen consumption, IV: 3945, V: 6361  
 perspiration, IV: 3979  
 skin temperature, IV: 3979  
 temperature regulation, IV: 4029, 5044  
 general physiological effects, VII-X: 9831  
 use in motion sickness, III: 2610
- CHOLESTEROL see Lipids
- CHOLINESTERASE see Cholinesterase content under  
 Blood
- CHOLINESTERASE ACTIVITY see Enzyme activity
- CHROMATOGRAPHIC ANALYSIS see under Steroids
- CHRONAXIA, II: 1781, 1818  
 effects of:  
 altitude, V: 5909; VII-X: 10442  
 anoxia, VII-X: 10613  
 light stimuli, VII-X: 9150  
 physical work, VII-X: 9150, 11066  
 relation to altitude tolerance, V: 5909
- CINERADIOGRAPHY see Roentgenography
- CIRCADIAN RHYTHMS see Biological rhythms, rela-  
 tion to diurnal cycle
- CIRCULATION (see also Blood; Cerebral circulation;  
 Cochlear c.; Coronary c.; Cutaneous c.; Ischemia;  
 Lymph; Lymph flow; Peripheral c.; Plethysmogram;  
 Pulmonary c.; Renal c.; Retinal c.)  
 analysis, VII-X: 8747  
 effects of:  
 abdominal pressure, II: 1064, 1105, 1512; VII-X:  
 8767
- acceleration, II: 1803; IV: 4095; V: 5803, 5804,  
 5809; VII-X: 10214  
 positive acceleration, VII-X: 10095, 10101,  
 10210  
 transversal acceleration, VII-X: 10095, 10142,  
 10177, 10210
- acrobatic flight, VII-X: 10128
- airplane flight, II: 1743; IV: 4553; VII-X: 9910
- altitude, I: 290, 381, 527, 621; II: 1456, 1518, 1546,  
 1790, 1791, 1792, 2151; III: 2634, 2896;  
 IV: 3942, 4509; V: 5830; VI: 7252, 7253,  
 7264, 7539; VII-X: 8848, 10292, 10364,  
 10370, 10435, 10436
- altitude acclimatization, II: 1055, 1057, 1838;  
 III: 3294; IV: 4662; V: 5868, 5884; VI: 7287;  
 VII-X: 10461
- anoxia, I: 128, 194, 195, 386, 569, 803; II: 1055,  
 1056, 1057, 1147, 1601, 2129; III: 2822, 2962,  
 3083, 3237, 3435, 3444; IV: 4692, 4693, 5111,  
 5116; V: 5908, 5930, 5931, 5944, 5950, 5951;  
 VI: 7357, 7375; VII-X: 9861, 10491, 10500,  
 10502, 10518, 10526, 10538, 10540, 10559,  
 10614
- anxiety, II: 1691
- apnea, IV: 4173; V: 5310
- artificial respiration, III: 3158
- barometric pressure, V: 5836; VI: 6800
- blast, II: 1242
- blood loss, II: 1056
- brain temperature, VII-X: 8732, 8964
- carbon dioxide, II: 1570; III: 2902; V: 5336; VII-X:  
 8764, 10502, 12141, 12145, 12152
- carbon monoxide, VII-X: 12137, 12156
- carbon monoxide acclimatization, III: 3088
- cold, II: 1728; IV: 4273, 4343, 5167; V: 5996, 5998,  
 6005, 6010, 6011, 6054; VI: 6804, 7392, 7405,  
 7428; VII-X: 8964, 10641, 10684, 10806,  
 10917  
 race factors, IV: 4636
- cold acclimatization, III: 2545; IV: 3931; V: 5993
- cold water immersion, VII-X: 10663, 10711,  
 10780, 10834, 10867
- conditioned reflexes, III: 3290
- continuous immersion, VII-X: 8759, 10242, 10243
- diet, VII-X: 11487, 11488
- drugs, I: 196, 719  
 acetylcholine, V: 5998  
 antihistaminics, IV: 5167  
 Aramine, IV: 4898  
 barbituric acid derivatives, II: 1964  
 epinephrine, V: 5998  
 flavones, V: 6366  
 quinine, II: 1245  
 succinates, II: 1281  
 vasopressin, I: 608
- environmental temperature, III: 2366; IV: 3815;  
 VI: 7421
- explosive decompression, I: 529; II: 1428, 1477,  
 1574, 1653, 2248
- food intake, VII-X: 11482, 11487, 11488
- heat, IV: 3898; VI: 7451, 7452; VII-X: 10858, 10897
- hibernation, VII-X: 8647
- hypercapnia, VI: 7357; VII-X: 8891, 9011, 12151
- hyperoxia, II: 1456, 2250; III: 3530
- hyperthermia, V: 5371; VII-X: 9067
- hyperventilation, V: 5339; VII-X: 8764
- hypnosis, VI: 6804
- hypocapnia, III: 2557; VI: 6845; VII-X: 10500, 10502
- hypothermia, III: 2983; IV: 4304, 4891, 5113;  
 V: 5378, 5380, 5388, 5394, 5397, 5405, 5408,  
 5413, 5436, 5480; VI: 6870, 6877, 6891, 6892,  
 6893, 6895, 6898, 6908, 6916; VII-X: 8891,  
 8928, 8956, 8974, 8895, 9011, 9065, 9079, 9115



- mental stress, II: 1776  
 mental work, III: 3290  
 negative acceleration, II: 1422  
 negative pressure breathing, VI: 6853; VII-X: 8902  
 noise, II: 1268; V: 6074  
 oxygen breathing, II: 1570; IV: 4631; V: 5336;  
     VII-X: 8743, 8829, 8868, 12261  
 peripheral pressure, II: 1064; III: 2841; IV: 4821;  
     V: 5837; VI: 6803  
 physical training, VII-X: 11085, 11100, 11117  
 physical work, I: 115, 878; II: 1838; IV: 4555;  
     V: 6098, 6103, 6110, 6116, 6118; VI: 7537,  
     7539, 7542, 7547, 7550, 7574, 7581; VII-X:  
     8758, 9861, 9992, 11064, 11070, 11079,  
     11113, 11114, 11559, 11773, 12046  
 postural change, IV: 3898; V: 6169; VII-X: 10214  
 posture, I: 392, 591; III: 3479; IV: 4128, 6168;  
     V: 6170; VI: 7637; VII-X: 8759, 9992, 11436,  
     11443, 11457, 11965  
 pressure breathing, I: 131, 397, 399, 406; II: 1140,  
     1141, 1142, 1651, 1964; III: 2826, 3186;  
     IV: 4116, 4379, 4898, 4945, 5111; V: 5329,  
     5341; VI: 6821, 6850; VII-X: 8760, 8768,  
     8847, 8848, 8851, 8853, 8857, 8862, 8897,  
     8910  
 rotation, II: 1347; III: 2699, 3624  
 solar radiation, II: 1546  
 space flight, VII-X: 9910  
 starvation, III: 3030; VII-X: 11487, 11488  
 stress, III: 3029; IV: 4463; VI: 7182  
 subgravity, I: 475; II: 931, 1742; III: 2319; VII-X:  
     10272  
 supersonic flight, V: 5809  
 thermal radiation, VII-X: 10787  
 tilting, III: 2716, 2784  
 tumbling, IV: 4095  
 ultrasonic vibrations, II: 1884; III: 2829  
 Valsalva maneuver, VII-X: 8777  
 vestibular stimulation, VII-X: 11866  
 vibration, I: 450; II: 1505, 1506; V: 6071; VI: 7498;  
     VII-X: 11025  
 voluntary apnea, I: 705; II: 1943  
 warm water immersion, VII-X: 10711  
 weather, I: 290; II: 1776  
 effects on:  
     skin temperature, IV: 3822  
     space vehicle attitude, VII-X: 12609  
 psychological factors, IV: 4463  
 relation to:  
     age, III: 2559, 3324; VII-X: 8758, 10614, 11773,  
         12152  
     heat loss, VI: 6806; 6861  
     muscular tonus, IV: 4494  
     positive acceleration tolerance, IV: 4587; VII-X:  
         10217  
     respiration, II: 1139, 1140, 1141, 1840; III: 3023;  
         V: 5324; VII-X: 8802  
     work capacity, VII-X: 8754  
 research methods, V: 5312  
 reviews, V: 5307, 5308  
 role in temperature regulation, VII-X: 8954  
 role of:  
     autonomic nervous system, II: 1546; V: 6005  
     carotid sinus reflexes, V: 5804  
**CIRCULATORY SYSTEM** *see* Cardiovascular system  
**CITRATE METABOLISM**  
 effects of:  
     altitude acclimatization, IV: 3830; V: 5829;  
         VI: 7247  
     anoxia, VII-X: 10553  
     hypothermia, VII-X: 9019  
 relation to immunity to infectious diseases, VII-X:  
     10553  
**CLASSIFICATION** *see under* the various personnel  
 categories, e.g., Personnel, classification  
**CLAUSTROPHOBIA**  
 relation to personality, IV: 4467  
**CLEANING SOLUTIONS** *see* Organic solvents  
**CLIMATE** (*see also* Cold climates; Hot climates;  
 Weather)  
 effects on:  
     body temperature, III: 2337  
     metabolism, VI: 6856  
         reviews, V: 6052  
     psychomotor performance, II: 1918, 1919, 1920,  
         vigilance, II: 1922  
     general physiological effects, II: 1921; VI: 7434  
     test methods, II: 957; III: 2313, 2634  
     relation to accidents, III: 2339  
**CLOSED ECOLOGICAL SYSTEMS** (*see also* Space  
 cabin atmospheres; Space cabins; Space capsules;  
 Space stations; Space vehicles), IV: 4327; VI: 8268;  
     VII-X: 8294, 8456, 8500, 8507, 8508, 8511,  
     8512, 8513, 8517, 8519, 8520, 8521, 9522,  
     8523, 8525, 8527, 8530, 8533, 8534, 8535,  
     8536, 8537, 8538, 8539, 8542, 8544, 8547,  
     12300, 12468, 12476, 12528, 12605, 12786,  
     12804, 12807, 12809, 12850, 12858, 12881,  
     12886, 12887, 12888, 12892, 12893  
     research, VII-X: 8491, 12869  
     research methods, VII-X: 12749  
**CLOTHING** (*see also* Altitude clothing; Body armor;  
 Boots; Fire protective clothing; Gloves; Helmets;  
 Masks; Suits; Underwear; Wet clothing)  
 effects on:  
     arm movements, VI: 8009  
     body movements, VI: 8011; VII-X: 9046  
     body temperature, VII-X: 9046  
     catecholamine excretion, VII-X: 9987  
     cold tolerance, II: 1524; III: 2875; VII-X: 10828,  
         10906, 12297  
     heat loss, V: 6463; VII-X: 10907, 12298  
     heat tolerance, VI: 7462, 7468; VII-X: 10851,  
         10912, 10913  
     neuromuscular performance, IV: 4901; VII-X:  
         12237  
     psychomotor performance, IV: 4901  
     temperature regulation, IV: 4079; V: 6471; VII-X:  
         12773  
     urine composition, VII-X: 9119  
     work capacity, VII-X: 12297  
 evaluation, I: 505; VII-X: 12252  
 fire-resistance, V: 6496  
 handbooks and treatises, VI: 8008  
 relation to:  
     body measurements, VII-X: 12178  
     thermal comfort, VI: 8026  
     thermal properties, IV: 4304, V: 6465, 6466; VII-X:  
         11405, 12202, 12217, 12235, 12241, 12275  
     toxic effects, VI: 7943  
**CLOTTING** *see* Blood coagulation  
**COAGULATION** *see* Blood coagulation  
**COBALT COMPOUNDS**  
 effects on:  
     anoxia tolerance, IV: 5154  
     hematopoiesis, VI: 7371; VII-X: 10182  
     hyperoxia tolerance, V: 5334  
**COCAINE**  
 effects on:  
     body weight, III: 3106  
     nystagmus, VI: 7879  
**COCARBOXYLASE**  
 effects on anoxia tolerance, VI: 7345  
**COCHLEA**  
 action potentials *see* Cochlea, electrical potentials

- effects of:  
 anoxia, I: 558; VII-X: 9405, 10493  
 hypothermia, VII-X: 9079  
 jet engine noise, II: 973; V: 6084  
 noise, I: 271, 427, 428, 838, 839; II: 973; III: 2623, 3482; VII-X: 10493  
 sound, II: 1284, 1287; IV: 3714; VII-X: 9405, 9441  
 ultrasonic vibrations, IV: 3737  
 electrical potentials, I: 134; VI: 7033; VII-X: 9406, 9417, 9424  
 effects of:  
 anoxia, I: 896; II: 1118, 2275; III: 2805; IV: 4025, 5070; V: 5940; VII-X: 9404, 10529, 10542, 10565  
 auditory stimuli, V: 5570; VII-X: 9377  
 carbon dioxide, I: 896; II: 2275  
 cold, V: 5554  
 diisopropyl fluorophosphate, I: 839  
 hyperthermia, VII-X: 8984  
 hypothermia, VII-X: 8996, 9068  
 noise, I: 838  
 sodium azide, I: 839  
 sound, I: 839; II: 1284, 1287; IV: 5070, 5157; V: 5583; VI: 7016, 7038; VII-X: 9404, 9418, 9425, 10966  
 measurement, VI: 7034; VII-X: 9399  
 relation to:  
 auditory adaptation, VI: 7038; VII-X: 9427  
 auditory fatigue, VI: 7038  
 auditory perception, V: 5878  
 hearing, I: 917; II: 1118, 1284; IV: 3715; VI: 7015  
 machine analogs, VII-X: 12769  
 metabolism  
 effects of:  
 anoxia, V: 5946; VII-X: 10634  
 sound, VI: 7041; VII-X: 9404, 9405, 9442  
 microphonics see Cochlea, electrical potentials  
 oxygen tension  
 effects of:  
 anoxia, VII-X: 9906  
 sound, VII-X: 9906  
 pathology, II: 973; IV: 5157  
 physiology, I: 918; IV: 3814; VII-X: 9437, 9438, 9439  
 relation to age, VII-X: 11775  
 role in:  
 auditory perception, V: 5547  
 pitch discrimination, IV: 3715  
**COCHLEAR CIRCULATION**  
 effects of sound, VII-X: 11030  
**COCKPITS** (see also Helicopter cockpits; Windshields)  
 air conditioning, III: 3076  
 field of vision, VII-X: 12502  
 human engineering, I: 33, 45, 285, 341, 538, 764, 802; II: 1638, 1806; III: 2310, 2325, 2327, 2656, 3068, 3298, 3387, 3485; IV: 4039, 4074, 4275, 4373, 4670, 4977, 4978, 5010; V: 6622, 6659, 6671, 6672; VI: 8200, 8203, 8204, 8227; VII-X: 9955, 10412, 11764, 12485, 12560, 12656, 12666  
 illumination, II: 2069; III: 3141; V: 6690; VI: 8220  
 ionizing radiations, VII-X: 11423  
**CODEINE**  
 effects on labyrinth, II: 2859  
**CODES** (see also Color codes)  
 intelligibility, V: 6612; VII-X: 11643  
**COENZYMES** see under Enzymes  
**COLD** (see also Precooling)  
 acclimatization see Cold acclimatization  
 cause of:  
 arteriosclerosis, V: 6040  
 dental disturbances, VI: 7831  
 life suspension, III: 2462; VII-X: 9078  
 pain, VII-X: 10917  
 effects on:  
 adrenal glands, II: 1842; III: 2645, 2646, 2995, 3193; IV: 4085; V: 5985, 6029; VII-X: 10662, 10710, 10727, 10831, 10868, 10869  
 airborne bacteria, VI: 6764  
 altitude tolerance, I: 421, 422; III: 2756  
 anoxia tolerance, II: 1972  
 arm tremor, V: 6032  
 ascorbic acid content of adrenal glands, VII-X: 10810, 10870  
 blood, I: 448; VII-X: 10892  
 race factors, VII-X: 10649  
 blood cell distribution, V: 6021  
 blood cells, II: 1691; V: 5767; VII-X: 8635  
 blood phosphate content, VII-X: 8634  
 blood plasma, II: 1992, 1993; III: 3547; V: 5284  
 blood pressure, IV: 3888  
 blood temperature, VII-X: 10738  
 body fat, VI: 7415  
 body temperature, I: 194, 195; III: 2448; IV: 3788, 3912, 3945, 4261; V: 5429, 5432, 5959, 5977, 5994, 6007, 6009; VI: 7413; VII-X: 10740, 10828  
 body temperature gradient, VII-X: 10648  
 body weight, IV: 4049; V: 5968; VI: 7467; VII-X: 9130, 9897, 10806  
 brain temperature, V: 5991; VII-X: 10703  
 catecholamine excretion, VII-X: 10798  
 circulation, II: 1728; IV: 4273, 4343, 4636, 5167; V: 5996, 5998, 6005, 6010, 6011, 6054; VI: 6804, 7392, 7405, 7428; VII-X: 8964, 10641, 10684, 10806, 10917  
 cutaneous circulation, V: 6045  
 peripheral circulation, V: 6059; VII-X: 10680, 10874, 10919, 10921  
 coronary blood vessels, V: 6040  
 digestive system function, VII-X: 10864  
 electrical potentials of cochlea, V: 5554  
 electrocardiogram, IV: 4486; V: 6019  
 endocrine system, V: 5971  
 flicker fusion frequency, III: 3537; IV: 5048  
 food intake, IV: 4203; VI: 7412, 7461, 7466, 7467, 7471; VII-X: 9130, 10771  
 heat loss, VI: 7385  
 hemoglobins, VII-X: 10881  
 hypophysis, III: 2995; IV: 5007; V: 6041; VII-X: 10643, 10788  
 immunity to infectious diseases, VII-X: 10812  
 infectious diseases, VII-X: 10813  
 insects, II: 1907; IV: 4745  
 kidney, II: 1842  
 kidney function, IV: 4724; V: 6028, 6031, 6135; VI: 7439  
 learning, VII-X: 10842  
 manual dexterity, V: 6023; VI: 7396, 7438, 7446, 7463; VII-X: 10683, 10822  
 mast cells, VI: 7429  
 metabolism, I: 469; III: 2619, 2659, 2889, 3278, 3461, 3499; IV: 4027, 4613, 4635; V: 5429, 5978, 5982, 6007, 6048; VI: 6858, 7389, 7395, 7768; VII-X: 8915, 10740, 10750, 10914, 12135  
 carbon dioxide production, V: 5987  
 enzyme activity, V: 5981; VII-X: 10841, 10903, 10909  
 metabolic rhythm, V: 6009  
 oxygen consumption, III: 2513, 2658; IV: 3788; V: 5980, 6009; VI: 7399, 7404, 7413, 7461, 7469; VII-X: 8988, 10698  
 race factors, VII-X: 11770  
 reviews, VI: 7406  
 metabolism of organs, VII-X: 10909

- adrenal glands, IV: 4710; V: 5967, 6030; VI: 7453  
 kidney, II: 1842  
 liver, III: 2658, 3452, 3642; IV: 4617, 5145;  
 V: 5989, 6013, 6014; VII-X: 8642, 10745,  
 10816, 10819, 10821, 10841, 10900  
 muscles, V: 5997  
 skin, IV: 4050  
 tissues, IV: 4410; V: 6050; VII-X: 10777  
 metabolism of substances, VII-X: 10857, 10900,  
 10909  
 ascorbic acid, II: 1842; III: 2689, 2995;  
 IV: 4049; VI: 7394  
 carbohydrates, III: 3642; V: 5989; VI: 7474;  
 VII-X: 10903  
 electrolytes, VII-X: 10646  
 glucose, VII-X: 10697, 10820, 10856  
 iodine, V: 6012  
 ketones, III: 3417; VII-X: 8923, 8925, 10865  
 lipids, III: 2888; IV: 3813, 5080, 5081; V: 5749,  
 6000, 6013, 6014, 6026, 6047; VI: 7465;  
 VII-X: 10816, 10817, 10818, 10819, 10820,  
 10821, 10893, 10898  
 phosphorus, IV: 4710; V: 6030, 6039; VI: 7453  
 proteins, III: 2888  
 steroids, IV: 4106; VII-X: 10870  
 succinic acid, IV: 4050  
 muscular fatigue, VII-X: 11149  
 muscular system, IV: 4536; V: 6006  
 nerves, V: 6006  
 neuromuscular performance, I: 119, 595; II: 1765;  
 III: 3136; VII-X: 10728, 10729, 10854  
 organ weight, VII-X: 9881  
 ovulation, VII-X: 8560  
 oxygen consumption of hibernators, VII-X: 9644  
 pain sensitivity, III: 3537; IV: 5048  
 psychomotor performance, III: 3537; IV: 5048;  
 VII-X: 10843  
 reaction time, VII-X: 9646  
 reproductive rhythm, VII-X: 8575  
 shivering, VII-X: 10509  
 skin temperature, IV: 3769; VI: 7435; VII-X:  
 10650, 10773  
 sleep, VII-X: 10873  
 stress sensitivity, III: 3001  
 survival, IV: 4471  
 tactile perception, I: 119; II: 1765; III: 3142;  
 IV: 4592; V: 6027; VI: 7446; VII-X: 10659,  
 10833, 10853  
 teeth, VII-X: 9998, 10889  
 temperature regulation, IV: 4027; VI: 7419; VII-X:  
 9031, 9106, 10641  
 thermoreception, VII-X: 9076  
 thyroid gland, III: 2645, 2646; IV: 4038, 4049, 4197,  
 4443, 5007; V: 5974, 5975, 5980, 6041, 6056;  
 VI: 7422; VII-X: 10788, 11078  
 thyroxin excretion, VI: 7414  
 urine composition, III: 2959; IV: 4443; VII-X: 10351  
 water exchange, VI: 7385  
 work capacity, III: 3220; VI: 7385  
 general physiological effects, III: 2640, 3024, 3267,  
 3379; IV: 3914, 4449; VI: 7401, 7456, 7460,  
 7780; VII-X: 9022, 9084, 10797, 10875, 10908  
 animal experiments, VII-X: 10901  
 bibliography, VII-X: 10673  
 handbooks and treatises, IV: 3913  
 race factors, IV: 3897; VII-X: 10835  
 research, VI: 7386  
 pathological effects (see also Frostbite), III: 3566;  
 VI: 7172, 7397; VII-X: 10763  
 bibliography, VII-X: 11886  
 reviews, IV: 4535  
 protection, II: 978; V: 6015; VI: 7433, 8007; VII-X:  
 12365  
 bibliography, VII-X: 10676  
 role in induction of hibernation, VII-X: 8646  
 tolerance see Cold tolerance  
 COLD (disease)  
 effects on air transportability, VII-X: 11985  
 COLD ACCLIMATIZATION, IV: 4636; V: 6004; VI: 7403,  
 7428, 7456; VII-X: 10692, 10708, 10803,  
 10807, 10862, 10873, 10888  
 animal experiments, V: 5966; VI: 7445  
 bibliography, VII-X: 10673  
 congresses, meetings, and symposia, VII-X: 10677,  
 10778  
 effects of ascorbic acid, IV: 4048; VI: 7394; VII-X:  
 10769  
 effects on:  
 adrenal glands, IV: 4019; VI: 7476; VII-X: 10837  
 altitude tolerance, III: 2755  
 antibodies, VI: 7464; VII-X: 9990  
 behavior, VI: 7443, 7444, 7445  
 blood, V: 5979, 6042, 6043; VII-X: 10712, 10744,  
 10879  
 blood cells, III: 2657, 3519  
 blood glucose content, III: 3169, 3519  
 blood iodine content, V: 6017  
 blood pressure, VII-X: 10795  
 blood vessels, V: 6002; VII-X: 10759  
 body fluid distribution, V: 5979; VII-X: 10645  
 body temperature, IV: 3778; V: 6138; VII-X: 10733,  
 10790, 10825, 10827  
 body weight, VII-X: 10762  
 catecholamine excretion, VII-X: 10798  
 circulation, III: 2545; IV: 3931; V: 5993  
 peripheral circulation, VII-X: 10919  
 cold tolerance, III: 2747; IV: 4346; VI: 6914;  
 VII-X: 10783, 10797, 10831  
 cold water immersion tolerance, VII-X: 10783  
 drug action, VII-X: 10665, 10910  
 electrolyte distribution, VII-X: 10645  
 epinephrine content of organs, VII-X: 10832  
 hair growth, V: 6038  
 heart function, VII-X: 8980  
 heat tolerance, VII-X: 10716  
 hemoglobins, VII-X: 10881  
 hypothermia tolerance, VI: 6869; VII-X: 9060  
 immunity to infectious diseases, VII-X: 10811  
 kidney, VI: 7457  
 learning, VII-X: 10842  
 life expectancy, VII-X: 10764, 10786  
 liver, VII-X: 10746  
 metabolism, III: 2619; IV: 3778, 3976, 4040, 4482;  
 V: 5982; VI: 7455; VII-X: 10661, 10686,  
 10696, 10698, 10709, 10750, 10752, 10753,  
 10758, 10781, 10786, 10825, 10852, 10859,  
 10872  
 enzyme activity, VII-X: 10671, 10743, 10860  
 oxygen consumption, VII-X: 8835  
 metabolism of organs:  
 liver, VII-X: 10713, 10743, 10748, 10749, 10815,  
 12369  
 tissues, II: 1241; III: 2593  
 metabolism of substances, VII-X: 12369  
 carbohydrates, III: 3280; IV: 4747; VII-X: 10713  
 electrolytes, VII-X: 10850  
 glucose, VI: 7393; VII-X: 10699, 10700, 10705,  
 10747  
 lipids, III: 3280, 3452; VI: 7441; VII-X: 10397,  
 10713, 10815, 10818, 10840  
 magnesium, VII-X: 10836  
 oxygen, VII-X: 9846  
 phosphorus, VI: 7453; VII-X: 10837  
 proteins, VII-X: 10879  
 muscular system, VII-X: 10765  
 nail growth, V: 6038; VII-X: 10730

- neuromuscular performance, VII-X: 10822  
 norepinephrine content of organs, VII-X: 10832  
 organ weight, VII-X: 10832  
 pancreas, VII-X: 10644  
 positive acceleration tolerance, VII-X: 10150  
 shivering, VII-X: 10695  
 skin, VI: 7408; VII-X: 10796  
 steroid excretion, IV: 4019  
 tactile perception, IV: 4592; VII-X: 10659  
 temperature regulation, III: 2439, 2440, 2920;  
     IV: 3779, 3930, 4482; V: 5403, 5999, 6003;  
     VI: 7417; VII-X: 10661, 10694, 10695, 10659  
 thermal comfort, VII-X: 10737  
 tumors, VII-X: 10814  
 urine composition, VII-X: 10395, 10824  
 general physiological effects, V: 6022; VII-X: 10661,  
     10678, 10761, 10764  
 psychological factors, V: 5748  
 relation to:  
     age, VI: 7401  
     annual cycle, VII-X: 10709  
     heat acclimatization, V: 5890; VII-X: 9007, 10693  
     physical fitness, VII-X: 10754  
 reviews, VI: 7449  
 role of:  
     adrenal glands, III: 2657, 2917, 2918, 2919, 3169;  
         IV: 4048; V: 5403, 6044; VII-X: 10757, 10760,  
         10769  
     endocrine system, VII-X: 10690, 10696, 10775,  
         10915  
     thyroid gland, IV: 4048; V: 6044; VI: 7450; VII-X:  
         10687, 10757, 10793  
**COLD AIR BREATHING**  
 effects on:  
     body temperature, IV: 4517  
     lung, VI: 6868  
     respiration, IV: 4517  
 general physiological effects, VII-X: 10642  
**COLD CLIMATES**  
 effects on:  
     blood electrolyte content, VII-X: 10742  
     blood plasma, VII-X: 9887  
     body fat, VII-X: 10802  
     body weight, VII-X: 10802  
     food intake, VI: 7387, 7473  
     metabolism, V: 5972, 6053; VI: 7418; VII-X: 10826,  
         12370  
     performance, VI: 7411  
     plasma ascorbic acid content, VII-X: 10847  
     temperature regulation, VI: 7406; VII-X: 10859  
 general physiological effects, II: 1691; III: 3216;  
     VI: 7400; VII-X: 10827  
     bibliography, VI: 7381  
 general psychological effects,  
     bibliography, VI: 7381  
 incidence of diseases, VI: 7418  
 medical problems, V: 6004, 6057  
 nutritional requirements, III: 2393, 2477, 2914, 2991,  
     3210, 3211, 3279, 3417, 3655; IV: 4856, 4868,  
     4896, 4897, 5080, 5081; V: 5972; VI: 7436,  
     7437, 7472; VII-X: 10826, 10844, 10862,  
     10899, 10901, 12358  
 pathological effects, VI: 7391  
 research methods, III: 3358  
 survival, VII-X: 12356, 12366  
**COLD PRESSOR TEST**, III: 2648, 3025; VII-X: 8868  
 effects on adrenal glands, VII-X: 9928  
**COLD TOLERANCE**, I: 825; VI: 7433; VII-X: 10675,  
     10875  
 animal experiments, VI: 7469; VII-X: 10656, 10679  
 bibliography, VII-X: 10673  
 effects of:  
     altitude acclimatization, III: 2756  
     anesthesia, III: 2448  
     body fat, V: 5376; VII-X: 10672, 10691  
     clothing, II: 1524; III: 2875; VII-X: 10828, 10906,  
         12297  
     cold acclimatization, III: 2747; IV: 4346; VI: 6914;  
         VII-X: 10783, 10797, 10831  
     diet, VI: 7425; VII-X: 9129, 10791  
     lipids, VI: 7430  
     drugs, VII-X: 10656, 10726  
         adrenocorticotrophic hormone, VII-X: 9133, 10726  
         ascorbic acid, III: 2512, 2688, 2689, 2747, 2991,  
             3070, 3642; IV: 3862; V: 5983; VII-X: 10662,  
             10726  
         chlorpromazine, V: 6361  
         cortisone, IV: 3862; V: 6018; VII-X: 10726  
         glycine, VII-X: 10638, 10650, 10843  
         hexamethonium, V: 6360  
         hydergine, I: 509  
         pantothenic acid, V: 5973; VI: 7470  
         procaine, V: 6359  
         pyridoxine, VII-X: 10902  
         rutin, IV: 3727  
         sex hormones, V: 6058  
         sodium compounds, VII-X: 10679  
         somatropin, IV: 4084; VII-X: 9879  
         vitamin B complex, III: 3351  
     heat acclimatization, VII-X: 10716  
     hypocapnia, III: 3051  
     nutrition, III: 3277  
         vitamin supplements, V: 6035  
     oxygen breathing, VII-X: 10724  
     physical training, VII-X: 10639  
     physical work, V: 6018  
     prewarming, VII-X: 10647  
     restraint, III: 2448  
     sex hormones, V: 6058  
     starvation, VII-X: 10679  
     underwear, VII-X: 12262, 12282  
     X-rays, VII-X: 10725  
 of insects, IV: 4743  
 race factors, VI: 6914, 7380, 7447; VII-X: 10640,  
     10740, 10774, 10871, 10873, 10922  
 relation to age, IV: 4164; V: 5995; VI: 7401, 7469,  
     7780; VII-X: 10914  
 role of:  
     adrenal glands, III: 2512; IV: 3862, 4346; V: 5973,  
         5986, 6034; VII-X: 10723  
     blood glucose content, III: 3051  
     endocrine system, V: 5983  
     enzyme activity, III: 2512  
     thyroid gland, VII-X: 10658, 10723  
     sex factors, V: 6058; VI: 7409  
**COLD WATER IMMERSION**  
 cause of pain, VII-X: 10706  
 effects on:  
     body temperature, VII-X: 10780, 10782  
     circulation, VII-X: 10663, 10711, 10780, 10834,  
         10867  
     muscle temperature, VII-X: 10867  
     peripheral circulation, VII-X: 10706  
     respiration, VII-X: 10711  
 heat loss, VII-X: 10707, 10755  
 tolerance  
     effects of  
         cold acclimatization, VII-X: 10783  
         drugs, VII-X: 10780  
     relation to:  
         body fat, VII-X: 10782  
         body temperature, VII-X: 10780  
**COLOR ADAPTATION**, III: 2996  
 effects of light stimuli, II: 1683  
**COLOR BLINDNESS**  
 relation to electroretinogram, VI: 6975

- use of color signals, IV: 4968
- COLOR CODES**  
intelligibility, VII-X: 12636
- COLOR SIGNALS**  
effectiveness, IV: 4686; VII-X: 9257, 9258, 11643  
use in color blindness, IV: 4968
- COLOR STIMULI**  
effects on:  
electroretinogram, V: 5487; VI: 6983; VII-X: 9291  
retinal adaptation, VII-X: 9239
- COLOR VISION** (see also Color blindness), I: 228;  
IV: 4390; V: 5541; VI: 7721, 7723; VII-X:  
9250, 9301, 9317
- effects of:  
anoxia, I: 175; II: 2064; III: 2963; VII-X: 10504,  
10530  
drugs, II: 2297  
  alcohol, II: 2064; IV: 4859  
  caffeine, II: 2064  
  physostigmine, II: 1682  
empty visual field, VII-X: 9275  
flight duty, V: 5533  
illumination, II: 1146, 1605, 1817, 1974, 2062;  
  III: 3356; IV: 4770; VII-X: 9258  
noise, VII-X: 10976, 10977  
oxygen breathing, I: 175  
sound, II: 1949
- relation to:  
age, VI: 7779  
binocular vision, VII-X: 9349  
brightness discrimination, II: 1121; VI: 6980  
dark adaptation, I: 499; II: 1122, 1855; III: 2412;  
  IV: 4770; V: 5534  
depth perception, V: 5640  
foveal vision, II: 1177, 1607, 1620, 1939  
night vision, IV: 4639; V: 5518  
peripheral vision, II: 1939  
pilot performance, V: 5540  
retinal adaptation, I: 200; II: 991, 1146, 1184, 1604,  
  1607, 1620; IV: 3757, 3877, 4639  
thresholds of auditory perception, V: 5482  
visual acuity, II: 1893; VI: 6956; VII-X: 9200, 9299
- role of acetylcholine metabolism, II: 1948, 1949
- test methods, I: 762, 763; II: 1556, 1973, 1975, 1988,  
  2032, 2062, 2063; III: 2724, 2884, 3438;  
  IV: 3817, 3870; V: 6413, 6424; VII-X: 9280,  
  12636
- tests, I: 175, 457; II: 1164, 1185; III: 2479, 2585, 2877;  
  V: 5492; VII-X: 9194
- thresholds, II: 1122, 1177, 1781, 1939, 1988; V: 5489;  
  VII-X: 9337  
  tests, VII-X: 9243  
time factors, II: 2032  
use of optical filters, IV: 4838  
visual illusions, IV: 4741
- COLORS** (see also Color under Instrument panels; Life  
rafts)  
effects on:  
  depth perception, II: 1209  
  size perception, II: 1086; VII-X: 9217  
visibility, I: 144; II: 1785, 2128, 2257; III: 3068;  
  VII-X: 9219, 9256, 9294, 9336, 9338, 12401,  
  12407
- COMBAT CREWS**  
attitudes, V: 6273  
morale, VI: 7763  
performance, V: 6246  
  effects of personnel changes, VI: 7731  
training, IV: 3845; VI: 8060, 8061  
  prediction of success, V: 6273
- COMBAT PILOTS**  
personality, VI: 7151, 7746
- COMBAT STRESS**  
cause of:  
  fatigue, V: 6125  
  neuroses, II: 1729, 2268; III: 3571; V: 6125  
effects on blood cells, II: 1318, 1319  
general physiological effects, III: 3535  
general psychological effects, I: 82; III: 3498, 3535
- COMFORT** see Acoustical comfort; Passenger c.;  
Thermal c.
- COMMUNICABLE DISEASES** (see also Cold (disease);  
Diphtheria; Poliomyelitis; Scarlet fever; Syphilis;  
Tuberculosis; Whooping cough)  
control (see also Immunization), I: 57, 431; III: 2428;  
  V: 6431, 6432, 6433; VII-X: 12097  
effects on air transportability, I: 319; II: 2008;  
  V: 6431  
  quarantine, I: 319
- COMMUNICATION** (see also Animal communication;  
Speaking; Speech communication; Telegraph operation.  
See also entries under Cues and Signals)  
role in:  
  piloting, VI: 8172  
  traffic control operation, VI: 8176
- use of:  
  cutaneous perception, VII-X: 12576  
  cutaneous signals, VII-X: 9661, 12573  
  electrical stimuli, VII-X: 12574  
  use of tactile perception, IV: 4201; VII-X: 12550,  
  12599
- COMMUNICATION SYSTEMS** (see also Intercom sys-  
tems; Microphones); VII-X: 12629  
analysis, VII-X: 12602  
effects on speech intelligibility, IV: 4130  
human engineering, II: 1408, 1567; IV: 3749, 4338;  
  V: 6255, 6580; VI: 8226
- COMPENSATORY TRACKING**, I: 548, 549; II: 1288,  
  1289, 1290, 1401, 1403, 1475, 1724, 1957;  
  III: 2491, 2899, 2968, 3082, 3295, 3456, 3533,  
  3623; IV: 4271; V: 5665, 5671, 5683, 5689,  
  5693, 5698, 5700; VI: 7088, 7091, 7098, 7101,  
  7108, 7109, 8208; VII-X: 9565, 9571, 9576,  
  9605, 9619, 9620, 9621, 9622, 9623, 9625,  
  9649, 10027, 10064, 10111, 10969, 12715  
  equipment, VII-X: 9637  
  tests, IV: 3843, 4919  
  training devices, V: 6677
- COMPLEXION (SKIN)**, III: 3136
- COMPLEXITY** see Task complexity
- COMPOSITION** see Body composition
- COMPUTER ANALYSIS** see under Electroencephalogram
- COMPUTERS**  
  use in aviation medicine, VII-X: 11813
- CONCUSSION** see Brain injuries
- CONDITIONED REFLEXES** (see also Avoidance condi-  
tioning) II: 1665, 1782, 1799; IV: 5142; VI: 7131;  
  VII-X: 9655
- effects of:  
  acceleration, VII-X: 10195  
  altitude, III: 3355; VII-X: 10282, 10286, 10290  
  anoxia, I: 609, 612; II: 1835, 1836, 1933; III: 2388,  
  3355; VII-X: 10282  
  fatigue, VI: 7601  
  heat, III: 3502; VII-X: 10880  
  hyperoxia, VII-X: 8798  
  hypothermia, V: 5448; VI: 6911; VII-X: 8931, 9037  
  microwave radiation, VI: 7625; VII-X: 11411  
  negative acceleration, VII-X: 10093  
  noise, VII-X: 10938, 11003  
  physical work, VII-X: 11086  
  rotation, II: 1670, 1898  
  sensory deprivation, VI: 7614; VII-X: 11226  
  sleep deprivation, VII-X: 10286, 11172  
  static physical exercise, VI: 7570  
  vibration, VII-X: 10983, 11003

- X-rays, VII-X: 11295  
 effects on:  
   blood cells, II: 1741, 1933  
   circulation, III: 3290  
   heart function, VI: 7134; VII-X: 9654  
   hematopoiesis, II: 2215  
   respiration, III: 3290, 3597  
 relation to:  
   retinal adaptation, VI: 6970  
   vigilance, I: 188  
   role in motor performance, VI: 7132  
   use in hearing tests, II: 1664; III: 2862; VII-X: 12072
- CONDUCTION see Bone conduction; Vibration, conduction in body
- CONFIDENCE  
 relation to reasoning, VII-X: 9716
- CONFIGURATION see Shape configuration
- CONFINEMENT (see also Restraint; Social isolation)  
 effects on:  
   catecholamine excretion, VII-X: 11254  
   performance, VII-X: 11691  
   team performance, VII-X: 11273  
   general physiological effects, VII-X: 9916, 11243  
   bibliography, VII-X: 11264  
   research methods, VII-X: 11276  
   general psychological effects, VII-X: 11241, 11243, 11274
- CONGESTION see under Nasal passages
- CONGRESSES, MEETINGS, AND SYMPOSIA see under  
 Accidents; Aerospace medicine; Air evacuation; Air transportation of patients; Airplane flight, safety; Aviation medicine; Biological rhythms; Cabin atmospheres; Cold acclimatization; Cosmic rays, biological effects; Fatigue; Heart, examination; Hot climates; Human engineering; Hypothermia; Labyrinth; Microwave radiation, general physiological effects; Military medicine; Personnel, research; Physical fitness; Pilots, age factors; Preventive medicine; Remote handling equipment, human engineering; Sensory deprivation; Social isolation; Space environment; Space flight; Space flight (Suborbital); Space medicine; Space stations; Spatial orientation; Temperature regulation
- CONSCIOUSNESS (see also Alertness)  
 effects of intermittent light, VII-X: 9170  
 test methods see Stipple test
- CONSTITUTIONAL TYPE see Somatotype
- CONTACT LENSES, I: 314; III: 2662  
 effects of eye movements, VII-X: 9209  
 effects on:  
   depth perception, I: 85, 87, 219  
   visual perception, I: 314  
 evaluation, I: 597  
 use in jet plane piloting, VII-X: 9228
- CONTAINERS see Animal containers; Food containers; Oxygen containers
- CONTAMINANTS  
 olfactory perception, VII-X: 12188, 12189, 12271
- CONTAMINATION see under Cabin atmospheres; Helicopter cabin atmospheres; Oxygen supply; Sealed cabin atmospheres; Space cabin atmospheres. Also see entries under Biological contamination
- CONTINUOUS ACCELERATION see Acceleration (Continuous)
- CONTINUOUS ANOXIA see Anoxia (Continuous)
- CONTINUOUS IMMERSION see Immersion (Continuous)
- CONTINUOUS ROTATION see Rotation (Continuous)
- CONTOUR PERCEPTION (see also Dynamic contour perception), II: 1752  
 effects of illumination, II: 1218  
 relation to brightness discrimination, II: 1753
- CONTRAINICATION see under Drugs
- CONTRAST DISCRIMINATION see Brightness discrimination
- CONTROL KNOBS  
 human engineering, I: 154; II: 1283, 1488, 1622, 1623, 1676, 1863, 2235; III: 2522; IV: 3880, 3968, 4094, 4264, 4265, 4266, 4270, 5040; V: 6628, 6638, 6669; VI: 8195, 8216; VII-X: 12461
- CONTROL LEVERS  
 human engineering, II: 1622, 1623, 1733, 1885, 1887, 2156; III: 2336, 2572, 3522, 3623; IV: 3763, 3764, 4152, 4267, 4272, 4563, 4866; VII-X: 9644  
 relation to visual displays, III: 2523; IV: 4267
- CONTROL SYSTEMS see Display-control systems; Instrument control s.; Space vehicle control s.; Traffic control s.
- CONTROL TOWER OPERATORS see Traffic control operators
- CONTROLS (see also Aircraft controls; Control knobs; Control levers; Display-control systems; Gunnery controls; Helicopter controls; Jet engine controls; Space vehicle controls; Switches; Traffic control systems), VI: 8229  
 human engineering, I: 780; II: 1747, 1849, 1995; III: 2491, 3118; IV: 3734, 3735, 3843, 3879, 4268, 4894, 5134, 5146; V: 6596, 6639, 6647, 6648; 6655; VI: 7115, 8140, 8191, 8196, 8208, 8212; VII-X: 9565, 12600, 12610, 12627, 12631, 12657, 12669, 12676, 12698, 12709, 12715  
 handbooks and treatises, V: 6641
- CONVERGENCE see Ocular convergence
- CONVULSIONS see Epileptic seizures
- COOLING see Precooling. Also see under Cabins
- COORDINATION see Neuromuscular performance; Psychomotor performance
- CORAMINE see Nikethamide
- CORIOLIS EFFECT, VII-X: 9506, 9507, 9524, 12455, 12554  
 cause of vestibular stimulation, VII-X: 9512  
 caused by head movements, VII-X: 9513
- CORNEA  
 mitotic rhythm  
   relation to diurnal cycle, VII-X: 8596
- CORONARY BLOOD VESSELS  
 effects of cold, V: 6040
- CORONARY CIRCULATION  
 effects of:  
   anoxia, VI: 7330, 7373; VII-X: 10528  
   auditory stimuli, VII-X: 9810  
   blood carbon dioxide tension, VII-X: 8833  
   blood oxygen tension, III: 2361; IV: 3713  
   electrolytes, VII-X: 8790  
   hypothermia, III: 2474; V: 5386, 5424, 5433  
   pain, VII-X: 9810  
   measurement, V: 5424
- CORRELATES see Physiological correlates
- CORTEX see Auditory cortex; Cerebral c.; Visual c.
- CORTICOSTEROIDS see Steroids
- CORTICOSTIMULINE see Adrenocorticotrophic hormone
- CORTISONE  
 effects on:  
   anoxia tolerance, III: 3528; IV: 3743  
   cold tolerance, IV: 3862; V: 6018; VII-X: 10726
- COSMIC RAY CYCLE  
 relation to:  
   activity rhythm, VII-X: 8552  
   biological rhythms, IV: 3894  
   metabolic rhythm, VII-X: 8552
- COSMIC RAYS (see also Radiation belts; Solar flares)  
 biological effects, I: 330, 331, 363, 662, 754, 755, 756, 858; II: 2055, 2056, 2088; III: 2490, 2564, 3424, 3425; IV: 3919, 4122, 4125; V: 5252,

- 6142, 6151, 6153, 6156, 6159; VI: 7634;  
VII-X: 8303, 8336, 8725, 9940, 11297, 11303,  
11310, 11318, 11319, 11321, 11335, 11373,  
11375, 11383, 11385, 11391, 11401, 11424  
animal experiments, V: 6157; VII-X: 11349  
congresses, meetings, and symposia, VII-X: 8405,  
11378  
research methods, IV: 4126; VII-X: 8432, 8437,  
8499, 11401, 11407  
reviews, IV: 4126  
test methods, II: 1367; III: 2717, 3032, 3475, 3681;  
IV: 4123; V: 6146, 6154, 6157, 6164; VI: 7621;  
VII-X: 8448  
cause of eye diseases, VII-X: 10412, 11432  
effects on:  
  blood plasma, I: 204  
  brain, III: 3475; V: 6156  
  central nervous system, VII-X: 11415  
  enzyme activity, IV: 4123  
  seeds, VII-X: 11318, 11319  
  skin, III: 2581; IV: 3944, 4124; V: 6156; VI: 7622  
  general physiological effects, VII-X: 8336, 11321  
  hazards, I: 753, 835, 836; II: 1638, 2054, 2088, 2104,  
  2172; III: 2443, 3426; IV: 4123, 4126, 4909,  
  4910, 4911, 4912, 4913, 4926, 5169, 5176;  
  V: 5225, 6140, 6152, 6154, 6158, 6164, 6575;  
  VI: 6781, 7622, 7623, 7633, 7634; VII-X:  
  8327, 9902, 11283, 11285, 11301, 11307,  
  11315, 11321, 11330, 11347, 11348, 11367,  
  11368, 11378, 11386, 11387, 11388, 11389,  
  11390, 11391, 11395, 11402, 11414, 11422,  
  11429, 11430, 12451  
  measurement, VII-X: 11306  
  protection, II: 2056; III: 3427; V: 6140; VI: 7623;  
  VII-X: 11285, 11300, 11315, 11321, 11337,  
  11381, 11400, 11403, 11415, 11425  
  tolerance, III: 3425; VII-X: 11349, 11394  
COSMONAUTS see Astronauts  
COUGH see Whooping cough  
CRANKS see Hand cranks  
CRASH see Impact  
CRASH AMBULANCES, V: 6380  
CRASH INJURIES (see also items listed under Injuries),  
VI: 7833; VII-X: 12391, 12420  
  analysis, I: 273, 654; II: 1215, 1296, 1354, 1544, 1633,  
  2047; III: 2685, 2894, 3322; IV: 3742, 4083,  
  4141, 4172, 4194, 4320, 4321, 4674, 4755;  
  V: 6351, 6563; VI: 7629, 7850, 8090, 8091;  
  VII-X: 11939  
  etiology, VII-X: 12414  
  first aid, II: 1748  
  prevention (see also Accidents, prevention; see also  
  items under Safety), I: 56, 114, 274, 286, 287, 288,  
  426, 602; II: 935, 1295, 1297, 1388, 1633,  
  1798, 2052, 2132; III: 2685, 2848, 3322;  
  IV: 3922, 4321, 4674; V: 6553, 6554, 6563,  
  6565, 6691; VI: 8096; VII-X: 9851, 9979,  
  12384, 12387, 12393, 12394, 12413, 12414,  
  12785  
  research, II: 2276  
  statistics, V: 6351; VII-X: 11939, 12413, 12414  
  treatment, I: 694  
CRASH WARDS see Airports, hospital facilities  
CREATIVITY see Originality  
CREWS see Air crews; Combat c.; Ground c.; Space c.  
CROUCHING see Anti-g procedures  
CRUSTACEA  
  use as food, VII-X: 12868  
CUES see Auditory cues; Visual cues  
CULTURING see under Algae; also see Hydroponics  
CUPULOGRAPHY  
  relation to motion sickness predisposition, V: 5610  
CUPULOMETRY see Cupulogram; Labyrinth, effects of  
  rotation, test methods  
CUTANEOUS CIRCULATION  
  effects of:  
    altitude, III: 2986  
    cold, V: 6045  
    environmental temperature, IV: 4364; VI: 7426;  
    VII-X: 10876  
    heat, V: 5984, 6037; VII-X: 10767  
    hyperoxia, VI: 6821  
    microwave radiation, VII-X: 11325  
    physical work, IV: 4364  
  relation to:  
    heat loss, I: 483; IV: 4869; VI: 6876  
    pain, VI: 7136  
    skin temperature, VII-X: 10767  
    tactile perception, VII-X: 9660  
CUTANEOUS PERCEPTION (see also Pain; Tactile  
  perception; Thermoreception), VII-X: 9671  
  use for communication, VII-X: 12576  
CUTANEOUS RESPIRATION  
  tests, III: 3047  
CUTANEOUS SIGNALS  
  relation to auditory signals, VII-X: 9597  
  use in communication, VII-X: 9661, 12573  
CUTANEOUS STIMULI  
  thresholds  
    effects of skin temperature, VII-X: 9661  
CYANOCOBALAMINE  
  effects on anoxia tolerance, VII-X: 10496  
CYBERNETICS see Man-machine systems  
CYCLES see Activity cycle; Annual c.; Cosmic ray c.;  
  Diurnal c.; Lunar c.; Work-rest c. Also see entries  
  under Rhythms  
CYCLIZINE  
  effects on brain activity, VII-X: 11992  
  use in motion sickness, III: 2860; IV: 4460  
CYSTAMINE see Methenamine  
CZECHOSLOVAKIA see under Aviation medicine  
DACORENE  
  effects on heart function, IV: 4329  
DACTYLOGRAPHY see Fingerprinting  
DAPHNIA see Crustacea  
DARK ADAPTATION, I: 197, 198; II: 1825  
  bibliography, I: 703; II: 1274; IV: 4576  
  effects of:  
    altitude, II: 1963  
    anoxia, I: 141  
    color adaptation, III: 2996  
    drugs, VII-X: 10664  
      ascorbic acid, II: 1458  
      atropine, V: 6371  
      Carcholin, II: 1385  
      glycyrrhizin, IV: 4309  
      intermedin, IV: 4641  
      physostigmine, VI: 7006; VII-X: 9342  
      plant extracts, VI: 6995  
      vitamin A, II: 1458  
    heat, VII-X: 10664  
    hormones, VII-X: 9286  
    illumination, I: 200, 601; II: 1855; III: 3650;  
    VII-X: 9198  
    light stimuli, I: 864; II: 1387, 1427, 1779, 1825,  
    1854; V: 5519; VI: 8225; VII-X: 9314  
    preadaptation, I: 480; II: 945, 1853; IV: 4660, 4679,  
    5182; V: 5484, 5520; VI: 6965  
    ultraviolet rays, II: 1900; IV: 5182; VII-X: 11427  
  effects on behavior, VII-X: 9656  
  electroretinogram, V: 5485  
  general physiological factors, IV: 4641  
  race factors, II: 1926  
  relation to:  
    age, IV: 4584; V: 5497; VII-X: 9234, 11766

- color vision, I: 499; II: 1122, 1855; III: 2412;  
IV: 4770; V: 5534  
motion perception, II: 1593  
peripheral vision, II: 1120  
visual acuity, I: 294; II: 1157; III: 2660; IV: 4055  
test methods, II: 2234; III: 3506; V: 5522; VII-X: 9346  
tests, VII-X: 9197  
thresholds, IV: 4680  
time factors, II: 1031, 1384; II: 2387, 2660; IV: 4680;  
VII-X: 9234
- DARK ADAPTATION GLASSES, II: 1387**  
evaluation, III: 2608
- DAY-NIGHT CYCLE** *see* Diurnal cycle
- DAZZLE**  
aftereffects, VII-X: 9334  
cause of accidents, II: 2059  
effects on:  
electromyogram, II: 2044  
electroretinogram, V: 5495; VI: 6983; VII-X: 9291,  
9322  
psychomotor performance, VII-X: 9268  
retinal adaptation, V: 5495; VII-X: 9215, 9239,  
9304  
target identification, VII-X: 9358  
visual perception, I: 886; III: 3440; VII-X: 9276,  
9334, 9339  
general physiological factors, V: 5542; VII-X: 11467  
protection (*see also* Spectacles; Visors), VII-X: 9201;  
9215, 9246, 10412, 11316, 12216, 12305
- DEACCLIMATIZATION** *see* Readjustment
- DEAF**  
effects of high-intensity noise, VII-X: 10926
- DEAFNESS (including partial deafness)** (*see also* Audi-  
tory perception of partially deaf; Occupational deaf-  
ness), I: 292, 428, 462, 840; II: 1203, 1704, 1730, 1731;  
III: 3008  
caused by:  
auditory stimuli, III: 2364  
flight duty, III: 3053  
general physiological factors, II: 1703; III: 3150, 3579  
incidence in personnel, VII-X: 11921  
predisposition, V: 5553; VI: 7026  
prevention, IV: 4108, 4480, 4899; V: 5550, 5552, 5592,  
6454, 6467; VI: 7837, 7932; VII-X: 9426,  
11000, 11874, 11902, 12608  
motion pictures, V: 6079  
relation to:  
auditory fatigue, IV: 4140; VII-X: 10973  
speech intelligibility, III: 3305; V: 5563  
treatment, IV: 4495; VII-X: 11922, 11924  
use of nicotinic acid, II: 1685
- DEBRIS** *see* Aircraft debris
- DECELERATION** *see* Acceleration
- DECISION MAKING PERFORMANCE** (*see also* Reason-  
ing), III: 3688; VI: 7163; VII-X: 9676  
analysis, VI: 7141; VII-X: 9715  
effects of:  
anxiety, VII-X: 9750  
visual displays, VII-X: 9700  
relation to personality, IV: 3857  
time factors, III: 2974
- DECOMPRESSION** *see* Altitude; Explosive decompres-  
sion
- DECOMPRESSION CHAMBERS, II: 1374, 2304; III: 2634,**  
2773; IV: 3916; VII-X: 12759, 12760, 12762  
equipment, VI: 8243  
for animal experiments, III: 2649; VII-X: 12726,  
12745, 12754  
handbooks and treatises, III: 3267  
use in physical examination, VII-X: 12045
- DECOMPRESSION SICKNESS (Aeroembolism, Bends)**  
(*see also* Blood, gas bubble formation; Postdecom-  
pression shock; Tissue emphysema), I: 269, 270, 453,  
657; II: 1562, 2037; III: 3267; IV: 3993, 4192,  
4206, 4325; V: 5223, 6317, 6318, 6327, 6335;  
VI: 7275, 7629, 7815, 7819; VII-X: 10279,  
11819, 11822, 11829, 11831, 11844, 11845,  
11854, 11863, 11868, 11870  
aftereffects, VII-X: 10305, 10407, 11820, 11862  
effects of physical work, III: 2433; V: 6320  
effects on respiration, VII-X: 10407  
etiology, IV: 3810  
general physiological factors, II: 1758; IV: 5112  
incidence, IV: 4301  
post-mortem findings, VII-X: 11861  
prevention and treatment, I: 178; II: 1561; III: 2605,  
2913; IV: 3810; VI: 7824; VII-X: 11826,  
11840, 11846, 11851, 11853  
relation to:  
age, I: 270  
blood viscosity, VII-X: 11873  
body fat, VI: 7325  
body weight, I: 270; VI: 7817  
cabin atmosphere composition, VII-X: 10430  
nitrogen elimination, VI: 7814; VII-X: 11846, 11847  
obesity, VII-X: 11826, 11847, 11851, 11860  
pressure cabin atmosphere composition, VII-X:  
12794  
sleep deprivation, VI: 8099  
reviews, VII-X: 11835
- DEHUMIDIFICATION** *see* entries *under* Air conditioning
- DEHYDRATION**  
caused by:  
hot climates, IV: 4525; VII-X: 10883  
physical work, VII-X: 10883  
effects on:  
temperature regulation, VII-X: 10766  
work capacity, VI: 7639  
prevention, VII-X: 10883  
relation to urine composition, VII-X: 9118  
treatment, IV: 4524
- DELINQUENCY** *see* Attitudes
- DENITROGENATION** *see* Nitrogen elimination
- DENMARK** *see under* Aviation medicine
- DENTAL ANOMALIES**  
general physiological effects, III: 3632  
relation to aerotitis media, II: 2244
- DENTAL CARE** (*see also* Oral surgery), I: 532; II: 1359;  
III: 2981, 3010; IV: 4695; V: 6430; VI: 7801;  
VII-X: 11807  
statistics, VII-X: 11808
- DENTAL CARIES**  
relation to saliva composition, VII-X: 11961
- DENTAL DISTURBANCES, IV: 4695**  
caused by:  
altitude, I: 48, 871; IV: 4017, 4429; V: 6430;  
VI: 7324, 7809, 7831, 7835; VII-X: 11901,  
11930  
cold, VI: 7831  
incidence in aviators, VI: 7809  
relation to:  
airplane flight, II: 1788; III: 2571; VI: 7830;  
VII-X: 11898  
personality, II: 1787; III: 3167; IV: 4607  
statistics, II: 1788
- DENTAL EXAMINATION, III: 3166; V: 6416**
- DENTAL INJURIES**  
caused by parachute jumping, VI: 7865
- DENTAL PLATES** *see* Dental prostheses
- DENTAL PROSTHESES**  
effects on speech, II: 977
- DENTAL REQUIREMENTS** *see under* Pilots
- DENTAL SERVICE**  
administrative and organizational aspects, IV: 4042
- DEODORANTS**  
evaluation, IV: 4942



- toxic effects, I: 366, 367
- DEODORIZATION see under Cabins
- DEPRIVATION see Sensory deprivation; Sleep d.; Social isolation; Starvation; Water d.
- DEPTH OF FOCUS see under Visual perception
- DEPTH PERCEPTION, I: 219, 244, 374, 790; II: 2116; III: 2813; V: 5532, 5624, 5634; VII-X: 9232
- analysis, VI: 7054
- effects of:
- alcohol, I: 242
  - anoxia, I: 242; II: 1661; IV: 3929
  - colors, II: 1209
  - contact lenses, I: 85, 87, 219
  - empty visual field, VII-X: 12598
  - fatigue, IV: 4892
  - heterophoria, IV: 4064, 4315; V: 5644; VI: 6963
  - hyperoxia, IV: 3929
  - illumination, II: 1353, 2009, 2014; III: 3232, 3409; VII-X: 9467, 9529, 9530
  - motion, II: 1450, 222
  - myopia, VII-X: 9489
  - noise, II: 1068; VII-X: 10976
  - periscopes, IV: 4112
  - posture, III: 2675
  - target motion, VII-X: 9530
  - training, IV: 4221
  - visual cues, III: 2579
  - visual stimuli, II: 1452
- eye movements, VII-X: 9514, 9539
- in high speed flight, VII-X: 9229
- physical factors, III: 2694; IV: 5047; V: 5654; VI: 7061; VII-X: 9328, 9466
- psychological factors, I: 84; II: 979, 1579, 1580, 1617
- relation to:
- accidents, I: 249; II: 2059
  - binocular disparity, VII-X: 9503
  - binocular vision, II: 975, 1068, 1211, 1233, 1315, 1901; III: 2672, 2673, 2811, 2812, 2979, 3268, 3481, 3532, 3538, 3684; IV: 3962, 4067, 5047; V: 5509, 5620; VI: 7083; VII-X: 9504, 9515
  - brightness discrimination, III: 3232; IV: 4000; V: 5640
  - color vision, V: 5640
  - emmetropia, IV: 4841
  - form perception, V: 5619, 5647; VII-X: 9549
  - head movements, II: 1068
  - monocular vision, I: 301, 940; II: 1068, 1211, 1233, 1451, 2115; III: 2979, 3538, 3684; IV: 5047; VII-X: 9515
  - motion perception, VI: 7075
  - ocular convergence, V: 5646, 5657; VII-X: 9499, 9500, 9501
  - ocular dominance, II: 1533, 1821
  - peripheral vision, III: 2671
  - pilot performance, IV: 4134
  - retinal adaptation, I: 434; II: 2187; III: 3409
  - size perception, II: 1464, 1465; III: 2849, 3100; IV: 4227, 4228, 5628; VI: 7063, 7069; VII-X: 9333, 9488, 9555
  - visual accommodation, VII-X: 9500
  - visual acuity, III: 2979; IV: 5047
- reviews, VII-X: 9538
- role of eye movements, IV: 4529
- test methods, I: 461, 674; II: 980, 1929; III: 3480; VI: 7058
- tests, II: 1463; IV: 4134, 4649, VI: 7076, 7081; VII-X: 9548
- time factors, VII-X: 9539
- DEPTH PERCEPTION (AUDITORY) see Sound, localization
- DESERTS see Hot climates; Survival in the desert; Water supply in the desert
- DEVELOPMENT see under Biological rhythms; Ear.
- Also see Embryonic development. Also see entries under Growth
- DEXEDRINE see Amphetamine
- DEXTERITY see Manual dexterity
- DIABETES see Blood glucose content; Glycosuria
- DIAL READING see Scale reading
- DIALS see Instrument dials
- DIAMOX
- effects on:
- anoxia tolerance, IV: 3933
  - carbon dioxide elimination, II: 1060; III: 2573
  - gastric secretion, VII-X: 9122
  - hypercapnia tolerance, V: 6439; VI: 7963
- DIAPHRAGMATIC HERNIA, VII-X: 11880
- DIATRIN
- use in motion sickness, I: 231
- DIBAZOL
- effects on stress tolerance, VII-X: 9956
- DIBENAMINE
- effects on:
- altitude tolerance, I: 122
  - anoxia tolerance, I: 321
  - respiration, I: 321
- DIBENZYLENE
- use in motion sickness, I: 236
- DICHLOROETHANE
- toxic effects, VI: 7949
- DICHOTIC HEARING see Binaural hearing
- DIET (see also Flight feeding; Food; Liquid diets; Space feeding; Space flight feeding. See also entries under Nutritional requirements)
- effects on:
- altitude tolerance, III: 2629; VII-X: 10403, 10848
  - body weight, V: 5968; VII-X: 9121
  - circulation, VII-X: 11487, 11488
  - cold tolerance, VI: 7425; VII-X: 9129, 10791
  - heat tolerance, VII-X: 10655
  - metabolism, III: 2560, 3278, 3499; VII-X: 12371
  - metabolism of organs:
    - liver, IV: 4809; VII-X: 9128, 10900
  - metabolism of substances, VII-X: 10900
    - carbohydrates, IV: 4139; VI: 7425
    - ketones, VII-X: 8925
    - nitrogen, III: 2562
  - physical fitness, II: 1848; III: 2990, 3343
  - steroid excretion, VI: 6933
  - stress tolerance, VII-X: 12857
  - survival, III: 3016; IV: 4471
  - water intake, II: 1674
  - work capacity, III: 2901
- relation to:
- altitude acclimatization, IV: 4254
  - arteriosclerosis, VII-X: 10285
  - blood glucose content, VII-X: 9986
  - blood lipid content, VII-X: 11121, 11900, 11917
- DIETARY REQUIREMENTS see Nutritional requirements
- DIFFUSION see under Respiratory gases. Also see Carbon monoxide, diffusion in lung
- DIFFUSION RESPIRATION
- effects on:
- blood, V: 5350
  - blood pH, V: 5350
- DIGESTIVE SYSTEM (see also Digestive system function; Flatus; Gastrointestinal diseases; Gastrointestinal pressure; Liver; Pancreas; Peptic ulcer; Salivary glands)
- effects of explosive decompression, VI: 7251
- histology
- effects of hibernation, VII-X: 8650
- DIGESTIVE SYSTEM FUNCTION (see also Appetite; Gastric secretion; Intestinal secretion; Pancreatic rhythm; Vomiting)

- effects of:  
 acceleration, VII-X: 10186  
   negative acceleration, III: 3122  
 airplane flight, V: 5761  
 altitude, I: 267, 513, 798, 799; II: 1265, 2092;  
   IV: 5004  
 altitude acclimatization, VI: 7262  
 anoxia, II: 1386, 1982, 1983; V: 5935; VII-X: 10535  
 cold, VII-X: 10864  
 environmental temperature, V: 5992  
 explosive decompression, II: 2209  
 fatigue, VI: 7597  
 heat, VII-X: 10864  
 hyperthermia, V: 5469  
 solar radiation, I: 267; II: 1265; VII-X: 10789  
 subgravity, VII-X: 10229  
 tetraethyl ammonium, II: 1386  
 vibration, VI: 7527  
 glucose absorption, I: 267; II: 1265  
 relation to diurnal cycle, VII-X: 8622
- DIGITS *see* Letters and Numerals
- DIHEXYVERINE  
 effects on altitude tolerance, IV: 4176
- DIISOPROPYL FLUOROPHOSPHATE  
 effects on:  
   electrical potentials of cochlea, I: 839  
   labyrinth, III: 3373
- DIMENHYDRINATE (Dramamine, Etanautine,  
 Nautamine, Novamine)  
 effects on:  
   anoxia tolerance, I: 821, 823; III: 3350  
   auditory perception, II: 1389; III: 3661  
   mental performance, I: 689; II: 1917  
   nystagmus, III: 3373  
   psychomotor performance, VI: 7873  
   visual perception, II: 1389  
 general psychological effects, II: 1890  
 use in motion sickness, I: 84, 89, 142, 156, 236, 293,  
   333, 336, 689; II: 1509; III: 3160; IV: 4317,  
   4460; VII-X: 11843
- DIPARCOL  
 use in motion sickness, I: 236
- DIPHENHYDRAMINE HYDROCHLORIDE *see*  
 Benadryl
- DIPHENYLHYDANTOIN  
 effects on anoxia tolerance, II: 1400
- DIPHOSPHOPYRIDINE NUCLEOTIDE  
 effects on anoxia tolerance, VI: 7346
- DIPHOSPHOTHIAMINE *see* Cocarboxylase
- DIPHThERIA  
 control, I: 772
- DIPLOPIA (*see also* Heterophoria)  
 relation to heterophoria, III: 2464
- DIRIGIBLE FLIGHT  
 medical problems, V: 5221; VI: 6726
- DISABILITY *see* Physical fitness
- DISASTER RESCUE, V: 6408  
 use of:  
   helicopters, V: 6536  
   parachutists, V: 6175
- DISCIPLINE *see* entries *under* Attitudes
- DISCRIMINATION *see* Brightness discrimination; Loud-  
 ness d.; Pattern d.; Pitch d.; Probability d.; Tactile d.;  
 Velocity d.; Weight d.
- DISEASES (*see also* Aerotitis; Arteriosclerosis; Arthri-  
 tis; Asthma; Cardiovascular diseases; Cold (disease);  
 Communicable diseases; Epilepsy; Eye diseases; Fat  
 embolism; Gastrointestinal diseases; Glaucoma; Gly-  
 cosuria; Infectious diseases; Intestinal diseases;  
 Malaria; Mental diseases; Neuritis; Phakomatosis;  
 Pneumonia; Poliomyelitis; Pulmonary diseases; Pul-  
 monary edema; Respiratory diseases; Spasmophilia.  
*See also* entries *under* Occupational diseases; Sick-
- nesses. *See also* Pathology *under* organs and organ  
 systems)  
 cause of accidents, VII-X: 12421  
 effects on:  
   flying ability, VII-X: 11964  
   performance of aviators, III: 3607  
 incidence in:  
   aviators, VI: 7847; VII-X: 11797, 11888, 11933,  
     11964  
   cold climates, VI: 7418  
   personnel, IV: 4089  
   pilot candidates, VII-X: 11908, 11915
- DISORDERS *see under* Retinal adaptation. *Also see*  
 Psychosomatic disorders; Speech disorders. *Also*  
*see* items *under* Abnormalities and Disturbances
- DISORIENTATION *see* Spatial orientation
- DISPARITY *see* Binocular disparity; Image disparity
- DISPLACEMENT *see under* Spleen. *Also see* Visceral  
 displacement
- DISPLAY-CONTROL SYSTEMS  
 effectiveness, IV: 4199
- DISPLAYS *see* Visual displays
- DISPOSAL *see under* Biological waste products; Feces;  
 Urine; *also see* subdivision Removal
- DISTANCE ESTIMATION (*see also* Depth perception)  
 relation to size perception, V: 5623, 5650; VI: 7064;  
 VII-X: 9534  
 tests, IV: 4833; 5649; VII-X: 9279
- DISTANCE ESTIMATION (AUDITORY), VII-X: 9367
- DISTURBANCES *see* Dental disturbances; Vestibular  
 disturbances. *Also see under* Spatial orientation;  
 Vision; *also see* Diseases; Sicknesses; *and subdivi-*  
*sions* Abnormalities; Disorders; Pathology
- DITCHINGS (*see also* Accidents)  
 medical problems, VII-X: 12316, 12317  
 statistics, IV: 4062, 5099
- DIURNAL CYCLE  
 changes  
   cause of neuroses, VII-X: 8562  
 effects on thymus, VII-X: 8589  
 general physiological effects, I: 812, 814; VII-X:  
   12823  
 relation to:  
   accidents, VII-X: 12424  
   alcohol tolerance, VII-X: 8585  
   aldosterone excretion, VII-X: 8609  
   altitude, VII-X: 8630  
   biological rhythms, III: 2530, 2542, 2961; IV: 3895,  
     4105, 4990, 5030; V: 5272; VI: 6773, 6778;  
     VII-X: 8545, 8546, 8553, 8562, 8577, 8578,  
     8579, 8580, 8587, 8599, 8626, 11198  
   activity rhythm, III: 2402, 3013, 3154; IV: 3746,  
     4169, 4799; V: 5257; VI: 6767, 6775, 7596;  
     VII-X: 8559, 8565, 8603, 8615  
   adrenal activity rhythm, IV: 4294; V: 5264;  
     VII-X: 8570, 8602  
   autonomic nervous activity rhythm, IV: 4242  
   blood cell rhythm, II: 1461; V: 5258  
   body temperature rhythm, VI: 6768; VII-X:  
     8561, 8569, 8571, 8588, 8592, 8601, 8608,  
     8619  
   corneal mitotic rhythm, VII-X: 8596  
   excretory rhythm, III: 3086; IV: 4643, 4655;  
     V: 5269; VI: 6774; VII-X: 8572, 8598, 8614,  
     8629  
   galvanic skin response rhythm, IV: 4890  
   glutathione rhythm, VII-X: 8611  
   metabolic rhythm, V: 5274  
   mitotic rhythm, VI: 6770; VII-X: 8548, 8561  
   pulse rate rhythm, IV: 4353; VII-X: 8571, 8607  
   reproductive rhythm, VII-X: 8605  
   respiratory rhythm, IV: 4353  
   reviews, VII-X: 8549

- sleep, III: 3012; VI: 6772; VII-X: 8593, 8612, 8616, 8630  
 water exchange rhythm, VII-X: 8606  
 blood bilirubin content, V: 5259  
 blood coagulation, VII-X: 8586  
 blood plasma proteins, VII-X: 8576  
 brain glycogen content, VII-X: 8624  
 catecholamine excretion, IV: 4127  
 digestive system function, VII-X: 8622  
 electroencephalogram, V: 5266  
 electro-oculogram, VI: 6985  
 fatigue, II: 1165; IV: 4180; VI: 7596  
 fertility, VII-X: 8566  
 food intake, VII-X: 8547, 8620  
 kidney function, VII-X: 8556  
 liver function, VII-X: 8556  
 mental performance, IV: 3846  
 metabolism of organs:  
   adrenal gland, VII-X: 8573  
   liver, V: 5265, 5267; VII-X: 8548  
 metabolism of substances:  
   carbohydrates, III: 3020; V: 5265  
   iron, IV: 3868  
   proteins, V: 5267  
   steroids, V: 5271; VII-X: 8610  
 muscular strength, VII-X: 8632  
 oxygen consumption, V: 5261  
 performance, VI: 6778; VII-X: 8626, 11152  
 psychomotor performance, VII-X: 8631  
 reaction time, VII-X: 9923  
 saliva composition, VII-X: 8617  
 steroid excretion, VII-X: 8618  
 urine composition, V: 5260; VII-X: 10805  
 water exchange, III: 3194  
 water intake, VII-X: 8572  
 work capacity, III: 2530  
 work-rest cycle, VII-X: 8551, 8627
- DIVING FLIGHT**  
 medical problems, VI: 4951
- DIVISION** *see* Cell division
- DOGS** *see* Space dogs
- DOMINANCE** *see* Handedness; Ocular dominance
- DONAGGIO REACTION** *see* Physical work, effects on  
 urine composition; Fatigue effects on urine composition
- DOOR KNOBS**  
 human engineering, VII-X: 12811
- DPN** *see* Diphosphopyridine nucleotide
- DRAMAMINE** *see* Dimenhydrinate
- DREPANOCYTEMIA** *see* Sicklelemlia
- DRINKING** *see* Alcohol; Water intake
- DRINKING WATER** *see* Water supply
- DROSOPHILA**, VII-X: 11375
- DROWSINESS**  
 effects on:  
   mental performance, VII-X: 9177  
   psychomotor performance, VII-X: 9177
- DRUG ACTION**  
 effects of  
   altitude, I: 863; II: 953; III: 3106; IV: 4696; VII-X: 10417  
   anoxia, I: 108, 275, 863; II: 1815; III: 2628  
   barometric pressure, II: 1205  
   carbon dioxide, IV: 4457  
   cold acclimatization, VII-X: 10665, 10910  
   hypothermia, VII-X: 9117, 12001
- DRUGS** (*see also* Anesthetics; Antihistaminics; Hypnotics; Motion sickness drugs; Narcotics; Pyrogenic agents. *See also* individual drugs: Acetylcholine; Acetylsalicylic acid; Adenosine monophosphate; Adrenochrome; Alcohol; Amino acids; Aminophylline; Aminopyrine; Amphetamine; Androsterone; Antistine; Aramine; Atropine; Bantnine; Barbituric acid derivatives; Benadryl; Bently; Bromides; Buscopan; Caffeine; Carcholin; Centropnein; Chloramphenicol; Chlorophyll; Chlorpromazine; Cobalt compounds; Cocaine; Codeine; Cortisone; Cyanocobalamin; Cyclizine; Dacorene; Diamox; Diatrin; Dibenamine; Dibenzylene; Dihexyverine; Diisopropyl fluorophosphate; Dimenhydrinate; Diparcol; Diphenylhydantoin; Diphosphopyridine nucleotide; Ephedrine; Epinephrine; Ergotamine; Flavones; Folic acid; Glutamic acid; Glycine; Glycyrrhizin; Heparin; Hesperidin; Hexamethonium; Histamine; Hydergine; Intermedin; Isophenergan; Kemadrin; Lergigan; Lipoic acid; Lisergan; Lucidril; Lysergic acid; Meclizine; Meperidine; Meproamate; Mescaline; Metaraminol; Methadone; Methenamine; Methyl siloxane; Metrazol; Micoren; Morphine; Mosidal; Multergan; Nalorphine; Nicotine; Nicotinic acid; Nikethamide; Nitrites; Norepinephrine; Opium; Pagitane; Paraaminobenzoic acid; Parsidol; Perphenazine; Phenergan; Phentolamine; Physostigmine; Pilocarpine; Postafene; Prednisone; Primaquine; Probanthine; Procaine; Prochlorperazine; Progesterone; Promethazine; Purine; Pyribenzamine; Pyridine; Pyridozine; Pyrolazote; Quinhydrone; Quinine; Rutin; Salyrgan; Scopodex; Scopolamine; Sex hormones; Sodium azide; Sodium compounds; Soventol; Streptomycin; Succinates; Sulfonamide compounds; Terramycin; Tetraethyl pyrophosphate; Tetraethyl ammonium; Thephorine; Thiamine; Tranquilizers; Trifluoperazine; Vasopressin; Veratrine; Vitamins; Vomex A)  
 cause of psychoses, VII-X: 12007  
 contraindication  
   for astronauts, VII-X: 11980  
   for aviators, III: 2831; IV: 4248; VII-X: 11987, 12002, 12004  
   for pilots, VII-X: 11984  
 effects on:  
   acceleration tolerance, VI: 7877  
   altitude tolerance, I: 122; VI: 7877; VII-X: 10325  
   anoxia tolerance, I: 608, 821, 823; II: 1400; III: 2488; V: 5955, 5962; VI: 7363; VII-X: 10622  
   behavior, VII-X: 9695, 12000  
   binocular vision, VII-X: 10600  
   blood pressure, I: 196, 608, 719; IV: 3888  
   body temperature, VII-X: 9060  
   carbon dioxide elimination, VII-X: 9124  
   circulation, I: 196, 719  
     cerebral circulation, VII-X: 8746  
   cold tolerance, VII-X: 10656, 10726  
   cold water immersion tolerance, VII-X: 10780  
   color vision, II: 2297  
   dark adaptation, VII-X: 10664  
   electroretinogram, II: 1882  
   explosive decompression tolerance, VII-X: 10321  
   fatigue, II: 1915; IV: 3954; 4394; V: 6127; VII-X: 11159  
   flicker fusion frequency, VII-X: 11169  
   flying ability, VI: 7867  
   hearing, VII-X: 12009  
   heart function, VII-X: 8936  
   heart metabolism, III: 3525  
   heat tolerance, VI: 7442  
   heterophoria, IV: 3836  
   hyperoxia tolerance, IV: 4215  
   hypothermia tolerance, VI: 6889; VII-X: 9071  
   labyrinth, VI: 6906; VII-X: 9180, 11989  
   mechanical properties of aorta, VII-X: 8743  
   mental performance, VI: 7876  
   metabolism *see under* Metabolism  
   nervous system activity, VI: 7871  
   neuromuscular performance, III: 2898  
   nuclear radiation tolerance, VII-X: 11384  
   nystagmus, III: 3115; V: 6372; VII-X: 9478, 11988  
   optokinetic nystagmus, VII-X: 9471

- oxygen consumption, III: 2434  
 peripheral vision, VII-X: 11983  
 positive acceleration tolerance, VII-X: 10193  
 psychomotor performance, II: 1549; III: 2843,  
 2900, 3295; VII-X: 9630, 12004  
 reaction time, VII-X: 9585  
 respiration, II: 1202; VII-X: 10294  
 retention of messages, IV: 4762  
 shivering, VII-X: 8991  
 stress tolerance, VII-X: 11731, 12003  
 team behavior, V: 5741  
 temperature regulation, III: 2434; IV: 3887; V:  
 5994; VII-X: 8991, 10664  
 reviews, VII-X: 8992  
 time estimation, VII-X: 9161  
 work capacity, VII-X: 10657  
 X-ray tolerance, VII-X: 11346, 11364, 11398  
 hazards, VII-X: 12002  
 inducing hypothermia, III: 2983; IV: 3906; V: 5416;  
 VII-X: 9060
- DUCTLESS GLANDS *see* Endocrine system  
 DUMMIES, I: 52; II: 919; III: 3119; V: 6582; VII-X: 12178  
 DUODENAL ULCER *see* Peptic ulcer  
 DUTIES *see under* the various personnel categories,  
 e.g., Flight surgeons, duties. *Also see* Flight duty;  
 Hazardous duty  
 DYNAMIC CONTOUR PERCEPTION  
 tests, VI: 7005  
 DYNAMIC VISUAL ACUTY, II: 1750, 1830; IV: 4566;  
 V: 5503, 5526, 5527, 5695; VII-X: 9207, 9225  
 effects of:  
 illumination, V: 5525; VII-X: 9203, 9311  
 training, III: 3126; IV: 3833, 4565  
 general physiological factors, VII-X: 9208, 9220,  
 9223, 9224  
 relation to:  
 target motion, VII-X: 9297, 9311  
 velocity discrimination, VI: 7062  
 sex factors, VII-X: 9208  
 tests, VII-X: 9247, 9345  
 time factors, VII-X: 9306
- DYSBARISM *see* Altitude sickness; Decompression  
 sickness; Dental disturbances caused by altitude. *Also  
 see* entries *under* Barotrauma  
 DYSTONIA  
 caused by parachute jumping, V: 6514, 6524
- EAR (*see also* Cochlea; External ear; Labyrinth; Middle  
 ear; Otorhinolaryngology)  
 anatomy, I: 93; II: 2028; IV: 4590  
 handbooks and treatises, III: 3628  
 development, I: 93  
 effects of:  
 airplane flight, IV: 4862  
 blast, II: 1008, 1329, 2199  
 sound, II: 1453  
 ultrasonic vibrations, II: 1865  
 examination *see* Hearing, test methods  
 pain, II: 1453  
 caused by:  
 noise, IV: 4864  
 sound, II: 1453; VII-X: 10926, 10927  
 pathology (*see also* Aerotitis media; Otitis externa;  
 Otosclerosis), I: 292, 567; III: 3079, 3183; IV: 4590;  
 V: 6332; VII-X: 12079  
 caused by flight duty, VII-X: 11885  
 treatment, V: 5591  
 physiology (*see also* Hearing), I: 93; IV: 4495, 4590,  
 5206  
 handbooks and treatises, III: 3628  
 pressure gradient  
 cause of pain, VII-X: 10449  
 effects of:  
 altitude, VII-X: 9392, 10366, 10405  
 middle ear gas composition, VII-X: 9391  
 oxygen breathing, VII-X: 10365, 10366  
 recompression, VII-X: 10449  
 effects on auditory perception, VI: 4312; VII-X:  
 9365
- EAR DEFENDERS (*see also* Ear muffs; Ear plugs; Hel-  
 mets, acoustical properties), II: 941, 1935; III: 2305,  
 2424, 2972, 2973, 3052, 3162, 3244; IV: 3974,  
 4022, 4322, 4473, 4480, 4646, 4787, 4827,  
 5115, 5140, 5175; V: 6461, 6467, 6486; VI:  
 8000, 8027; VII-X: 10923, 10934, 10947,  
 10986, 11019, 11057, 12263  
 effectiveness, VI: 7843; VII-X: 12302  
 evaluation, IV: 4625, 5015; V: 6493; VII-X: 12225,  
 12270, 12295  
 test methods, V: 6493; VII-X: 12238
- EAR MUFFS, II: 1285, 1454, 1637, 1813; III: 2664;  
 V: 6491; VI: 8022; VII-X: 12301
- EAR PLUGS, I: 383, 487, 552, 615; II: 1285, 1329, 1425,  
 1454, 1637, 1795, 1813, 1871, 2301, 2302,  
 2303; III: 2664, IV: 4226, 4383, 4419, 5170,  
 5207; V: 6453, 6454  
 effectiveness, II: 1380, 1700; III: 3558; VII-X: 9370  
 effects on speech intelligibility, II: 1872  
 evaluation, VI: 8003
- EARPHONES  
 effects on auditory perception, IV: 5205  
 evaluation, VII-X: 12632
- EARTH (planet)  
 biological contamination, VII-X: 12446, 12447  
 gravitational field, VII-X: 8718  
 life conditions, VII-X: 8727
- EATING *see* Food intake  
 EBULLISM *see* entries *under* Gas bubble formation  
 ECOLOGICAL SYSTEMS *see* Closed ecological systems  
 EDEMA *see* Pulmonary edema  
 EDIBLE PLANTS, IV: 4307
- EJECTION FROM AIRCRAFT, I: 744, 809, 892; III:  
 2909, 3314; IV: 5100; VI: 8034, 8041; VII-X:  
 12340  
 at high altitude, I: 634; IV: 4143, 4335; VII-X: 8474,  
 12331, 12347  
 at high speed, III: 3552; VI: 3859, 4143, 4190, 4335,  
 5305; V: 5806, 6509, 6513; VI: 8042, 8045,  
 8050; VII-X: 12322, 12331, 12348  
 cause of injuries, IV: 3999; VII-X: 11891, 12342  
 hazards, IV: 4820, 4865; V: 6521, 6528; VII-X:  
 12333  
 at low altitude, IV: 3865; VI: 8042, 8047, 8052; VII-X:  
 9979, 12322  
 cause of:  
 injuries, VII-X: 12352  
 motion sickness, VII-X: 11818  
 spine injuries, VI: 7833; VII-X: 11955, 11991,  
 12325, 12330, 12411  
 effects of posture, III: 2330  
 equipment, IV: 4669; VI: 8029, 8039; VII-X: 12336  
 general physiological effects, V: 5794; VII-X: 12328  
 hazards, II: 1212; III: 2330; IV: 4452, 4996; V: 6518,  
 6519, 6526; VI: 8033, 8043, 8046, 8052, 8055;  
 VII-X: 12324, 12328, 12329, 12345, 12349  
 psychological factors, VI: 8056  
 research, VII-X: 12335  
 statistics, VI: 8046, 8055; VII-X: 12324, 12329, 12330  
 tolerance, VII-X: 12352  
 training devices, IV: 3928, 4401  
 training methods, IV: 4107  
 under water, VII-X: 12316, 12317
- EJECTION SEATS, I: 172, 359, 543, 744, 749, 809; II:  
 924, 928, 1249, 1330, 1382, 1554, 1555, 1844,  
 2034; III: 2879, 2909, 2910, 3274, 3314; IV:  
 3859, 3928, 3966, 4107, 4190, 4335, 4382,  
 4406, 4546, 4616, 4845, 4846, 4847, 4895,

- 4902, 5100; V: 6497, 6504, 6507, 6510, 6513, 6515, 6516, 6517, 6523, 6525; VI: 8028, 8029, 8034, 8045, 8050, 8052, 8053, 8054; VII-X: 9991, 12179, 12323, 12325, 12337, 12348, 12349, 12353
- evaluation, IV: 4461; V: 6505, 6506, 6522; VII-X: 12324, 12344
- history, VI: 8035
- human engineering, VII-X: 12326, 12332
- EJECTION TRAINING *see* Bailout training
- ELECTRIC FIELDS
- effects on:
- muscle metabolism, VI: 7635; VII-X: 11434
  - phosphorus metabolism, VI: 7635; VII-X: 11434
- ELECTRICAL POTENTIALS *see under* Auditory cortex; Cerebral cortex; Cochlea; Labyrinth; Meninges; Visual cortex. *Also see* Bioelectrical potentials; Standing potential and entries *under* Action potentials
- ELECTRICAL PROPERTIES *see under* Muscular system
- ELECTRICAL RESISTANCE *see under* Brain. *Also see* Galvanic skin response
- ELECTRICAL STIMULI
- cause of auditory fatigue, V: 5601; VII-X: 9377
  - effects on:
    - eye, II: 2079; III: 2531
    - labyrinth, II: 1010, 1665
    - muscular function, II: 1490
    - pulse rate, IV: 5142
    - visual perception, V: 5498
  - thresholds, VII-X: 9661
  - use for communication, VII-X: 12574
- ELECTRICIANS
- performance
    - test methods, IV: 4955; V: 6252
  - training, III: 2356
- ELECTROCARDIOGRAM (*see also* Electrocardiography; Myocardial tissue, action potentials), II: 1906; III: 3275, 3325; VI: 7924
- abnormalities, III: 3168; IV: 4807; VII-X: 8751, 11876, 11904, 11905, 11912, 11913, 11926, 11962, 12070
  - incidence in:
    - aviators, VI: 7863; VII-X: 8742, 8756
    - pilots, VII-X: 8744
  - race factors, VII-X: 8742
  - relation to age, VII-X: 8742, 11904
  - analysis, VII-X: 8765
  - effects of:
    - acceleration, VII-X: 10032
    - airplane flight, II: 1942
    - altitude, IV: 3805; V: 5887; VII-X: 10368, 10374, 10409
    - altitude acclimatization, IV: 3723; V: 5839; 5872; VI: 7292, 7300; VII-X: 10368, 10410, 10411, 10431
    - anoxia, I: 884; II: 981, 1945, 2283; III: 2344, 2505, 2508, 2818, 3381; IV: 3699, 4059, 4237, 4238, 4288; V: 5937; VII-X: 10479, 10511, 10512
    - anti-g suits, VII-X: 11458
    - body movements, VII-X: 8792
    - carbon dioxide, I: 884
    - chlorpromazine, V: 6355
    - cold, IV: 4486; V: 6019
    - drugs
      - atropine, I: 392; VI: 7578; VII-X: 8766
      - hexamethonium, V: 6355
      - Micoren, VII-X: 10511
      - nicotine, III: 2344
      - vasopressin, IV: 3699
      - vitamin E, III: 2818
    - fatigue, IV: 4807
    - food intake, IV: 4493; VII-X: 9126
    - heat, III: 3542
    - hibernation, V: 5275
    - hyperoxia, I: 607, 884; III: 3530
    - hyperthermia, VII-X: 9090
    - hyperventilation, V: 5362; VI: 6848
    - hypothermia, IV: 4003, 4004, 4599; V: 5275, 5319, 5402, 5412, 5437, 5452, 6355; VI: 6860, 6866, 6923; VII-X: 8958, 9018, 9045, 9087
    - jet engine noise, VII-X: 10944
    - nasal stimulation, II: 2285
    - oxygen breathing, I: 607; IV: 4247
    - physical work, III: 3683; IV: 4486; V: 6019, 7529, 7577, 7586; VII-X: 11073
    - piloting, II: 1457; VII-X: 9898
    - positive acceleration, I: 720; VI: 7199; VII-X: 10131, 10137, 10162, 10163, 10194
    - posture, VII-X: 8766, 11458, 11461, 11480
    - pressure breathing, I: 452, 607; V: 5359; VI: 6851
    - respiration, VII-X: 8766
    - rotation, III: 3060
    - sport activities, V: 6111; VII-X: 7533, 7578
    - subgravity, VII-X: 10032
    - tobacco, III: 2344
    - transversal acceleration, VII-X: 10052, 10197
    - tumbling, IV: 5149
    - Valsalva maneuver, II: 1210
    - vestibular stimulation, III: 3488
    - vibration, VII-X: 10944
    - voluntary apnea, V: 5331

general physiological factors, V: 5309

relation to:

    - electroencephalogram, IV: 5189; VI: 6947; VII-X: 8733
    - physical fitness, III: 3050; VI: 7529; VII-X: 12070
    - telemetry, VII-X: 8794, 12044, 12630, 12648, 12705, 12713

use in:

    - air transportation of patients, VII-X: 12026
    - heart examination, VII-X: 12090
    - physical examination, VI: 7913, 7916; VII-X: 8793, 12044

ELECTROCARDIOGRAPHY, V: 5805; VII-X: 8745, 8792, 9126, 12682

    - in flight, II: 1457; III: 2320

ELECTRODERMAL RESPONSE *see* Galvanic skin response

ELECTROENCEPHALOGRAM (*see also* Electroencephalography), IV: 5189; VI: 6947

    - analysis, VII-X: 9152
    - computer analysis, VII-X: 9171
    - effects of:
      - acceleration, VII-X: 9153, 10001
      - anoxia, I: 282, 413, 821, 823, 906; II: 1591, 2112, 2120, 2121, 2279; III: 2469, 2505, 2976, 3335; IV: 4011, 4749; VI: 7326, 7337, 7339, 7349, 7362, 7836; VII-X: 9176, 10492, 10516, 10527, 10554, 10555, 10577, 10588, 10596, 10602, 10617, 12068
      - animal experiments, VII-X: 10514
      - antihistaminics, IV: 4716
      - auditory stimuli, III: 3199; V: 5384, 5570; VII-X: 9159, 9440
      - boranes, VII-X: 12115, 12124
      - brain injuries, VI: 7836
      - caffeine, IV: 4716
      - carbon dioxide, I: 758; II: 2058; III: 3431; VII-X: 12147
      - carbon monoxide, VII-X: 12133
      - cerebral stimulation, VII-X: 8971, 10083
      - explosive decompression, II: 1419; V: 5942
      - fatigue, VII-X: 11144
      - flight maneuvers, VII-X: 9963
      - hypercapnia, VII-X: 9176

- hyperoxia, III: 2454, 3170; IV: 4144  
hyperventilation, II: 1168, 2282; III: 3316, 3431;  
IV: 5189; VI: 6947, 7194; VII-X: 8733, 8828,  
8898, 8972, 9763  
hypocapnia, II: 1591  
hypothermia, III: 2556, 2730; IV: 4144, 4145, 4932;  
V: 5384, 5443, 5472; VI: 6867, 6886; VII-X:  
8965, 8971, 8972, 8977, 9045, 9076, 9112,  
9162  
intermittent light, VII-X: 9175  
jet plane piloting, VII-X: 9962  
light stimuli, I: 853, 906; II: 1168, 2112, 2202,  
2203, 2204; III: 2855, 3572, 3573; V: 5531;  
VII-X: 8977, 9159, 9162, 9163, 9164, 9322,  
11467  
mental work, VII-X: 9151  
Metrazol, II: 1168  
muscular fatigue, VII-X: 11112  
nasal stimulation, II: 2285  
noise, II: 2225; III: 2553, 2566; VII-X: 9440  
physical work, VII-X: 11088, 11112, 11128  
piloting, VII-X: 9547  
positive acceleration, VI: 7194; VII-X: 8733  
posture, VII-X: 9154, 10083, 11446  
retinal adaptation, VII-X: 9283  
rotation, III: 3060; VII-X: 8660, 9167  
sensory deprivation, VII-X: 11235  
sleep deprivation, VI: 7600; VII-X: 11138, 11142  
smallpox vaccination, VI: 7940  
sound, VII-X: 9362  
stress, VII-X: 9924  
vestibular stimulation, II: 2299; III: 3687; VII-X:  
9167  
vibration, VII-X: 10001  
waking, VII-X: 9156  
warm air breathing, VII-X: 9782  
yoga practice, VII-X: 8731  
relation to:  
accident proneness, V: 6422; VII-X: 12403  
activity rhythm, VII-X: 8559  
age, I: 282; VII-X: 10602  
alertness, II: 1659; VII-X: 9165  
anxiety proneness, I: 853; II: 2204; V: 6422  
blackout, VII-X: 10031  
blood glucose content, VII-X: 8733  
carbohydrate metabolism, IV: 5189; VI: 6947  
cerebral circulation, VII-X: 8746, 10031, 11446  
diurnal cycle, V: 5266  
electrocardiogram, IV: 5189; VI: 6947; VII-X:  
18733  
electroretinogram, VII-X: 9166  
fainting, VII-X: 10434  
flying ability, VII-X: 11578  
mental performance, VII-X: 9164  
nystagmus, VII-X: 9153, 9527  
personality, IV: 4792; VII-X: 11533  
predisposition to fainting, VII-X: 11816  
pulse rate, II: 1591  
reaction time, VI: 6945; VII-X: 9570  
sleep, III: 2855; VI: 6943, 6944; VII-X: 8623, 9165,  
9177, 10262  
stress tolerance, VII-X: 9963  
telemetry, VII-X: 11088, 12652, 12713  
use in:  
lung function tests, VII-X: 12068  
physical examination, VII-X: 11562, 11603, 12055,  
12078  
selection of pilot candidates, VII-X: 11510, 11533  
space vehicle control systems, VII-X: 12686  
warning devices, VII-X: 12686  
ELECTROENCEPHALOGRAPHY, II: 2284; III: 3594,  
3665; IV: 3908, 5188; V: 5483, 5805; VII-X:  
12646  
ELECTROLYTE DISTRIBUTION (see also Potassium  
metabolism; Sodium metabolism; see also Electrolyte  
content under Blood; Saliva)  
effects of:  
altitude, VII-X: 10347, 10464  
anoxia, IV: 4736; V: 5422; VI: 7351; VII-X: 10490,  
10605  
cold acclimatization, VII-X: 10645  
hyperthermia, V: 5477  
hyperventilation, IV: 4736; VI: 6848  
hypothermia, IV: 4736; V: 5422, 5477, 5478; VI:  
6864, 7351; VII-X: 8943, 8944, 9024, 9104  
effects on heart function, V: 5441  
ELECTROLYTE EXCRETION  
effects of posture, V: 6168; VII-X: 11449  
relation to adrenal activity rhythm, V: 5264  
ELECTROLYTE METABOLISM  
effects of:  
altitude, VII-X: 10420, 10470, 10475  
carbon dioxide, VI: 7965  
cold, VII-X: 10646  
cold acclimatization, VII-X: 10850  
hypercapnia, VII-X: 8924, 12150  
hyperthermia, V: 5371; VII-X: 10721  
hypothermia, VII-X: 8960, 9074  
sea water intake, VII-X: 12361  
ELECTROLYTES  
effects on coronary circulation, VII-X: 8790  
ELECTROMAGNETIC ENERGY  
auditory perception, VII-X: 9374  
ELECTROMYOGRAM (see also Electromyography)  
effects of:  
altitude, VII-X: 9143, 10442  
auditory stimuli, V: 6067  
carbon dioxide, I: 758  
dazzle, II: 2044  
environmental temperature, VII-X: 10776  
hyperthermia, VII-X: 9033  
hypothermia, VII-X: 9033, 9062, 9143  
immobilization, VII-X: 11278  
muscular fatigue, VII-X: 11110, 11111, 11158,  
11176  
noise, II: 2044; VI: 7488  
physical training, VI: 7569  
physical work, VI: 7183; VII-X: 11120, 11127  
positive acceleration, VII-X: 10003  
posture, VII-X: 11451  
psychomotor performance, VI: 7112, 7120, VII-X:  
9583, 9647  
respiration, II: 1193, 1194  
static physical exercise, VII-X: 11067, 11068,  
11110, 11111  
transfer of training, VI: 7106  
ultrasonic vibrations, III: 2762; VI: 7106  
vestibular stimulation, VII-X: 9160  
vibration, VII-X: 10979  
visual searching, II: 2044  
relation to:  
alertness, II: 1659, 2044  
psychomotor performance, V: 5670, 5674, 5675,  
5679, 5728, 6066; VI: 7099, 7121; VII-X: 9608  
telemetry, VII-X: 11088, 12713  
ELECTROMYOGRAPHY, VII-X: 9139, 9140  
handbooks and treatises, VII-X: 12640  
ELECTRONIC EQUIPMENT (see also Radar equipment;  
Radio equipment), III: 2358  
human engineering, III: 3207; IV: 4291  
use in:  
aviation medicine research, IV: 4905  
piloting (see also Instrument flight), II: 1953, 1954,  
1955, 2084, 2289; IV: 4291  
ELECTRONICS TECHNICIANS  
performance

- test methods, II: 1371, 1495  
 tests, VI: 7732  
 selection, II: 1493; IV: 5057  
 training, III: 2348, 2349, 2352; IV: 3702; V: 6178, 6626  
 ELECTRONYSTAGMOGRAM see Labyrinth, electrical potentials  
 ELECTRONYSTAGMOGRAPHY, VI: 7073; VII-X: 12693  
 animal experiments, VII-X: 9518  
 ELECTRO-OCULOGRAM (see also Electroretinogram);  
 IV: 3748  
 effects of:  
 retinal adaptation, IV: 4065; V: 5500, 5501; VI:  
 6964; VII-X: 9292  
 visual accommodation, VI: 6953  
 relation to:  
 diurnal cycle, VI: 6985  
 electroretinogram, V: 5531; VI: 6978  
 eye movements, VII-X: 9210  
 telemetry, VII-X: 12713  
 ELECTROPHONIC HEARING, I: 344, 722  
 ELECTROPHRENIC RESPIRATION, I: 400; III: 2830  
 cause of hyperventilation, VI: 6807  
 ELECTRORETINOGRAM, II: 991, 2278; VI: 7010  
 effects of:  
 anoxia, II: 2112; IV: 4749; V: 5915; VI: 7335;  
 VII-X: 10549  
 color stimuli, V: 5487; VI: 6983; VII-X: 9291  
 dazzle, V: 5495; VI: 6983; VII-X: 9291, 9322  
 drugs, II: 1882  
 illumination, VI: 6983, 6986; VII-X: 9281, 9291  
 intermittent light, VI: 6976, 6977  
 light stimuli, II: 1796, 2112; VI: 6949, 6950; VII-X:  
 9323, 9331  
 positive acceleration, IV: 4532  
 in blackout, IV: 4532; V: 5523  
 in dark adaptation, V: 5485  
 relation to:  
 color blindness, VI: 6975  
 electroencephalogram, VII-X: 9166  
 electro-oculogram, V: 5531; VI: 6978  
 flicker fusion frequency, VI: 6949  
 retinal adaptation, II: 1135; V: 5486; VII-X: 9236,  
 9283  
 visual perception, III: 4854  
 ELECTROSHOCK  
 effects on restraint tolerance, VII-X: 11280  
 ELIMINATION see Carbon dioxide elimination; Carbon  
 monoxide elimination; Nitrogen elimination. Also see  
 items under Disposal; Removal  
 EMBOLISM see Blood, gas bubble formation; Fat embolism;  
 Tissue embolism  
 EMBRYONIC DEVELOPMENT (see also Fetus)  
 effects of:  
 altitude, I: 512; VI: 7305  
 microwave radiation, VII-X: 11376  
 EMERGENCIES see Adaptability to emergencies; Radio  
 equipment for emergencies  
 EMERGENCY EXITS  
 human engineering, V: 6552; VII-X: 12259, 12278,  
 12338  
 EMERGENCY HOSPITALS  
 equipment, I: 600  
 EMERGENCY MEDICAL SERVICE  
 use of airplanes, VII-X: 11798  
 EMERGENCY PRESSURE CELLS, III: 2605  
 EMERGENCY RATIONS, III: 2392, 2483, 2903, 2928,  
 3014, 3016, 3343, 3346, 3347, 3416, 3484,  
 3640; IV: 4471, 4804, 4896, 4897; V: 6534;  
 VII-X: 12358, 12368, 12371  
 bibliography, IV: 4023  
 effects on:  
 blood electrolyte content, VII-X: 10742  
 liver metabolism, VII-X: 12369  
 metabolism of substances, VII-X: 12369, 12370  
 EMERGENCY RESCUE see Air evacuation; Disaster  
 rescue; Rescue  
 EMETIC CENTER see Vomiting center  
 EMMETROPIA  
 relation to depth perception, IV: 4841  
 statistics, IV: 4063  
 EMOTION STRESS see Mental stress  
 EMPHYSEMA see Tissue emphysema  
 EMPTY VISUAL FIELD, VI: 6982, 6988; VII-X: 9273  
 cause of visual illusions, VII-X: 11209  
 effects on:  
 color vision, VII-X: 9275  
 depth perception, VII-X: 12598  
 visual accommodation, IV: 4351; V: 5490, 5543;  
 VI: 7012  
 visual perception, V: 5490; VI: 6957; VII-X: 9233,  
 9312, 9535, 12607  
 visual searching, VII-X: 9309  
 ocular convergence, IV: 4404; VI: 6954  
 ENCAPSULATION  
 effects on acceleration tolerance, VII-X: 12231  
 ENDOCRINE DISEASES, VII-X: 11724  
 ENDOCRINE SYSTEM (see also Adrenal glands; Hypophy-  
 sisy; Pancreas; Pineal gland; Testis; Thymus; Thyroid)  
 effects of:  
 altitude, I: 345; III: 3411  
 altitude acclimatization, V: 5896  
 auditory stimuli, VII-X: 11034  
 carbon dioxide, VII-X: 12155  
 cold, V: 5971  
 noise, II: 1174, 1176; VI: 7523  
 sound, V: 6086  
 stress, V: 5771  
 ultrasonic vibrations, II: 1174; V: 6086  
 vibration, II: 1176  
 effects on biological rhythms, IV: 4852; VII-X: 8591  
 role in:  
 altitude tolerance, VII-X: 10325  
 cold acclimatization, VII-X: 10690, 10696, 10775,  
 10915  
 cold tolerance, V: 5983  
 hematopoiesis, VII-X: 10592  
 hyperoxia, IV: 4972  
 temperature regulation, I: 345; VII-X: 8969, 9003  
 ENDOCRINES see Hormones  
 ENDOGENOUS FORMATION see under Carbon monoxide  
 ENERGY see Electromagnetic energy  
 ENERGY EXPENDITURE see Metabolism  
 ENGINE NOISE (see also Jet engine noise)  
 analysis, II: 1455, 2040; III: 3254; IV: 4438  
 effects on:  
 adrenal glands, I: 449  
 hearing, I: 383, 641; IV: 4419, V: 5580  
 general physiological effects, III: 2519  
 reduction, II: 1390, 1553  
 ENGINE OILS  
 hazards, II: 1786; V: 6438  
 toxic effects, III: 2499; VI: 7943, 7946; VII-X: 12110  
 ENGINEERING see Human engineering. Also see Engi-  
 neering factors under Accidents  
 ENGINES see Turbojet engines  
 ENVIRONMENT see Adaptation to environment; Plane-  
 tary atmospheres; Space environment. Also see under  
 Venus  
 ENVIRONMENTAL FACTORS (see also under Acci-  
 dents; Visual searching; see also specific environ-  
 mental factors, e.g., Cold)  
 effects on biological rhythms, IV: 3747; VII-X: 8555  
 relation to heat tolerance, VII-X: 10804  
 ENVIRONMENTAL TEMPERATURE (see also Cold;  
 Heat; Thermal comfort. See also subdivision Temper-  
 ature; Temperature control)

- effects on:
- acceleration tolerance, VII-X: 10033
  - activity rhythm, III: 3462
  - adrenal glands, VII-X: 9999
  - altitude tolerance, I: 122
  - anoxia tolerance, I: 122; II: 1307, 1520; V: 5957; VII-X: 10546
  - auditory perception, VII-X: 9853
  - blood, V: 6036, 6049; VII-X: 10701
  - blood pressure, VII-X: 10895
  - body fluids, V: 5969
  - body temperature, VII-X: 10739, 10839
  - body temperature rhythm, VI: 7424
  - catecholamine excretion, VII-X: 9889
  - circulation, III: 2366; IV: 3815; VI: 7421
    - cutaneous circulation, IV: 4364; VI: 7426; VII-X: 10876
    - peripheral circulation, VII-X: 10878, 10895
  - digestive system function, V: 5992
  - electromyogram, VII-X: 10776
  - food intake, VI: 7388; VII-X: 10916
  - heat loss, VI: 6902
  - hibernation, V: 5288
  - kidney function, V: 6036
  - mental performance, VII-X: 9853
  - metabolism, V: 5988; VI: 7388, 7440, VII-X: 10672, 10849, 10925
    - oxygen consumption, III: 2434; VII-X: 10739
  - metabolism of substances, VII-X: 10394
    - lipids, IV: 4728, 5196
    - nitrogen, IV: 5197
  - microwave radiation tolerance, VII-X: 11311
  - nutritional requirements, IV: 4809
  - perspiration, II: 1563, 1564, 1565, 1766, 1767; IV: 4975; V: 5389
  - psychomotor performance, II: 1918, 1919, 1920; III: 3540; VI: 7454; VII-X: 9628
  - pulse rate, VII-X: 10739
  - respiration, VII-X: 10739
  - skin temperature, VII-X: 8954, 10878
  - skin temperature gradient, V: 6046
  - sleep, VI: 7424
  - tactile perception, VI: 7454
  - teeth, VII-X: 10751
  - temperature regulation, II: 1204; III: 2669
  - thyroid gland, VI: 7416, 7440; VII-X: 10886
  - urine composition, IV: 5197; VI: 7185; VII-X: 9930, 10350
  - vascular tonus, VII-X: 10895
  - vigilance, II: 1922
  - water intake, VII-X: 10916
  - work capacity, VII-X: 10924, 10925
  - general physiological effects, II: 1921; IV: 4819; V: 5688; VI: 7382; VII-X: 9984, 10803, 10888, 11071
    - reviews, VI: 7383
  - measurement, VII-X: 10768
  - relation to thermal comfort, III: 2313; VII-X: 10715
- ENZYME ACTIVITY**
- effects of:
- altitude, V: 5858; VII-X: 10381, 10391
  - altitude acclimatization, V: 5893; VI: 7309, 7368; VII-X: 10355, 10423
  - anoxia, V: 5858, 5936; VI: 7359, 7366; VII-X: 10482, 10511, 10548, 10629
  - blackout, VII-X: 10218
  - cold, V: 5981; VII-X: 10841, 10903, 10909
  - cold acclimatization, VII-X: 10671, 10743, 10860
  - cosmic rays, IV: 4123
  - explosive decompression, VII-X: 10375, 10376
  - hypothermia, VII-X: 8955, 8970, 8983, 8997, 9017
  - ionizing radiations, I: 338
  - physical work, VII-X: 11061
  - positive acceleration, VII-X: 10218
  - sound, VI: 7041; VII-X: 9442
  - starvation, V: 5936
  - stress, VI: 7173; VII-X: 9843
  - tumbling, VII-X: 10143
  - ultrasonic vibrations, VI: 7504
  - vibration, VII-X: 9843
- role in:
- cold tolerance, III: 2512
  - hyperoxia tolerance, III: 2800
- ENZYMES** see Carboxypeptidase; Catalase; Cholinesterase; Cocarboxylase; Diphosphopyridine nucleotide; Hyaluronidase; Lipase
- EOSINOPHILS** see Blood cells
- EPHEDRINE AND DERIVATIVES (Pervitin, Rhinalgan)**
- effects on:
- congestion of nasal passages, I: 566
  - night vision, III: 2836
  - use in altitude sickness, III: 3643
  - vasoconstrictor effects, I: 566
- EPIDEMIOLOGY** see Communicable diseases
- EPILEPSY**, II: 2281
- general psychological effects, III: 3667; IV: 5190
- relation to:
- acceleration tolerance, VII-X: 11947
  - flying ability, VII-X: 11970
- EPILEPTIC SEIZURES**
- caused by:
- helicopter flight, VII-X: 9827
  - intermittent light, III: 2328
- predisposition
- test methods, IV: 4568
- EPINEPHRINE AND RELATED DRUGS** (see also Adrenochrome; Norepinephrine)
- effects on:
- blood pressure, III: 2825; VI: 6922; VII-X: 10795
  - brain activity, V: 6369
  - circulation, V: 5998
  - heart function, V: 6369
  - oxygen consumption, II: 2239
  - positive acceleration tolerance, VII-X: 10160
  - pulse rate, III: 2591; V: 5446
  - respiration, II: 2239; III: 3084
  - visual perception, II: 1393
- excretion see Catecholamine excretion
- EPINEPHRINE CONTENT** see under Blood plasma; Brain; Organs
- EQUILIBRIUM**
- effects of:
- anxiety, II: 1609
  - fatigue, II: 1608, 1609
  - menstruation, II: 2038
  - training, VII-X: 9452
  - vibration, VII-X: 10952, 11039
- relation to labyrinth, II: 1665, 1876; III: 3339; VII-X: 12048
- role in piloting, IV: 4863
- role of:
- cerebellum, VII-X: 9493, 9652
  - proprioception, VII-X: 9453
- test methods, III: 3061
- tests, I: 333, 336; II: 1010
- EQUIPMENT** see under Ambulance planes; Artificial respiration; Bailout, Bailout at high altitude; Bailout at high speed; Bailout from space vehicles; Balloon cabins; Blood transfusion; Compensatory tracking; Decompression chambers; Ejection from aircraft; Emergency hospitals; Jet planes; Human centrifuges; Lunar stations; Man-made satellites; Pursuit tracking; Rescue on water; Space stations; Space vehicles; Survival; Survival in space; Survival in the Arctic; Survival on land; Survival on water. Also see Electronic equip-



- ment; Navigational equipment; Protective equipment;  
Subgravity equipment
- ERGOTAMINE AND RELATED DRUGS** (Gynergen)  
effects on anoxia tolerance, II: 1400
- ERROR** *see* Pilot error
- ERYTHROCYTES** *see* Blood cells; Hemoglobins
- ERYTHROCYTOLYSIS**, V: 5871
- ERYTHROPOIETIN** *see* Hemopoietin
- ESCAPE CAPSULES**, I: 53, 359, 622, 692; II: 928; IV: 4190, 4331, 5089, 5151; V: 5231, 6499, 6508, 6512, 6513, 6525; VI: 8030, 8031, 8037, 8040, 8066; VII-X: 12191, 12130, 12312, 12321, 12340, 12341, 12347, 12350, 12351, 12353, 12364  
hazards, V: 6526, 6527  
human engineering, VII-X: 12343
- ESCHERICHIA COLI**, II: 1538
- ESERINE** *see* Physostigmine
- ESOPHAGEAL PRESSURE**  
effects of posture, VII-X: 11448
- ESTRADIOL** *see* Sex hormones
- ESTRUS** *see* Reproductive system
- ETANAUTINE** *see* Dimenhydrinate
- ETHANOL** *see* Alcohol (Ethyl)
- ETHIONINE**  
effects on lipid metabolism, V: 6014
- ETHYL ALCOHOL** *see* Alcohol (Ethyl)
- EUROPE** *see under* Air transportation of patients
- EUSTACHIAN TUBE** *see* Middle ear
- EVACUATION** *see* Air evacuation
- EVIPAN** *see* Barbituric acid derivatives
- EVOLUTIONARY ASPECTS** *see under* Anoxia tolerance; Life
- EXAMINATION** *see under* Autonomic nervous system; Cardiovascular system; Eye; Heart; Labyrinth; Liver; Lung; Middle ear; Spinal column; Spleen. *Also see* Dental examination; Neuropsychiatric e.; Physical e.; Post-mortem e.
- EXCREMENTS** *see* Biological waste products; Feces
- EXCRETION** *see* Aldosterone excretion; Catecholamine e.; Chloride e.; Electrolyte e.; Micturition; Riboflavin e.; Skin e.; Steroid e.; Thiamine e.; Thyroxine e.; Uropepsin e.
- EXCRETORY RHYTHM**  
effects of:  
physical inactivity, VII-X: 8921  
postural change, VII-X: 11463  
pressure breathing, VII-X: 8921  
relation to:  
annual cycle, VII-X: 8581  
diurnal cycle, III: 3086; IV: 4643, 4655; V: 5269; VI: 6774
- EXERCISE** *see* Physical exercise (Static); Physical training; Physical work; Sport activities
- EXITS** *see* Emergency exits
- EXOBIOLGY** *see* Extraterrestrial life
- EXPECTANCY** *see* Life expectancy
- EXPEDITIONS** *see under* Mars (Planet); Venus (Planet).  
*Also see* Lunar expeditions; Planetary expeditions
- EXPIRED AIR** *see* Respiratory gases
- EXPLOSIONS** *see* Atomic explosions; Blast
- EXPLOSIVE DECOMPRESSION**, IV: 4206; VI: 7294; VII-X: 10443  
aftereffects, VI: 7260; VII-X: 10386  
analysis, II: 1513, V: 5862; VII-X: 10330  
animal experiments, VI: 7299, 7304; VII-X: 10278, 10343, 10380, 10429  
cause of:  
fainting, VII-X: 10358  
gas in body cavities, VI: 7267  
effects on:  
abdominal pressure, IV: 3774  
alveolar carbon dioxide tension, II: 2130  
alveolar oxygen tension, II: 2130; III: 2515  
blood, I: 529; II: 1653  
blood cells, VII-X: 10393  
blood coagulation, VII-X: 10378  
blood oxygen tension, VII-X: 10327  
blood pressure, II: 2023; IV: 3774, VI: 7316  
blood temperature, II: 2210  
blood vessels, VII-X: 10348  
body gases, II: 2218  
bone, VII-X: 10393  
brain, I: 418  
circulation, I: 214, 529, 868, 869; II: 1428, 1574, 1653, 2248  
digestive system, VI: 7251  
digestive system function, II: 2209  
electroencephalogram, II: 1419; V: 5942  
enzyme activity, VII-X: 10375, 10376  
eye, VI: 7321  
hearing, IV: 4299  
heart, II: 2208; V: 5892; VI: 7290  
heart function, I: 214; II: 1179; VI: 7306  
intracranial pressure, II: 2247  
intrapulmonary pressure, IV: 4571, 5122; V: 5904, 5905  
lung, I: 418, 623, 855, 856, 868, 869; II: 1432, 1656, 2208, 2249; III: 2597, 2891, 3340, 3592; IV: 4319; VI: 7266, 7268, 7269, 7299, 7319; VII-X: 10429  
lung temperature, II: 2210  
memory, III: 3135  
middle ear, III: 3065; VI: 5848  
pulmonary blood vessels, VII-X: 10469  
respiration, II: 1477; VI: 7316  
tissue pressure, I: 530; II: 1654  
general physiological effects, I: 260, 324, 503, 506, 530, 586; II: 1349, 1350, 1477, 1577, 1652, 1654, 1656, 2035, 2246; III: 2321, 2933, 2998, 3107, 3127, 3589, 3591; IV: 3781, 4362, 5110, V: 5820, 5855, 5906, 5942, 6319; VI: 7275; VII-X: 10278, 10298, 10299, 10303, 10339, 10343, 10386, 10477  
research, VII-X: 10460  
general psychological effects, III: 2321; V: 5855; VII-X: 10477  
hazards, VII-X: 10380  
pathological effects, IV: 4073, 4172, 4300; VI: 7304; VII-X: 10298, 10338, 10343, 10358  
physical factors, III: 3590; VII-X: 10380  
post-mortem findings, V: 5906; VI: 8084  
protection, I: 503, 506; II: 1107, 1754; IV: 3698, 3753; V: 5854; VII-X: 9869, 10278, 10312, 10327, 10387, 10429
- EXPLOSIVE DECOMPRESSION TOLERANCE**, II: 1577; V: 5904; VI: 7260, 7306; VII-X: 10299  
animal experiments, II: 1657, 2138, 2246; III: 3436; V: 5854; VI: 7266, 7269, 7270, 7278, 7279; VII-X: 10321, 10322, 10473  
effects of:  
altitude, VII-X: 10473, 10474  
altitude acclimatization, VII-X: 10473  
drugs, VII-X: 10321  
methyl siloxane, VII-X: 10389  
oxygen breathing, VII-X: 10331  
pneumothorax, VI: 7279  
posture, VII-X: 10322  
pressure suits, VI: 7299; VII-X: 10334
- EXPLOSIVE RECOMPRESSION**  
general physiological effects, VI: 7280, 7296; VII-X: 10369
- EXPLOSIVE RECOMPRESSION TOLERANCE**  
animal experiments, VII-X: 10369
- EXPOSURE SUITS** (*see also* Ventilated suits), II: 925, 1524; III: 2323, 2599, 2875; IV: 4206; V:

- 6479; VI: 7992; VII-X: 8474, 10913, 12242, 12255, 12280
- effects on:
- heat tolerance, VII-X: 12257
  - performance, VII-X: 12200
- evaluation, II: 958, 1525; V: 6482; VI: 8021; VII-X: 12299
- EXTERNAL EAR**
- pathology (*see also* Otitis externa), II: 2082
  - physical factors, VII-X: 11877, 11887
- EXTRACTS** *see* Plant extracts; Urine extract
- EXTRATERRESTRIAL LIFE**, VI: 6778; VII-X: 8293, 8390, 8670, 8671
- evidence from meteorites, VII-X: 8674, 8680
  - research methods, VII-X: 8722
  - terminology, VII-X: 8688, 8699, 8700, 8702, 8703, 8708, 8712, 8716, 8725
- EYE** (*see also* Aqueous humor, Cornea; Heterophoria; Intraocular pressure; Ocular convergence; Ocular rhythms; Pupil size; Pupillary reactions; Retina; Vision; Visual requirements; Vitreous humor)
- diseases *see* Eye diseases
  - dominance *see* Ocular dominance
  - effects of:
    - anoxia, II: 1661; VI: 7379
    - blast, III: 3386
    - electrical stimuli, II: 2079; III: 2531
    - explosive decompression, VI: 7321
    - ionizing radiations, II: 1638; VII-X: 11334
    - microwave radiations, V: 6143, 6163; VII-X: 11304
    - negative acceleration, VII-X: 10200
    - radiations, VII-X: 11289
      - reviews, VII-X: 11299
    - solar radiation, VII-X: 10412
    - ultrasonic vibrations, II: 1706
    - ultraviolet rays, VII-X: 10412
  - electrical potentials *see* Electro-oculogram; Electro-retinogram
  - examination (*see also* Vision, test methods), I: 137, 140, 218, 895; II: 2274; IV: 4188, 4430, 4767, 4979; V: 5510, 5535; VI: 7915; VII-X: 9323, 11576, 11894, 12064, 12088
  - movements *see* Eye movements
  - optical properties, VII-X: 9325
  - pathology *see* Eye diseases
  - physiology, III: 3414; VII-X: 9317
    - reviews, VII-X: 9341
- EYE DISEASES** (*see also* Glaucoma), IV: 4765; VI: 7854; VII-X: 11936, 11938
- caused by:
    - airplane flight, III: 3300
    - cosmic rays, VII-X: 10412, 11432
    - flight duty, VII-X: 11957
  - effects on air transportability, V: 6399
  - handbooks and treatises, II: 1924
  - relation to nasal passages pathology, III: 3378
- EYE MOVEMENTS** (*see also* Blinking; Eye tremor; Nystagmus), II: 1005; III: 2957; IV: 5029; VI: 6973; VII-X: 9259
- analysis, VII-X: 9186, 9241
  - caused by:
    - acceleration, III: 3057; VII-X: 10105, 10208
    - tilting, II: 1768, 1769; VII-X: 11465
  - during fixation, VI: 6981; VII-X: 9190, 9255, 9266, 9272, 9300, 9353
  - effects of:
    - light stimuli, II: 1444; VII-X: 9788
    - motion, V: 5790
    - noise, V: 6073
    - positive acceleration, VII-X: 10014
    - target motion, VI: 6951
  - effects on:
    - contact lenses, VII-X: 9209
    - visual acuity, VII-X: 9266
    - in depth perception, VII-X: 9415, 9539
    - in interpretation of visual displays, VI: 6990
    - in piloting, I: 325, 646, 647, 648; III: 2603, 2674; IV: 5135
    - in radar operation, I: 370; VII-X: 9357
    - in target tracking, V: 5524, 5790; VI: 6968
    - in visual perception, III: 3124; V: 5517; VII-X: 9271, 9274, 9277, 9300
      - of moving objects, VII-X: 9221, 9222, 9271, 9300
    - measurement, III: 2674, 3368; VII-X: 9218, 9254, 9284, 9320, 9340, 9523, 12049
    - relation to:
      - electro-oculogram, VII-X: 9210
      - proprioception, VII-X: 9226
      - retinal adaptation, IV: 3748
      - tactile perception, VII-X: 9618
    - role in:
      - depth perception, IV: 4529
      - size perception, III: 2957
    - time factors, III: 2674, 2795
- EYE PROTECTION**, IV: 4043
- EYE STIMULATION**
- effects on visual perception, V: 5498
- EYE TREMOR**, II: 1310
- relation to visual acuity, II: 1987; III: 3368; VI: 6984
- EYEGASSES** *see* Spectacles
- FABRICS** *see* Clothing
- FACE MASKS** *see* Masks
- FAINTING**
- cause of accidents, VI: 8112
  - caused by:
    - altitude, VII-X: 10434
    - anoxia, VI: 7328
    - explosive decompression, VII-X: 10358
    - hyperventilation, VII-X: 8734
    - physical work, IV: 4494; V: 6353
    - posture, V: 6353
    - pressure breathing, VII-X: 11872
    - voluntary apnea, VII-X: 8734
  - general physiological factors, II: 1679; III: 3334; IV: 4193, 4370, 5152; V: 6313; VI: 7806, 7818; VII-X: 8737, 10434, 11815, 11825, 11827, 11856, 11859, 12386
  - incidence
    - during piloting, V: 6313; VII-X: 11856
    - in aviators, VI: 7818; VII-X: 11841
  - predisposition
    - relation to electroencephalogram, VII-X: 11816
    - test methods, VII-X: 12056
  - psychological factors, II: 1679; III: 3334; VI: 7806; VII-X: 11815
  - relation to:
    - electroencephalogram, VII-X: 10434
    - flying ability, VI: 7724
    - muscular tonus, IV: 4494
    - pulse rate, VII-X: 8734
    - warning devices, VII-X: 11859
- FALL** *see* Free fall
- FALLING OBJECTS** *see* Aircraft debris; Meteoroids
- FAMILY HISTORIES**
- use in aviator selection, VII-X: 11613
- FASCINATION** (*see also* Autohypnosis), II: 1237, 1239; IV: 3973; VI: 8188
- cause of accidents, II: 2059
- FASTING** *see* Starvation
- FAT EMBOLISM**, VII-X: 11857
- caused by:
    - accidents, VII-X: 12395
    - altitude, VII-X: 10454
- FAT METABOLISM** *see* Lipid metabolism
- FATIGABILITY**
- test methods, V: 6126

- FATIGUE** (see also under Sweat glands. See also Auditory fatigue; Fatigability; Mental fatigue; Muscular fatigue; Visual fatigue)
- caused by:
- acceleration, VII-X: 10167
  - adrenocorticotrophic hormone, VI: 7606
  - airplane flight, I: 77, 889; III: 3043, 3139, 3156, 3668; IV: 4180; V: 6121, 6128
  - combat stress, V: 6125
  - flight duty, I: 77; II: 1800, 1843; III: 2691, 2720, 2987, 2988; IV: 4879; V: 6124, 6254; VI: 7592, 7597
  - heat, III: 2463
  - hot climates, III: 2708
  - jet plane flight, VII-X: 11157
  - noise, II: 1127; III: 2971
  - physical work, III: 3229, 3570; V: 6103
  - stress, II: 1691; VI: 7175
- congresses, meetings, and symposia, III: 2741
- effects of:
- drugs, II: 1915; IV: 3954, 4394; V: 6127; VII-X: 11159
    - amino acids, III: 3213
    - amphetamine, II: 1915; IV: 4323, 4757, 4758, 4760; V: 6365
    - androsterone, IV: 4879
    - Benadryl, IV: 4757
    - caffeine, IV: 4323
    - lipoic acid, VII-X: 11146
    - scopolamine, IV: 4757
- effects on:
- alertness, VII-X: 11173
  - altitude tolerance, VII-X: 10437
  - binocular vision, VI: 7598
  - blood, VI: 7591
  - blood cells, II: 1461
  - brightness discrimination, IV: 3767
  - cerebral circulation, IV: 4606
  - conditioned reflexes, VI: 7601
  - depth perception, IV: 4892
  - digestive system function, VI: 7597
  - electrocardiogram, IV: 4807
  - electroencephalogram, VII-X: 11144
  - equilibrium, II: 1608, 1609
  - finger tremor, II: 1991; III: 2695
  - flicker fusion frequency, II: 1609; III: 2558, 2834, 3394; IV: 4737, 5129; VII-X: 11144, 11148, 11169
  - flying ability, VI: 7604
  - mental performance, IV: 4416
  - metabolism, IV: 3789
  - neuromuscular performance, III: 3394; V: 6126; VI: 7605; VII-X: 11173
  - olfactory perception, II: 2254
  - performance, VII-X: 11152
  - psychomotor performance, VI: 7588, 7602; VII-X: 11170
  - pulse rate, III: 3515
  - pupillary reactions, III: 3121
  - reaction time, II: 1645; III: 3163; VI: 7588; VII-X: 11162
  - reasoning, II: 1760
  - speech intelligibility, II: 2232
  - steroid excretion, VII-X: 9809, 11155
  - steroid metabolism, VII-X: 9809
  - urine composition, VI: 7595; VII-X: 11141
  - uropepsin excretion, VI: 7597
  - vigilance, V: 6122; VI: 7592
  - visual accommodation, VII-X: 9319
  - visual afterimages, VI: 7594
  - visual perception, II: 1293, 1759, 1760; III: 3132
  - visual thresholds, VII-X: 11150
  - work capacity, III: 2431, 2432
  - general physiological effects, III: 3668; V: 6120, 6121
  - general physiological factors, II: 1130, 1341, 1638, 1797; III: 3192; V: 6128; VI: 7589
  - general psychological effects, III: 3139, 3668; V: 6121; VI: 7595
  - in airplane flight, VII-X: 11154
  - in fighter plane piloting, II: 1341, 1375
  - in helicopter flight, IV: 4021
  - in helicopter piloting, VII-X: 9850, 11159
  - in jet plane piloting, I: 628; II: 1075, 2262; IV: 5129; V: 5739
  - in mental performance, II: 1646
  - in physical work, II: 1282, 1883; III: 3570
  - in piloting, I: 33, 77, 326; III: 2329, 3229; IV: 4030; V: 6248; VI: 7590, 7599
  - in psychomotor performance, II: 1048, 1129, 2105; III: 2532, 2899, 2900, 3456; IV: 4323, 4757, 4758, 4760, 4953; VI: 7595, 7602
  - in radar operation, I: 370; II: 2005; III: 2466; VII-X: 11143
  - in radio operation, VII-X: 11156
  - in traffic control operation, III: 3460; VI: 8170
  - in vigilance, I: 352; II: 2255, 2256; III: 2532; IV: 3767; V: 5709; VII-X: 9790, 9799, 9806, 11147, 11150, 11162
  - legal aspects, VII-X: 11154
  - measurement, II: 1608, 1609, 1759, 1760; III: 2396, 2397, 2558, 2722, 2834, 3147, 3449, 3515; V: 6120, 6127; VI: 7598; VII-X: 11141, 11145, 11147, 11173
  - psychological factors, II: 1341, 1772; III: 3449
- relation to:
- anoxia, II: 1325
  - diurnal cycle, II: 1165; IV: 4180; VI: 7596
  - motion sickness, VI: 7813
  - muscular tonus, II: 2253
  - sleep deprivation, II: 1165, 1760
  - visual illusions, II: 1759
- research, II: 1903
- reviews, II: 1130
- role of:
- adrenal glands, II: 1690, 1797
  - hypophysis, II: 1797
  - test methods, V: 6125
- FATS** see Body fat; Lipids
- FEAR** see Anxiety
- FECES**
- disposal, IV: 4596
- FEDERAL AVIATION AGENCY (U. S.)**, VII-X: 8417
- FEEDBACK** see Information feedback; Misinformation f.; Speech f.
- FEEDING** see Flight feeding; Food; Food intake; Space flight feeding; Starvation. Also see Nutrition under Air crews; Space crews
- FEMALES** see Body measurements (Female); Instructors (Female); Sex factors
- FERTILITY**
- effects of:
    - altitude, I: 11
    - altitude acclimatization, IV: 4663
    - anoxia, V: 6326
    - carbon tetrachloride, I: 11
    - hypothermia, V: 5421
    - illumination, VII-X: 8566
    - relation to diurnal cycle, VII-X: 8566
- FETUS**
- physiology
    - analogy to space flight, VII-X: 10266
- FEVER** (see also Hyperthermia; Scarlet fever)
- effects on air transportability, IV: 4485
- FIELD OF VISION** see under Airplane flight; Cockpits; Prone position flight. Also see Empty visual field

- FIELDS** *see* Electric field; Empty visual f.; Gravitational f.; Magnetic f.; Visual f.
- FIGHTER PLANE PILOTING**  
fatigue, II: 1341, 1375
- FIGHTER PLANE PILOTS**  
training, VI: 7705
- FILLINGS** *see* Tooth fillings
- FILMS** *see* Motion pictures
- FILTERS** *see* Acoustical filters; Optical filters; Respirators
- FINGER TREMOR**  
effects of:  
  anxiety, II: 1991  
  fatigue, II: 1991; III: 2695  
  noise, IV: 4551  
  vibration, IV: 4551
- FINGERNAILS** *see* Nails
- FINGERPRINTING**, I: 279
- FIRE**  
  warning devices, VI: 8198, 8201
- FIRE EXTINGUISHING AGENTS** (*see also* Methyl bromide)  
  toxic effects, I: 263; IV: 4806; VI: 7946; VII-X: 12105
- FIRE PROTECTION**, I: 465; V: 6561; VI: 8129, 8130
- FIRE PROTECTIVE CLOTHING**, III: 2416
- FIRE RESCUE**, I: 696, 843; II: 1928; V: 6552  
  use of helicopters, VII-X: 12357
- FIRE RESISTANCE** *see under* Clothing
- FIRST AID** *see under* Blast injuries; Crash injuries
- FITNESS** *see* Neuropsychiatric fitness; Physical fitness
- FIXATION** *see* Eye movements, during fixation; Visual fixation
- FLACK TEST**, II: 2003, 2004; III: 3272; VII-X: 8823  
  effects on blood pressure, III: 3326; VII-X: 8769  
  general physiological effects, VII-X: 8883
- FLARES** *see* Solar flares
- FLASH** *see* Dazzle
- FLASHING LIGHTS** *see* Signal lights (Flashing)
- FLATUS**  
  effects of altitude, I: 797, 799
- FLAVONES**  
  effects on:  
    anoxia tolerance, V: 6362, 6366  
    circulation, V: 6366  
    metabolism, V: 6362
- FLICKER** *see* Intermittent light
- FLICKER FUSION FREQUENCY**, V: 5505; VI: 7002; VII-X: 9244, 9266, 9296  
  effects of:  
    alcohol, III: 3385; VI: 6998  
    anoxia, III: 2480, 3385; VII-X: 10613  
    anxiety, II: 1609; III: 3394  
    carbon dioxide, II: 2058; III: 3431  
    cold, III: 3537; IV: 5048  
    drugs, VII-X: 11169  
    fatigue, II: 1609; III: 2558, 2834, 3394; IV: 4737, 5129; VII-X: 11144, 11148, 11169  
    heat, IV: 4442  
    hyperventilation, II: 1615; VII-X: 9253  
    illumination, VII-X: 9251, 9321  
    mental stress, III: 2558  
    mental work, VII-X: 9252  
    noise, VI: 7512; VII-X: 11008  
    pupil size, VII-X: 9252  
    sleep deprivation, VII-X: 11151  
    stress, II: 1167; III: 2396, 2397  
    weather, VII-X: 9935  
  measurement, II: 1615; V: 5499; VII-X: 9269  
  physical factors, VI: 6987  
  relation to:  
    age, VII-X: 9321  
    brightness discrimination, VI: 7013  
    electroretinogram, VI: 6949  
    reviews, I: 781, 782  
    use in heart examination, III: 3002
- FLIERS** *see* Aviators
- FLIGHT** *see* Acrobatic flight; Airplane f.; Balloon f.; Dirigible f.; Flight duty; Helicopter f.; High speed f.; Instrument f.; Jet plane f.; Low altitude f.; Night flying; Prone position f.; Space f.; Supine position f.; Visual f.  
*Also see* Electrocardiography in flight
- FLIGHT DUTY** (*see also* Adjustment to flight duty; Airplane flight; Navigation; Piloting)  
  cause of:  
    anxiety, I: 21, 41, 767; II: 1435; III: 2719, 2763, 2781, 2782, 3092, 3593, 3595; IV: 5125; V: 5723, 5729, 5732; VI: 7152, 7764  
    deafness, III: 3053  
    ear pathology, VII-X: 11885  
    eye diseases, VII-X: 11885, 11957  
    fatigue, I: 77; II: 1800, 1843; III: 2329, 2691, 2720, 2987, 2988; IV: 4879; V: 6124, 6254; VI: 7592, 7597  
    mental diseases, VII-X: 9773  
    splenic displacement, VII-X: 9961  
  effects on:  
    blood cells, IV: 4072; V: 5754  
    blood glucose content, VII-X: 9986  
    blood lipid content, IV: 4218; VII-X: 8773  
    blood pressure, III: 3399  
    body weight, II: 1875; V: 5763  
    color vision, V: 5533  
    gastric secretion, VI: 7180  
    heart, III: 2839; IV: 4259  
    lung, VII-X: 11903  
    metabolism of substances, VII-X: 9812  
      carbohydrates, VII-X: 9813  
      lipids, VII-X: 9813  
      steroids, VII-X: 9813  
    urine composition, V: 5762; VI: 7180  
    uropepsin excretion, VI: 7171  
    visual accommodation, VI: 7181  
    visual afterimages, VII-X: 10000  
  general psychological effects, I: 41, 358, 676; IV: 4936; V: 5765, 6374  
  lack of adaptation  
    reviews, VII-X: 9698  
  relation to:  
    neuroses, I: 590; II: 1437; VII-X: 11715  
    peptic ulcer, III: 2639; VII-X: 11715  
    tumors, V: 6344
- FLIGHT FEEDING** (*see also* Airplanes, kitchen facilities; Liquid diets), I: 35, 69, 415, 484; III: 3312, 3584; IV: 3770, 4479, 4768, 4802; V: 6696, 6697, 6698, 6699, 6700, 6701; VI: 8261, 8262; VII-X: 12845, 12855, 12856, 12872, 12877, 12879  
  in high altitude flight, IV: 4366
- FLIGHT HELMETS** *see* Helmets
- FLIGHT MANEUVERS** (*see also* Acrobatic flight)  
  effects on:  
    electroencephalogram, VII-X: 9963  
    pilot performance, VII-X: 10136
- FLIGHT NURSES** (*see also* Space flight nurses)  
  duties, II: 970, 1709; IV: 4507; V: 6262  
  Great Britain, V: 6262  
  personality, II: 1709  
  training, I: 2, 25; III: 3685; V: 6212, 6232; VII-X: 11673
- FLIGHT SIMULATORS** (*see also* Airplane flight (simulated); Helicopter flight simulators; Jet plane flight simulators; Space flight simulators; Vertical accelerators; *see also* entries under Centrifuges), I: 706; II: 1409, 1568, 1802; III: 2357, 2528, 3298, 3562, 3651, 3654; IV: 3832, 3916, 4020, 4045, 4178, 4235, 4285, 4286, 4620, 4706, 4793, 4961,

- 5006; V: 5780, 6675, 6676, 6677, 6678, 6679, 6680, 6682, 6683; VI: 7682, 8228, 8237, 8238, 8239, 8241, 8246, 8247, 8248; VII-X: 9569, 9582, 10046, 11649, 11695, 12701, 12707, 12723, 12730, 12736, 12756, 12761
- elevation, IV: 5058; V: 6673, 6674, 6684
- human engineering, II: 1351; III: 3652; VII-X: 12766
- FLIGHT SURGEONS** (*see also* Space flight surgeons)
- Australia, I: 68
- certification, I: 18, 796; II: 929, 933, 1069; IV: 3790, 3941, 5101, 6234; VII-X: 11669
- duties, I: 30, 32, 186, 190, 299, 522, 524, 673, 787, 789; II: 1571, 1729; III: 2639, 3465, 3561, 3639; IV: 3878, 4161, 4258, 4511, 4667, 4711, 4782, 4783, 4991, 5022, 5168; V: 6259, 6260, 6261; VI: 6731, 7697, 7698, 7750, 7752, 7754; VII-X: 11732, 11734, 11738, 11739, 11742, 11746, 12093
- Korean campaign, II: 2124; IV: 4570
- Russia, VII-X: 11632, 11733
- role in air evacuation, III: 3639
- training, I: 6, 7, 13, 17, 58, 102, 635, 789, 796; II: 933, 2067, 2142; III: 3155, 3531; IV: 3760, 5020; V: 6229, 6234, 6243, 6548; VI: 7692, 7697, 7698, 7699, 8076; VII-X: 11652, 11669, 11739
- Brazil, IV: 3790
- FLIGHT TRAINERS** *see* Flight simulators; Piloting, training devices; Training planes
- FLUID DISTRIBUTION** *see* Body fluids, distribution
- FLUIDS** *see* Body fluids; Hydraulic fluid; Water exchange
- FLUORIDES** *see* Hydrogen fluoride
- FLYING ABILITY**
- effects of:
- diseases, VII-X: 11964
- drugs, VI: 7867
- fatigue, VI: 7604
- pneumothorax, VI: 7742; VII-X: 11972
- thoracic surgery, VII-X: 11698
- relation to:
- arterial hypertension, VII-X: 11971
- arteriosclerosis, VII-X: 11954
- blood lipid content, VII-X: 12067
- blood pressure, VII-X: 11960
- cardiovascular diseases, VII-X: 11787
- electroencephalogram, VII-X: 11578
- epilepsy, VII-X: 11970
- fainting, VI: 7724
- gastrointestinal diseases, VII-X: 11934
- heart pathology, VI: 7832, 7849; VII-X: 11937, 11956
- heterophoria, VI: 7737; VII-X: 9327
- neuropsychiatric fitness, VII-X: 11716
- nystagmus, VII-X: 11703, 11708
- optokinetic nystagmus, VI: 7729
- personality, IV: 4168; VI: 7713
- physical fitness, VII-X: 11716, 11724, 11743
- psychomotor performance, VII-X: 11664
- somatotype, VI: 7777
- vestibular disturbances, VII-X: 11914
- test methods, I: 328, 402, 516, 606, 891; VII-X: 11526, 11577, 11602
- FLYING DOCTOR SERVICE** *see* Royal Flying Doctor Service, Australia
- FLYING PERSONNEL** *see* Aviators
- FLYING SUITS** (*see also* Altitude suits; Anti-g s.; Exposure s.; Heated s.; Pressure s.; Space s.; Ventilated s.), VII-X: 12203
- FOCAL INFECTION**
- incidence in pilots, VI: 7844
- treatment, VI: 7844
- FOLIC ACID**
- effects on anoxia tolerance, III: 2647
- role in hematopoiesis, III: 2367
- FOLLOW-UP STUDIES** *see under* Auditory perception; Aviators; Aviators, occupational deafness; Blood pressure; Body weight; Hearing; Hearing, test methods; Heart, examination; Myopia; Physical examination; Pulse rate; Visual accommodation; Vital capacity
- FOOD** (*see also* Diet; Edible plants; Emergency rations; Flight feeding; Space feeding; Space flight feeding; *see also* individual food items: Alcohol; Ascorbic acid; Carbohydrates; Folic acid; Nicotinic acid; Proteins; Pyridoxine; Thiamine; Vitamin A; Vitamin B complex; Vitamin E; Vitamin supplements. *See also* use as food *under* Algae; Crustacea; Plants)
- acceptability, VII-X: 12863
- preservation, I: 484; V: 6696; VI: 8265
- FOOD CONTAINERS**, III: 2392; IV: 4366; VII-X: 12860, 12864, 12874, 12875, 12879
- FOOD DEPRIVATION** *see* Starvation
- FOOD INTAKE** (*see also* Sodium chloride intake)
- effects of:
- anoxia, VII-X: 10620
- cold, IV: 4203; VI: 7412, 7461, 7466, 7467, 7471; VII-X: 9130, 10771
- cold climates, VI: 7387, 7473
- environmental temperature, VI: 7388; VII-X: 10916
- heat, IV: 4203
- humidity, VII-X: 11473
- starvation, VII-X: 8620, 11481
- subgravity, VII-X: 12878
- thiamine, VI: 7467; VII-X: 9130
- effects on:
- blood bilirubin content, V: 5259
- blood cells, VI: 7548
- body temperature rhythm, VI: 6771
- circulation, VII-X: 11482, 11487, 11488
- electrocardiogram, IV: 4493; VII-X: 9126
- liver metabolism, VII-X: 9128
- metabolism, V: 5988; VI: 6856, 7548; VII-X: 8915, 8916
- thyroid gland, VII-X: 11078
- work capacity, VII-X: 9131, 9132
- relation to:
- diurnal cycle, VII-X: 8547, 8620
- physical work, VI: 7387, 7585
- FOOD POISONING**, IV: 4171
- FOOD REQUIREMENTS** *see* Nutritional requirements
- FOOT MEASUREMENTS**, I: 655
- FOOT PEDALS** *see* Pedals
- FOOTWEAR** *see* Boots
- FORM PERCEPTION** (Shape perception) (*see also* Pattern discrimination), I: 372, 572
- bibliography, I: 784
- effects of:
- illumination, II: 1218; III: 3031; V: 5633
- instrumental magnification, III: 3206
- training, V: 5613
- visual noise, V: 5621
- physical factors; IV: 3876; V: 5684
- relation to:
- age, VII-X: 11762
- brightness discrimination, II: 1364
- depth perception, V: 5619, 5647; VII-X: 9549
- night vision, II: 1826
- retinal adaptation, VI: 6971
- shape configuration, III: 2399
- size perception, VII-X: 9344
- spatial orientation, IV: 3801
- tests, II: 1423, 2110; V: 5622, 5641, 5643; VI: 7051, 7053, 7079
- thresholds, II: 1104; IV: 4641
- time factors, IV: 3876; V: 5633

- FOVEAL VISION, II: 1030, 1217; VII-X: 9285  
 relation to:  
   color vision, II: 1177, 1607, 1620, 1939  
   night vision, II: 2046  
   peripheral vision, VI: 7001; VII-X: 9301  
 tests, VI: 7007  
 thresholds, II: 1781; VII-X: 9230, 9343  
 time factors, II: 989, 2158
- FRANCE see under Air transportation of patients;  
 Aviation medicine; Maintenance personnel, training;  
 Medical personnel, Pilots, training; Space flight
- FREE FALL  
 general psychological effects, I: 351
- FRENCH EAST AFRICA see under Air evacuation
- FRENCH WEST AFRICA see under Aviation medicine
- FREON see Organic solvents
- FREQUENCY ESTIMATION  
 of light stimuli, VI: 6958  
 tests, VII-X: 9154, 9155, 9786, 9787
- FROSTBITE  
 bibliography, VII-X: 11886  
 prevention and treatment, I: 509; III: 3098; VII-X:  
 8986, 11942, 11967, 11968
- FUELS (see also Boranes; Gasoline; Jet fuels; Kerosene;  
 Rocket propellants)  
 effects on anoxia tolerance, VII-X: 12119  
 toxic effects, VI: 7946; VII-X: 12125
- FUMES  
 hazards, VII-X: 12106
- FUNCTION TESTS see under Cardiovascular system;  
 Heart; Labyrinth; Lung; Middle ear; Thyroid gland
- FUNGI  
 effects of space flight, VII-X: 8501
- FUR see Animal skin
- FURFURAL  
 toxic effects, VII-X: 12130
- GAGES see Pressure gauges
- GALVANIC SKIN RESPONSE  
 effects of:  
   acceleration, VII-X: 10054  
   altitude, VII-X: 10476  
   altitude acclimatization, VII-X: 10476  
   anxiety, VII-X: 9711  
   arousal, V: 5720  
   chlorpromazine, IV: 3979  
   mental stress, VII-X: 11183  
   piloting, VII-X: 9547  
   psychomotor performance, VII-X: 9609, 9610  
   rotation, V: 5788  
   sensory deprivation, VII-X: 9173  
   stress, VII-X: 9694  
   subgravity, VII-X: 9711  
   vestibular stimulation, IV: 3811, 4818  
   work-rest cycle, VII-X: 9610  
 in instrument flight, IV: 4391  
 measurement, VII-X: 12716  
 relation to:  
   adjustment to training, IV: 3845  
   alertness, VII-X: 9694, 9793  
   anxiety proneness, VII-X: 9761  
   motion sickness predisposition, VII-X: 11842  
   personality, VII-X: 9761  
   sleep, VII-X: 9793  
   stress tolerance, VII-X: 9761  
   tactile perception, VII-X: 9660  
   vigilance, VII-X: 9783; 9805  
   telemetry, VII-X: 12713  
   test methods, VII-X: 9173
- GALVANIC SKIN RESPONSE RHYTHM  
 relation to diurnal cycle, IV: 4890
- GAS BUBBLE FORMATION see under Blood; Body  
 fluids; Tissues
- GAS COMPOSITION see under Middle ear; Tissue  
 emphysema. Also see Respiratory gases, composition
- GAS EXCHANGE  
 through skin, VII-X: 8881
- GAS EXCHANGERS see Chemical gas exchangers;  
 Photosynthetic gas exchangers. Also see Use as gas  
 exchanger under Algae; Plants
- GAS IN BODY CAVITIES (see also Body gases;  
 Pneumothorax), III: 3267, 3657  
 caused by:  
   altitude, VI: 7267  
   explosive decompression, VI: 7267  
 effects on:  
   air transportability, I: 12, 215, 715  
   altitude tolerance, VII-X: 10406
- GASOLINE  
 toxic effects, I: 80, 730; III: 2377, 2427, 3183; V:  
 6437; VII-X: 12127
- GASTRIC SECRETION  
 effects of:  
   acceleration, VII-X: 10186, 10188  
   altitude, VII-X: 10324  
   Diamox, VII-X: 9122  
   flight duty, VI: 7180  
   heat, VII-X: 9948, 10855  
   hyperthermia, VII-X: 8989  
   hyperventilation, VII-X: 9122  
   hypothermia, V: 5419  
   mental stress, III: 3153  
   physical work, VII-X: 9948  
   restraint, VII-X: 11277  
 relation to blood carbon dioxide tension, VII-X: 10324
- GASTRIC ULCER see Peptic ulcer
- GASTRODUODENAL ULCER see Peptic ulcer
- GASTROINTESTINAL DISEASES  
 relation to flying ability, VII-X: 11934
- GASTROINTESTINAL PRESSURE  
 telemetry, VII-X: 12644
- GASTROINTESTINAL SYSTEM see Digestive system
- GAUGES see Pressure gauges
- GENERAL ADAPTATION SYNDROME, II: 1200, 1797;  
 III: 2720; VII-X: 9808
- GENETIC EFFECTS see Biological effects under Cos-  
 mic rays; Ionizing radiations; Nuclear radiations
- GENETIC FACTORS see Hereditary factors
- GENTLING  
 effects on altitude tolerance, VII-X: 10414
- GEOGRAPHY see entries under Arctic; Cold climates;  
 Hot climates; Mountains; Regional factors; Tropics.  
Also see under names of countries, e.g., United States
- GERMANY see under Aviation medicine; Psychomotor  
 performance, research
- GERONTOLOGY see Age
- GIARDIASIS, VI: 7834
- GLANDS see Adrenal glands; Hypophysis; Liver; Pan-  
 creas; Pineal gland; Salivary glands; Sweat glands;  
 Testis; Thymus; Thyroid gland
- GLARE see Dazzle
- GLASSES see Goggles and glasses
- GLAUCOMA (see also Eye diseases)  
 incidence in:  
   aviators, VII-X: 11895  
   personnel, VII-X: 11894
- GLIDER PILOTING, VII-X: 12540
- GLIDERS  
 human engineering, VII-X: 12226, 12540
- GLOVES, II: 978; V: 6452; VI: 8140  
 effects on:  
   manual dexterity, VII-X: 12232  
   neuromuscular performance, VII-X: 12246  
   psychomotor performance, V: 6455  
 evaluation, VII-X: 12289
- GLUCOSE (see also Glucose content under Blood; Blood  
 plasma)

- absorption in digestive system, I: 267; II: 1265  
 effects on:  
 anoxia tolerance, I: 821, 823; VII-X: 10636  
 respiration, II: 1433
- GLUCOSE METABOLISM (see also Carbohydrate metabolism)  
 effects of:  
 altitude acclimatization, VII-X: 10360  
 cold, VII-X: 10697, 10820, 10856  
 cold acclimatization, VI: 7393; VII-X: 10699, 10700, 10705, 10747  
 heat acclimatization, VI: 7393; VII-X: 10699, 10700  
 physical work, VII-X: 11115  
 role in temperature regulation, VII-X: 10697
- GLUCOSE TOLERANCE  
 effects of altitude acclimatization, V: 5875
- GLUTAMIC ACID  
 effects on:  
 anoxia tolerance, VII-X: 8918  
 metabolism, VII-X: 8918
- GLUTAMINE METABOLISM  
 effects of anoxia, II: 2097
- GLUTATHIONE CONTENT see under Blood
- GLUTATHIONE RHYTHM  
 relation to diurnal cycle, VII-X: 8611
- GLYCEMIA see Blood, glucose content
- GLYCINE  
 effects on:  
 carbohydrate metabolism, VII-X: 9129  
 cold tolerance, VII-X: 10638, 10650, 10843  
 heart function, VI: 6862; VII-X: 8942  
 metabolism, VI: 7869  
 temperature regulation, V: 5379; VI: 7869
- GLYCOGEN CONTENT see under Brain; Heart; Retina
- GLYCOGEN METABOLISM see Carbohydrate metabolism
- GLYCOSURIA  
 incidence in aviators, VII-X: 11910, 11950
- GLYCYRRHIZIN AND DERIVATIVES  
 effects on:  
 anoxia tolerance, IV: 4309  
 dark adaptation, IV: 4309  
 mental performance, IV: 4309
- GOGGLES AND GLASSES (see also Contact lenses; Dark adaptation glasses; Spectacles; Sunglasses; Visors), V: 5537  
 effects on visual perception, VII-X: 9201  
 evaluation, III: 2609, 2687
- GONDOLAS see Balloon cabins
- GRADIENTS see Pressure gradient under Ear; Temperature gradient under Skin. Also see Body temperature gradient
- GRAVITATION SHIELD, VII-X: 10189
- GRAVITATIONAL FIELD see under Earth; Moon
- GRAVITY see Acceleration; Artificial gravity; Center of gravity; Subgravity
- GRAVITY SIMULATION see Artificial gravity
- GREAT BRITAIN see under Air transportation of patients; Ambulance planes; Aviation medicine; Flight nurses
- GROUND CREWS (see also Maintenance personnel; Traffic control operators)  
 selection, III: 2650  
 Canada, V: 6199
- GROUPS, see Teams
- GROWTH (see also under Hair; Nails; Plants)  
 effects of continuous acceleration, VII-X: 10211
- GROWTH HORMONE see Somatropin
- G-SUITS see Anti-g suits
- GUIDANCE see Orientation and guidance under Medical personnel
- GUIDANCE SYSTEMS see Instrument guidance systems
- GUNNERS see Aerial gunners
- GUNNERY see Aerial gunnery
- GUNNERY CONTROLS  
 human engineering, II: 1486
- GUSTATORY PERCEPTION  
 effects of:  
 altitude, VI: 7135; VII-X: 10337  
 oxygen breathing, VI: 7135; VII-X: 10337  
 sleep deprivation, V: 6123
- GYNERGEN see Ergotamine
- HABITUATION see Auditory habituation; Vestibular h.  
Also see entries under Acclimatization; Adaptation; Adjustment
- HAIR  
 growth  
 effects of cold acclimatization, V: 6038
- HALLUCINATIONS see Sensory illusions
- HAND (see also Manual dexterity; Nails)  
 effects of:  
 noise, VII-X: 11033  
 space environment, VII-X: 10382  
 temperature  
 effects on neuromuscular performance, VII-X: 10682, 10728, 10729
- HAND CRANKS  
 human engineering, VI: 8218
- HAND INJURIES  
 caused by parachute jumping, IV: 4746
- HAND MEASUREMENTS; IV: 7774  
 relation to human engineering, VI: 8140
- HANDBOOKS AND TREATISES see under Aerospace medicine; Airplane flight, safety; Altitude, general physiological effects; Auditory perception; Aviation medicine; Aviators, training; Biological rhythms; Clothing; Cold, general physiological effects; Controls, human engineering; Decompression sickness; Ear, anatomy; Ear, physiology; Electromyography; Eye diseases; Hearing; Human engineering; Hygiene and sanitation; Hypothermia; Labyrinth, function tests; Labyrinth, physiology; Man-machine systems; Man-made satellites; Night flying; Noise, effects on hearing; Noise, general physiological effects; Noise, measurement; Noise, reduction; Occupational deafness; Occupational medicine; Otorhinolaryngology; Parachute jumping; Physical fitness; Pilots, training; Poisonous substances; Respiration; Survival; Survival training; Training; Vibration; Work areas, human engineering. Also see entries under Reviews
- HANDEDNESS  
 effects on psychomotor performance, III: 3474; IV: 4251; VII-X: 9592, 9645  
 relation to pilot performance, VII-X: 9592
- HANDLES see Door knobs
- HANDLING see Gentling; Remote handling; Remote handling equipment
- HARNESSES see Head harnesses, Parachute harnesses; Safety harnesses
- HAZARDOUS DUTY (see also entries under Occupational hazards), VI: 7751  
 volunteering, VII-X: 9713
- HAZARDS see under Hazardous objects or actions, e.g., Aircraft debris, hazards; Bailout, hazards. Also see items under Occupational hazards
- HEAD see Skull
- HEAD HARNESES, VI: 8017
- HEAD INJURIES (see also Dental injuries), VI: 7860, 8015  
 caused by impact, IV: 4290  
 effects on:  
 air transportability, I: 215; IV: 4220, 5077; V: 6386; VII-X: 12027  
 hearing, VI: 7841
- HEAD MEASUREMENTS, II: 1232; VII-X: 9147

## HEAD MOVEMENTS

- cause of Coriolis effect, VII-X: 9513
- relation to:
  - depth perception, II: 1068
  - motion sickness, I: 517, 518; II: 1629; III: 3338; IV: 4422, 4450; V: 6324, 6325
  - spatial orientation, II: 1404; IV: 4501; VII-X: 9513
  - visual perception of moving objects, VII-X: 9220

## HEADACHE, VII-X: 11969

## HEALING see Wound healing

## HEALTH see Neuropsychiatric fitness; Physical fitness

## HEARING (see also Auditory perception; Binaural hearing; Bone conduction; Cochlea, physiology; Deaf; Deafness; Electrotonic hearing; Monaural hearing), II: 1408

## effects of:

- aerotitis media, II: 1381; VII-X: 9419
- airplane flight, II: 1301, 1302, 1379; III: 3377; VII-X: 12061, 12079
- blast, I: 393; II: 1008
- drugs, VII-X: 12009
- explosive decompression, IV: 4299
- head injuries, VI: 7841
- noise, I: 350, 383, 428, 542, 641, 743, 917; II: 941, 1171, 1175, 1302, 1304, 1536, 1537, 1592, 1594, 1685, 1704, 1730, 1775, 1871, 2027, 2042, 2068, 2102, 2175; III: 2663, 2972, 3078, 3094, 3161, 3162, 3404, 3419, 3420; IV: 3745, 3861, 3866, 4080, 4140, 4311, 4376, 4708, 4864, 4874; V: 5546, 5556, 5562, 5582, 5590, 6069, 6074, 6308; VI: 7507, 7520, 7521; VII-X: 9378, 9382, 9396, 9398, 9445, 10973, 10974, 10984, 10986, 10995, 11005, 11012, 11016, 11017, 11021, 11031, 11032, 11042, 11921
- airplane noise, I: 28, 777; II: 1429, 1871; III: 2663, 3009, 3215, 3405; IV: 4496, 4717; VII-X: 9419, 10960, 11000, 11019
- engine noise, I: 383, 641; IV: 4419; V: 5580
- helicopter noise (interior), IV: 4718; VII-X: 12590
- jet engine noise, I: 62, 743; II: 1871, 1935, 2049; III: 3420; IV: 4787; VII-X: 9426, 9450, 10741
- jet plane noise, I: 28; II: 1301, 1721, 1871, 1935; III: 2309; IV: 4785, 4787; V: 5600; VI: 7517; VII-X: 9430, 7517
- motion pictures, V: 6077
- sound, III: 2364, 3404; IV: 3714
- ultrasonic vibrations, II: 1304; III: 2663; V: 5546
- vibration, VII-X: 11049
- follow-up studies, IV: 4022, 4230; VII-X: 9444
- handbooks and treatises, V: 5595
- relation to:
  - action potentials of auditory nerve, VI: 7015
  - age, II: 976, 2171; IV: 3861; V: 6074; VII-X: 9378, 9395; 9444, 9450, 11768, 11785, 12073
  - electrical potentials of cochlea, I: 917; II: 1118, 1284; IV: 3715; VI: 7015
  - speech intelligibility, VII-X: 9390
- sex factors, VII-X: 11785
- test methods, I: 575, 816, 837; II: 940, 1182, 1303, 1309, 1378, 1539, 1664, 1688, 1703, 1934, 2192, 2231; III: 2524, 2563, 3019, 3282, 3621, 3649; IV: 3780, 3866, 4022, 4230, 4361, 4498, 4590, 5161, 5170, 5201; V: 5574, 5582, 5602, 6092, 6414, 6415, 6417, 6420, 6423, VI: 7019, 7517, 7905, 7906, 7910, 7911, 7912, 7917, 7920, 7922, 7923, 7926, 7927, 7929, 7930; VII-X: 9380, 9389, 9423, 10960, 12050, 12060, 12062, 12073, 12074, 12075, 12079, 12086, 12095, 12096

- follow-up studies, VII-X: 12061
- reliability, VII-X: 11976
- use of conditioned reflexes, II: 1664; III: 2862; VII-X: 12072

## HEARING CONSERVATION see Deafness, prevention

## HEARING LOSS see Deaf; Deafness

## HEARING REQUIREMENTS see under Aviators; Pilots

## HEART (see also Coronary circulation; Myocardial tissue)

## abnormalities

- relation to altitude, I: 291; III: 2369; IV: 4614; V: 5864; VII-X: 10287, 10353

## effects of:

- adenosine triphosphate, VI: 7342
- altitude, III: 3447; VI: 7318; VII-X: 10280, 10447
- altitude acclimatization, I: 291; III: 3400; IV: 3804, 4881, 5053; VI: 7317; VII-X: 10281
- anoxia, III: 2937, 3011; IV: 5108; VII-X: 10512, 10561
- continuous anoxia, VI: 7342
- explosive decompression, II: 2208; V: 5892; VI: 7290
- flight duty, III: 2839; IV: 4259
- heat, VII-X: 10447
- hypothermia, V: 5415, 5464
- physical work, V: 6099; VII-X: 11089
- sport activities, VI: 7532, 7568
- examination (see also Heart, function tests), I: 683; II: 1210, 1944, 1945, 1946; III: 3325, 3331; V: 6419; VI: 7924; VII-X: 12051, 12052, 12057, 12058
- congresses, meetings, and symposia, VII-X: 8385
- follow-up studies, III: 3275
- use of:
  - ballistocardiogram, VII-X: 12065
  - electrocardiogram, VII-X: 12090
  - flicker fusion frequency, III: 3002
  - plethysmogram, VII-X: 12065
- function tests (see also Step test), III: 3324; IV: 4288; V: 6446; VII-X: 12044
- glycogen content
  - effects of anoxia, VII-X: 10576
- metabolism
  - effects of:
    - altitude, V: 5860
    - altitude acclimatization, VII-X: 10450
    - anoxia, I: 565; II: 1261, 1262, 1266, 1267; III: 2362, 2508, 2866, 3525; V: 5917, 5923; VII-X: 10528, 10536, 10578
    - blood carbon dioxide tension, VII-X: 8833
    - carbon dioxide, II: 1266
    - drugs, III: 3525
    - hyperthermia, VII-X: 9094
    - hypothermia, III: 3525; IV: 4002; V: 5375, 5398, 5399, 5433, 5460, 5473; VI: 6881, VII-X: 8934, 8952, 8958, 8982, 9018, 9058, 9074, 9094
    - physical work, VII-X: 11075, 11089
    - somatropin, V: 5399
- pathology (see also Cardiovascular diseases; Cardiovascular injuries), VII-X: 11713, 11926, 11962, 12053, 12057
- cause of accidents, I: 9, 248; VII-X: 12388
- relation to:
  - flying ability, VI: 7832, 7489; VII-X: 11937, 11956
  - plasma lipid content, VI: 7656

## HEART FUNCTION (see also Ballistocardiogram; Electrocardiogram; Oculocardiac reflex; Phonocardiogram; Pneumotachocardiogram; Vectorcardiogram)

## abnormalities, VII-X: 12058

## effects of:

- abdominal pressure, II: 1512



- altitude, II: 1944; VII-X: 11447  
 alveolar carbon dioxide tension, II: 1154  
 anoxia, II: 1717; III: 3027, 3524, 3526; IV: 3750, 4444; V: 5952; VII-X: 10483, 10522, 10523, 10625  
 blast, VI: 7486  
 blood carbon dioxide tension, IV: 4329  
 blood potassium content, IV: 3893  
 body temperature, V: 5279  
 carbon dioxide, IV: 3893; VII-X: 9095  
 cold acclimatization, VII-X: 8980  
 conditioned reflexes, VI: 7134; VII-X: 9654  
 Dacorene, VI: 4329  
 drugs, VII-X: 8936  
 electrolyte distribution, V: 5441  
 epinephrine, V: 6369  
 explosive decompression, I: 214; II: 1179; VI: 7306  
 glycine, VI: 6862; VII-X: 8942  
 hypercapnia, III: 3526  
 hyperoxia, IV: 3750  
 hypocapnia, II: 1717  
 hypothermia, III: 2475, 2982; IV: 4005, 4329, 4709; V: 5391, 5418, 5424, 5425, 5441, 5455; VI: 6862, 6875, 6924; VII-X: 8936, 8937, 8939, 8942, 8944, 8979, 8980, 8981, 9008, 9056, 9059, 9095  
 intrapulmonary pressure, VI: 6834  
 physical work, II: 1945; IV: 5053; V: 6099, 6106; VI: 7557; VII-X: 8782, 11126  
 positive acceleration, VII-X: 10019, 10123, 10124, 10158  
 posture, VII-X: 11447  
 pressure breathing, II: 1657; VI: 6837; VII-X: 8787, 11872  
 pressure suits, VII-X: 8787  
 respiratory maneuvers, VII-X: 8860  
 rotation, II: 1347  
 tilting, VII-X: 10119  
 tobacco, VI: 7977  
 in hibernators, V: 5279  
 measurement, VII-X: 8782  
 role of:  
   carotid sinus reflexes, V: 5952  
   spleen, VII-X: 10198  
 test methods *see* Heart, function tests  
**HEART RATE** *see* Pulse rate  
**HEAT** (*see also* Hot climates; Hot water immersion; Pre-warming; Thermal radiation; Warm air breathing; Warm water immersion)  
 acclimatization *see* Heat acclimatization  
 cause of fatigue, III: 2463  
 effects on:  
   adrenal glands, III: 2568, 3193; IV: 5041  
   aldosterone excretion, IV: 3985  
   arm tremor, V: 6032  
   ascorbic acid content of adrenal glands, VII-X: 10810  
   ballistocardiogram, III: 3542  
   blood, I: 613; III: 2568, 2750, 2751, 3413; IV: 3834; VI: 7410; VII-X: 10722  
   blood carbon dioxide tension, VI: 7402  
   blood cells, III: 2748, 3093; IV: 4302; VI: 6918, 7459  
   blood coagulation, VI: 7398  
   blood glucose content, VI: 7420  
   blood oxygen tension, V: 6037; VI: 7402; VII-X: 10865  
   blood plasma, III: 2989  
   blood pressure, IV: 3888  
   blood steroid content, VI: 7178  
   blood volume, III: 3093  
   body fat, I: 670  
   body temperature, III: 2892, 3675; IV: 3856; V: 6016; VII-X: 9069, 10668  
   body temperature rhythm, VII-X: 8608  
   brain activity, III: 3502  
   carbon dioxide tolerance, VI: 7968  
   circulation, IV: 3898; VI: 7451, 7452; VII-X: 10858, 10897  
     cutaneous circulation, V: 5984, 6037; VII-X: 10767  
     peripheral circulation, V: 6059  
   conditioned reflexes, III: 3502; VII-X: 10880  
   dark adaptation, VII-X: 10664  
   digestive system function, VII-X: 10864  
   electrocardiogram, III: 3542  
   flicker fusion frequency, IV: 4442  
   food intake, IV: 4203  
   gastric secretion, VII-X: 9948, 10855  
   heart, VII-X: 10447  
   heat exchange, VII-X: 10704  
   hypophysis, IV: 5041  
   immunity to infectious diseases, IV: 4302  
   life expectancy, VII-X: 9839  
   mental performance, II: 1047; VI: 7390; VII-X: 10681  
   metabolism, III: 2893; V: 6051; VII-X: 10891, 10894  
   metabolism of organs:  
     tissues, IV: 4410; VII-X: 10777  
   metabolism of substances:  
     ascorbic acid, VII-X: 10894  
     chlorides, III: 2911, 3622  
     ketones, VII-X: 10670  
     phosphorus, IV: 4439; V: 6039  
     proteins, VII-X: 8919  
   muscular fatigue, VII-X: 11149  
   nutritional requirements, VII-X: 10685  
   organ weight, VII-X: 9881  
   ovulation, VII-X: 8560  
   pancreatic secretion, VII-X: 9948, 10855  
   performance, V: 6033  
   perspiration, III: 2892, 3675; IV: 5052; V: 6055; VII-X: 10714, 10766, 10858  
   positive acceleration tolerance, VII-X: 10035  
   psychomotor performance, VII-X: 9627, 10845  
   pulse rate, II: 1520; III: 3675; VII-X: 9880, 10668  
   pulse rate rhythm, VII-X: 8607  
   reaction time, IV: 4179  
   respiration, IV: 4148; VI: 7384; VII-X: 10865  
   skin, I: 613  
   spleen, III: 2561  
   steroid excretion, IV: 3985; VII-X: 10891, 11116  
   stress tolerance, VI: 7475  
   sweat composition, III: 2343, 2892, 2911; IV: 4468  
   teeth, VII-X: 9998  
   temperature regulation, VII-X: 10664, 10714  
   testis, VII-X: 10809  
   tumbling tolerance, II: 1889  
   urine composition, III: 2569, 2906, 2989; IV: 4440; VII-X: 10351, 10805  
   vigilance, VII-X: 9796, 10674  
   water exchange, III: 2341, 3330; IV: 4440; VII-X: 10785, 10863  
   water exchange rhythm, VII-X: 8606  
   work capacity, III: 3220, 3256; VI: 7448; VII-X: 10657  
   X-ray tolerance, I: 686; IV: 4077  
 general physiological effects, I: 613, 670, 686; II: 1170; III: 2539, 2640, 2846, 2871, 3379; IV: 4487; VII-X: 10674, 10719, 10735, 10756, 10657, 10770, 10772, 10908  
   time factors, VII-X: 10689  
 pathological effects (*see also* Burns), IV: 4324  
 protection, II: 1170; III: 2323, 2341; V: 6487; VI: 7433; VII-X: 10654, 10669, 10770, 10830, 10911, 10912, 11865, 12194, 12211, 12465

- tolerance *see* Heat tolerance
- HEAT ACCLIMATIZATION**, III: 3673, 3674; VII-X: 10770, 10803, 10807, 10888
- effects of hot water immersion, VII-X: 10666
- effects on:
- anoxia tolerance, IV: 4350
  - blood, VII-X: 11065
  - blood plasma proteins, VII-X: 10702
  - blood vessels, V: 6002
  - blood volume, VII-X: 9845
  - body temperature, VII-X: 10733
  - cold tolerance, VII-X: 10716
  - heat tolerance, III: 2710; V: 6001; VII-X: 10668, 10887
  - metabolism, IV: 3976; VI: 6858
    - oxygen consumption, III: 2457
  - metabolism of organs
    - salivary glands, IV: 3986; VI: 7407
    - thyroid gland, IV: 3986; VI: 7407
  - metabolism of substances
    - glucose, VI: 7393; VII-X: 10699, 10700
    - iodine, IV: 3986; VI: 7407
    - lipids, VII-X: 10397
    - oxygen, VII-X: 9846
  - peripheral circulation, VII-X: 10718, 10918
  - perspiration, VII-X: 10717
  - psychomotor performance, VII-X: 10846
  - salivary gland function, VI: 7458; VII-X: 10882
  - sweat composition, III: 2343
  - temperature regulation, III: 2457
  - urine composition, VII-X: 10395, 10823, 10824
- general physiological effects, III: 2923, 3217, 3516, 3675; IV: 3792; V: 6001; VII-X: 10794, 10799, 10809, 10861
- relation to:
- cold acclimatization, V: 5990; VII-X: 9007, 10693
  - thermal comfort, VII-X: 10732
- role of:
- adrenal glands, III: 2917
  - brain activity, VII-X: 10732
- time factors, VI: 7477; VII-X: 10878
- HEAT EXCHANGE**
- analysis, VII-X: 9026
  - effects of heat, VII-X: 10704
  - general physiological factors, VII-X: 10652
  - measurement, VII-X: 9098
  - relation to heat tolerance, VII-X: 9012
- role of:
- respiration, VII-X: 8906
  - skin, VII-X: 9099
- HEAT LOSS**, I: 483
- effects of:
- clothing, V: 6463; VII-X: 12298
  - cold, VI: 7385
  - environmental temperature, VI: 6902
  - humidity, VII-X: 10784
  - physical work, VI: 6902
  - posture, V: 5368; VI: 7637
  - wet clothing, VII-X: 12234
- in cold water immersion, VII-X: 10707, 10755
- in hypothermia, V: 5468
- machine analogs, VI: 6861
- measurement, VI: 6883; VII-X: 9013, 9098
- physical factors, VII-X: 8927
- relation to:
- circulation, VI: 6806, 6861
  - cutaneous circulation, I: 483; IV: 4869; VI: 6876
  - surface area, II: 1504
- HEAT RADIATION** *see* Thermal radiation
- HEAT REGULATION** *see* Temperature control
- HEAT TOLERANCE**, I: 825; II: 1170; III: 2501, 2502, 2624; VI: 7433, 7462; VII-X: 9012, 10681, 10704, 10808, 10911, 12465
- animal experiments, V: 6020
- effects of:
- atropine, V: 5976
  - clothing, VI: 7462, 7468; VII-X: 10851, 10907, 10912, 10913
  - cold acclimatization, VII-X: 10716
  - diet, VII-X: 10655
  - drugs, VI: 7442
  - exposure suits, VII-X: 12257
  - heat acclimatization, III: 2710; V: 6001; VII-X: 10668, 10887
  - humidity, VII-X: 10784
  - hyperthermia, III: 3676
  - precooling, VII-X: 8975, 10904, 10905, 10907
  - restraint, VII-X: 10722, 11272
  - sodium chloride, IV: 4487
  - somatropin, VII-X: 9879
  - underwear, VII-X: 10920, 12282
  - ventilated suits, VII-X: 10756, 12257
  - vitamin B complex, III: 3014
  - water intake, IV: 4487; VI: 8063; VII-X: 10734
- general physiological factors, VII-X: 10652, 10657, 10719
- regional factors, VII-X: 10923
- relation to:
- age, V: 6296; VII-X: 10734
  - body temperature, VII-X: 10688
  - environmental factors, VII-X: 10804
  - heat exchange, VII-X: 9012
  - metabolism, III: 2732
  - perspiration, V: 6055; VII-X: 10667, 10792
- role of:
- hypophysis, VII-X: 10792
  - thyroid gland, III: 2435
- test methods, VII-X: 10689, 10735, 10736
- time factors, VII-X: 10688
- HEATED SUITS**
- thermal properties, VII-X: 12267
- HEATING** *see* entries under Temperature Control
- HELICOPTER ACCIDENTS**
- analysis, VII-X: 9851
- HELICOPTER CABIN ATMOSPHERES**, IV: 4398
- contamination, VII-X: 9827
- HELICOPTER COCKPITS**
- human engineering, VI: 8222; VII-X: 12517
- HELICOPTER CONTROLS**
- human engineering, VI: 8235; VII-X: 12517, 12613
- HELICOPTER FLIGHT**
- cause of:
- carbon monoxide poisoning, VII-X: 9936
  - epileptic seizures, VII-X: 9827
  - hyperventilation, VII-X: 9936
- effects on psychomotor performance, VI: 7494
- fatigue, IV: 4021
- medical problems, II: 1324; VII-X: 9936, 10983
- safety, VII-X: 12398
- HELICOPTER FLIGHT (SIMULATED)**
- cause of motion sickness, VII-X: 11850
- HELICOPTER FLIGHT SIMULATORS**, IV: 4182, 4332, 4357, 4367; VI: 8245
- evaluation, VI: 8242
- HELICOPTER NOISE**
- analysis, IV: 4850; VII-X: 12608
  - reduction, IV: 4850, 4957; V: 6484
- HELICOPTER NOISE (INTERIOR)**, IV: 4850
- effects on hearing, IV: 4718; VII-X: 12590
  - reduction, VII-X: 9827, 12590
- HELICOPTER PILOT CANDIDATES**
- prediction of success, V: 6211; VI: 7672
  - selection, V: 6211; VI: 7672
- HELICOPTER PILOTING**
- disturbances of spatial orientation, VII-X: 9490, 9827, 12389

- fatigue, VII-X: 9850, 11159  
 general physiological effects, VII-X: 9850
- HELICOPTER PILOTS**  
 rating, VII-X: 11551  
 selection, V: 6186; VII-X: 11551  
 training, II: 1324; IV: 4332, 4333, 4357
- HELICOPTERS** (see also Ambulance helicopters;  
 Parachute jumping from helicopters)  
 use in:  
 air evacuation, I: 8, 16, 72, 302, 490, 528, 541, 580,  
 626, 897; II: 943, 1736, 2065; III: 2308, 2311,  
 2389, 2953, 3081, 3247, 3520; IV: 4699; V:  
 6390, 6396, 6397, 6398, 6404, 6411; VI: 7889,  
 7890, 7891; VII-X: 12022, 12031, 12032,  
 12033  
 air transportation of patients, III: 3313; VII-X:  
 12019  
 disaster rescue, V: 6536  
 fire rescue, VII-X: 12357
- HELMETS** (see also Oxygen helmets; Pressure helmets;  
 Visors), I: 523; II: 1232, 1630, 1989; III: 2307, 3354;  
 IV: 4648; 5018; VI: 7994, 7995, 7999, 8010,  
 8116; VII-X: 8422, 12215, 12287  
 acoustical properties, I: 893; II: 2174; III: 2590, 2664;  
 VII-X: 12224, 12301  
 evaluation, II: 1016; III: 2686, 2687; V: 6457, 6458;  
 VI: 7997, 8015; VII-X: 12205
- HEMATOPOIESIS** (see also Leukemia)  
 effects of:  
 altitude, II: 999; III: 2367, 2473; VII-X: 10323,  
 10392, 10422  
 anoxia, III: 2814; VI: 7348, 7371; VII-X: 9820,  
 10580, 10612  
 blood loss, II: 1904, 1905  
 carbon tetrachloride, VI: 7951  
 cobalt compounds, VI: 7371; VII-X: 10182  
 conditioned reflexes, II: 2215  
 hypocapnia, VII-X: 9820  
 nuclear radiations, VII-X: 11384  
 urine extract, VII-X: 10438  
 relation to  
 age, VI: 7348  
 iron metabolism, VII-X: 10421, 11331  
 vitamin E, V: 5840  
 role of:  
 adrenal glands, IV: 4801; VII-X: 10489  
 autonomic nervous system, II: 1904, 1905;  
 VII-X: 10489  
 chemoreceptors, IV: 5050  
 endocrine system, VII-X: 10592  
 folic acid, III: 2367
- HEMOGLOBIN CONTENT** see under Blood
- HEMOGLOBINS** (see also Blood, carboxyhemoglobin  
 content; Myoglobin)  
 composition  
 effects of:  
 altitude acclimatization, III: 3581; VI: 7271;  
 VII-X: 10419  
 carbon monoxide acclimatization, III: 3581  
 relation to:  
 age, III: 3580  
 anoxia tolerance, IV: 4308  
 sickle cell anemia, IV: 4308; VII-X: 11932  
 effects of:  
 anoxia, VII-X: 10547, 10558  
 cold, VII-X: 10881  
 cold acclimatization, VII-X: 10881  
 nutrition, IV: 4012; VII-X: 8783
- HEMOLYSIN** see Antibodies
- HEMOPOIETIN CONTENT** see under Blood; Blood  
 plasma
- HEMORRHAGE** see Blood loss
- HEMORRHOIDS**, I: 638
- HEPARIN**  
 effects on blood plasma, II: 1820, 1992
- HEREDITARY FACTORS** see under Blood, lipid content
- HERNIA** see Diaphragmatic hernia; Inguinal hernia
- HESPERIDIN**  
 effects on blood cells, IV: 5103
- HETEROPHORIA** (see also Diplopia; Ocular conver-  
 gence), I: 136, 137, 140; IV: 3818, 4068, 4700  
 effects of:  
 altitude, I: 640  
 drugs, IV: 3836  
 oxygen breathing, IV: 3836  
 effects on depth perception, IV: 4064, 4315; V: 5644;  
 VI: 6963  
 general physiological factors, II: 1316  
 incidence, II: 1660  
 in aviators, VII-X: 9327  
 relation to:  
 diplopia, III: 2464  
 flying ability, VI: 7737; VII-X: 9327  
 test methods, I: 139, 1333; III: 3036; VII-X: 9308,  
 11571  
 treatment, II: 1660
- HEXAMETHONIUM**  
 effects on:  
 cold tolerance, V: 6360  
 electrocardiogram, V: 6355  
 oxygen consumption, V: 6360
- HIBERNATION** (see also Hypothermia)  
 blood volume, VII-X: 8636  
 body temperature, V: 5282; VII-X: 8647  
 body temperature rhythm, VII-X: 8653  
 effects of:  
 environmental temperature, V: 5288  
 illumination, VII-X: 8639  
 effects on:  
 blood, V: 5284  
 blood cells, V: 5275; VII-X: 8635  
 blood electrolyte content, IV: 4853  
 blood phosphate content, VII-X: 8634  
 blood plasma, V: 5289  
 blood plasma proteins, VII-X: 8654  
 blood plasma volume, VII-X: 8654  
 carbohydrate metabolism, V: 5290  
 circulation, VII-X: 8647  
 electrocardiogram, V: 5275  
 histology of digestive system, VII-X: 8650  
 hypophysis, VII-X: 8643  
 metabolism, V: 5286; VII-X: 8656  
 phosphorus metabolism, V: 5290  
 salivary glands, VII-X: 8652  
 teeth, VII-X: 8651  
 general physiological effects, V: 5280; VII-X: 8648  
 induction  
 role of:  
 cold, VII-X: 8646  
 starvation, VII-X: 8646  
 relation to activity rhythm, VII-X: 8638  
 reviews, III: 3439; IV: 4575; V: 5281  
 role of:  
 adrenal glands, III: 2646; VII-X: 8645; 8655, 8657,  
 10921  
 body fat, V: 5291, 5292  
 liver, VII-X: 8642  
 pancreas, V: 5276  
 thyroid gland, III: 2646
- HIBERNATORS**  
 heart function, V: 5279  
 oxygen consumption  
 physiology, III: 2645; V: 5277, 5278, 5280, 5283,  
 5291, 5292; VI: 6894; VII-X: 8637; 8640,  
 8641, 8649  
 temperature regulation, IV: 4400; V: 5285

- HIGH ALTITUDE BAILOUT** *see* Bailout, at high altitude; Ejection from aircraft, at high altitude
- HIGH ALTITUDE FLIGHT** (*see also* Bailout at high altitude; Balloon flight; Break-off effect; Space flight), III: 3090
- effects on:
- instrument panel visibility, III: 2680
  - retinal blood vessels, VII-X: 10413
  - spleen, III: 2611, 2670, 3228
  - visual perception, II: 1188, 1189; IV: 4582; V: 5865, 5907; VII-X: 9323
- flight feeding**, IV: 4366
- liquid diets, IV: 4366; VI: 8263; VII-X: 12855
- general psychological effects**, VI: 7289; VII-X: 11205
- medical problems**, I: 118, 120, 138, 173, 202, 203, 221, 245, 281, 297, 357, 438, 446, 586, 632, 724, 770, 792, 813; II: 938, 955, 972, 1072, 1073, 1198, 1199, 1230, 1308, 1373, 1514, 2022, 2136, 2160; III: 2443, 2864, 2865, 3017, 3181, 3267, 3459, 3513, IV: 3753, 3923, 4149, 4508, 4513, 4585, 5032; V: 6593, 6692; VI: 6709, 6721, 7187, 7189, 7790, 7802; VII-X: 8487, 9821, 9828, 9837, 9869, 9902, 9941, 9952, 9959, 9979, 9997, 10412, 11630, 11633, 12172, 12176
- oxygen requirements**, VI: 7281; VII-X: 9834; 12197, 12244
- research methods**, III: 3234
- retinal adaptation**, I: 245
- safety**, II: 927, 1627; VII-X: 12103, 12166
- spatial orientation**, I: 220
- training methods**, II: 2270; VII-X: 11666
- use of pressure suits**, VI: 7714
- visual problems**, III: 3311; V: 5537, 5866; VI: 7322; VII-X: 9237, 9324, 12563, 12575, 12591
- HIGH-INTENSITY NOISE** *see* Noise (High-intensity)
- HIGH PRESSURE** *see* Overpressure
- HIGH SPEED** *see* Ejection from aircraft, at high speed
- HIGH SPEED FLIGHT** (*see also* Ejection from aircraft, at high speed; Supersonic flight), V: 6678
- cause of:
- alkalosis, VII-X: 9877
  - hyperventilation, VII-X: 9877
  - sensory illusions, VII-X: 9265
- depth perception**, VII-X: 9229
- effects on:
- adrenal glands, VII-X: 9877
  - cabin temperature, III: 2960
  - cardiovascular system, III: 3521
  - visual perception, II: 1188, 1189; III: 2795; VII-X: 9265, 9323
- medical problems**, II: 972, 1072, 1073, 1230, 1308, 1373, 1514, 1997, 2136, 2279; III: 2865, 3229; IV: 4513, 4585, 5032; VI: 6721, 7189, 7710, 7802; VII-X: 9902, 9979, 10157, 12172
- safety**, VII-X: 12166, 12258, 12560
- visual problems**, III: 3311; IV: 4926; V: 5536, 5537; VII-X: 9229, 9237, 9303, 9324, 12575
- HIGH TEMPERATURE** *see* Heat; Hyperthermia
- HIGHER NERVOUS ACTIVITY** *see* Brain activity
- HIPPURIC ACID METABOLISM**
- effects of mental stress, II: 1925
  - relation to anxiety proneness, II: 1053
- HISTAMINE AND DERIVATIVES**
- effects on:
- anoxia tolerance, III: 2775; IV: 3762; V: 5824
  - hyperoxia tolerance, IV: 4281
- HISTAMINE CONTENT** *see under* Blood plasma
- HISTAMINE METABOLISM**
- effects of:
- hyperoxia, VI: 6857
  - oxygen breathing, V: 5334
- HISTORY** *see* Family histories. *See under* Aerospace medicine; Aerospace medicine, research; Air evacuation; Altitude suits; Aviation medicine; Bailout; Balloon Flight; Ejection seats; Human centrifuges; Space flight (Orbital); Space flight (Suborbital); Space medicine; Supersonic flight. *Also see* items *under* Medical histories
- HOMING PIGEONS**
- biological orientation, V: 5293; VII-X: 8660, 8661, 8662, 8665, 8666, 8667
- HONDURAS** *see under* Air evacuation
- HORMONES** (*see also* Adrenocorticotrophic hormone; Androsterone; Epinephrine; Intermedin; Norepinephrine; Prednisone; Progesterone; Sex hormones; Somatropin; Thyrotropin; Vasopressin)
- effects on:
- ascorbic acid metabolism, IV: 4664
  - dark adaptation, VII-X: 9286
- HORSES**
- altitude tolerance, VII-X: 10426
- HOSPITAL FACILITIES** *see under* Airports
- HOSPITAL PLANES** *see* Ambulance planes
- HOSPITALS** (*see also* Airports, hospital facilities; Emergency hospitals; Operating rooms), II: 956; V: 6376
- HOT CLIMATES**
- cause of:
- dehydration, IV: 4525; VII-X: 10883
  - fatigue, III: 2708
- effects on:
- chloride excretion, VI: 7431
  - performance of aviators, V: 6025; VII-X: 10829
  - salivary gland function, VI: 7458; VII-X: 10882
  - sodium chloride intake, VII-X: 10801, 10885
  - sodium chloride metabolism, VII-X: 10884
  - sodium metabolism, VII-X: 10896
  - work capacity, V: 6119
- general physiological effects**, V: 6025, 6623; VI: 7400, 7432; VII-X: 10295, 10799, 10809, 10829
- congresses, meetings, and symposia, VII-X: 8398
- general psychological effects**, III: 2707
- lack of adaptation**, IV: 4526
- nutritional requirements**, III: 2914, 2923, 2991, 3208, 3210, 3328; IV: 4804, 4828; V: 6008, 6051; VII-X: 10848
- pathological effects**, VI: 7472
- protection**, VII-X: 10830
- research methods**, III: 3358
- water exchange**, III: 3000; IV: 4525; VII-X: 10721
- HOT WATER IMMERSION**
- effects on heat acclimatization, VII-X: 10666
- HUMAN CENTRIFUGES**, I: 22, 39, 46, 63, 65, 170, 701; IV: 3939, 4233, 4505, 4604, 4605, 4609, 4694; V: 5780, 5781; VII-X: 8420, 10170, 10205, 11584, 12729, 12731, 12733, 12736, 12753
- equipment, III: 2540; V: 5782
  - history, VII-X: 12734
- HUMAN ECOLOGY IN SPACE** *see* Survival, in space
- HUMAN ENGINEERING** (*see also under* Aircraft; Aircraft controls; Airplanes; Airports; Balloon cabins; Balloons; Cabins; Cockpits; Communication systems; Control knobs; Control levers; Controls; Door knobs; Ejection seats; Electronic equipment; Emergency exits; Escape capsules; Flight simulators; Gliders; Gunnery controls; Hand cranks; Helicopter cockpits; Helicopter controls; Instrument dials; Instrument panels; Instruments; Jet engine controls; Jet planes; Landing strips; Man-machine systems; Man-made satellites; Navigational equipment; Nuclear propelled space vehicles; Oxygen masks; Pedals; Pilot seats; Pressure cabins; Radar controls; Radar equipment; Remote handling equipment; Rockets; Sealed cabins;

- Seats; Space cabins; Space flight surgeons; Space stations; Space vehicle controls; Space vehicles; Switches; Target tracking, training devices; Traffic control systems; Training devices; Warning devices (Optical); Windshields; Work areas; Work space. See also Engineering factors under Accidents. See also Psychomotor performance, analysis), II: 2226; III: 2955; V: 6576, 6595; VI: 8148, 8150; VII-X: 12453, 12479, 12480, 12484, 12536, 12546
- bibliography, V: 6579, 6590, 6591; VII-X: 12499, 12530
- congresses, meetings, and symposia, V: 6176; VI: 6744
- handbooks and treatises, IV: 5184; VI: 8145
- motion pictures  
bibliography, VII-X: 12464
- relation to:  
aviation medicine, VII-X: 12510  
body measurements, III: 3144; IV: 4670; V: 6472, 6589; VI: 8141, 8151  
head measurements, VI: 8140  
research, III: 3281; V: 6577, 6582, 6586; VI: 8132; VII-X: 8475  
research centers, VII-X: 8475  
reviews, I: 845  
role in aircraft industry, III: 2870, 2949
- HUMAN ISOLATION** see Social isolation
- HUMAN WASTE PRODUCTS** see Biological waste products
- HUMIDITY** (see also under Cabins)  
effects on:  
auditory perception, VII-X: 9853  
blood, VII-X: 10392  
body temperature, IV: 3912  
bone marrow, VII-X: 10392  
chloride metabolism, III: 2911  
food intake, VII-X: 11473  
heat loss, VII-X: 10784  
heat tolerance, VII-X: 10784  
mental performance, VII-X: 9853  
performance, V: 6033  
perspiration, II: 1564; IV: 4447, 4455; V: 6055; VII-X: 10349, 11469  
skin, I: 365  
skin temperature, VII-X: 11469  
sodium chloride intake, VII-X: 10801  
sweat composition, III: 2911  
temperature regulation, VII-X: 9031  
urine composition, VII-X: 9119  
general physiological effects, IV: 3914; VII-X: 10772, 11071  
measurement, IV: 4786  
relation to thermal comfort, VII-X: 10715
- HUMIDITY CONTROL** see under Space cabins
- HYALURONIDASE**  
effects on nitrogen elimination, VI: 7824
- HYDERGINE**  
effects on cold tolerance, I: 509
- HYDRAULIC FLUID** (see also Tricresylphosphate)  
toxic effects, III: 2499; VI: 7943, 7946; VII-X: 12105
- HYDRAZINE AND DERIVATIVES**  
detection, VII-X: 12121  
hazards, VII-X: 12128  
toxic effects, I: 61; II: 1254, 1684, 1774; III: 2606
- HYDROGEN FLUORIDE**  
toxic effects, VII-X: 12136
- HYDROGEN ION CONCENTRATION** see entries under pH
- HYDROGEN PEROXIDE**  
toxic effects, II: 1971
- HYDROPONICS**, VII-X: 12862, 12867, 12873
- HYGIENE AND SANITATION** (see also subdivision Sanitary aspects)
- handbooks and treatises, VI: 7933
- HYOSCINE** see Scopolamine
- HYPERCAPNIA** (see also Acidosis)  
aftereffects, VI: 6845  
animal experiments, III: 2447  
cause of apnea, VII-X: 8872  
effects on:  
action potentials of carotid sinus nerve, VII-X: 10557  
adrenal glands, III: 3003, 3004, 3428  
blood, II: 990; VII-X: 12151  
blood cells, III: 3003, 3428  
blood potassium content, VII-X: 9176  
body temperature, VII-X: 10627  
carbohydrate metabolism, III: 3428  
circulation, VI: 7357; VII-X: 8891, 9011, 12151  
cerebral circulation, III: 3292  
pulmonary circulation, VII-X: 12139  
retinal circulation, II: 1693; VII-X: 12134  
electroencephalogram, VII-X: 9176  
electrolyte metabolism, VII-X: 8924, 12150  
heart function, III: 3526  
hypophysis, III: 3004  
interoceptors, II: 964  
kidney function, II: 1326  
mental performance, III: 2486, 2487  
respiration, I: 166, 456; II: 1839; III: 2692; VII-X: 8813, 8884, 8891, 9011, 12151  
standing potential, I: 217  
tissue metabolism, VII-X: 8914  
voluntary apnea, II: 1100  
general physiological effects, II: 1259  
warning devices, I: 217
- HYPERCAPNIA TOLERANCE**  
animal experiments, VII-X: 8879  
effects of Diamox, V: 6439
- HYPERGLYCEMIA** see Blood, glucose content
- HYPERLIPEMIA**  
incidence in aviators, VI: 7828; VII-X: 11917
- HYPEROXIA** (see also Oxygen breathing)  
animal experiments, VII-X: 8907  
bibliography, VII-X: 8892  
cause of:  
apnea, VII-X: 8872  
brain pathology, VII-X: 10544  
hyperventilation, VI: 6836  
effects on:  
adrenal glands, II: 1054; IV: 4214, 4216  
autonomic nervous system, II: 2057  
blood, I: 664; II: 990, 1045, 1739  
blood carbon dioxide tension, II: 1695  
blood oxygen tension, II: 1695; VII-X: 10606  
brain activity, III: 2455; IV: 5183  
brain metabolism, II: 1695  
brain oxygen tension, VII-X: 8846  
carbon dioxide tension of tissues, II: 1698  
circulation, II: 1456, 2250; III: 3530  
cerebral circulation, II: 1695; IV: 4645; VI: 6805  
cutaneous circulation, VI: 6821  
pulmonary circulation, II: 1045, 2145; VII-X: 8877  
retinal circulation, II: 1693  
conditioned reflexes, VII-X: 8798  
depth perception, IV: 3929  
electrocardiogram, I: 607; 884; III: 3530; VII-X: 9045  
electroencephalogram, III: 2454, 3170; IV: 4144; VII-X: 9045  
endogenous formation of carbon monoxide, II: 1784  
heart function, IV: 3750  
lung, I: 126, 127; II: 1054; III: 2418, 2832, 2845;

- IV: 4282; V: 5314, 5326; VII-X: 8874, 8896, 8904
- mental performance, I: 164, 167
- metabolism, IV: 3789
- metabolism of substances:
- ascorbic acid, IV: 4214
  - carbohydrates, III: 3301
  - histamine, VI: 6857
  - phosphorus, VII-X: 8901
- nerve function, VII-X: 8880
- nervous system, VII-X: 8912
- oxygen tension of vitreous humor, V: 5335, 5766
- respiration, II: 1696, 1697, 1739; III: 2418, 3530
- visual perception, II: 1088, 1393, 1941
- voluntary apnea, II: 1100
- general physiological effects, I: 15, 125, 126, 127; II: 2250; III: 2828; IV: 4618; V: 5337; VI: 6849; VII-X: 8892, 8907, 9916, 12164
- pathological effects, VII-X: 8838, 12164
- role of:
- adrenal glands, III: 2799
  - endocrine system, IV: 4972
- tolerance *see* Hyperoxia tolerance
- HYPEROXIA TOLERANCE**, III: 2798; VII-X: 8874, 12164
- effects of:
- drugs, IV: 4215
    - antihistaminics, IV: 4281
    - chlorpromazine, III: 2832, 2845; IV: 4282
    - cobalt compounds, V: 5334
    - histamine, IV: 4281
    - tetraethyl ammonium, IV: 4282
    - vitamin E, II: 2162; IV: 5046
  - X-rays, III: 2797
- role of:
- adrenal glands, IV: 4215, 4971
  - autonomic nervous system, III: 2845
  - enzyme activity, III: 2800
  - hypophysis, I: 125, 126, 127; II: 1054
  - thyroid gland, VII-X: 8896
- HYPERPNEA** *see* Hyperventilation
- HYPERTENSION** *see* Arterial hypertension; Blood pressure
- HYPERTHERMIA** (*see also* Fever; Pyrogenic agents)
- effects of anoxia, IV: 4485
- effects on:
- adrenal glands, V: 5377, 5461
  - autonomic nervous system, IV: 4207
  - ballistocardiogram, VII-X: 9073
  - blood glucose content, V: 5434; VII-X: 9040
  - blood phosphate content, VII-X: 9039
  - blood phosphorus content, VII-X: 9041
  - blood plasma, V: 5377
  - blood potassium content, V: 5442
  - blood pressure, V: 6024; VII-X: 10779
  - blood vessel permeability, VII-X: 9101
  - brain, V: 5970
  - brain activity, VII-X: 10731
  - carbon dioxide tolerance, V: 5393
  - carotid sinus reflexes, VI: 6890
  - circulation, V: 5371; VII-X: 9067
    - peripheral circulation, VII-X: 10800
  - digestive system function, V: 5469
  - electrical potentials of cochlea, VII-X: 8984
  - electrocardiogram, VII-X: 9090
  - electrolyte distribution, V: 5477
  - electromyogram, VII-X: 9033
  - gastric secretion, VII-X: 8989
  - heat tolerance, III: 3676
  - kidney function, VII-X: 10720, 10779
  - metabolism, VII-X: 9033
    - oxygen consumption, VI: 7343
  - metabolism of organs:
    - heart, VII-X: 9094
    - metabolism of substances:
      - electrolytes, V: 5371; VII-X: 10721
      - potassium, VII-X: 8932
      - sodium, VII-X: 8932
    - reflexes, VI: 6863
    - respiration, VII-X: 9090
  - general physiological effects, VI: 6888; VII-X: 9012, 10731, 10838
  - reviews, IV: 4819
- HYPERTHERMIA TOLERANCE**, VII-X: 10669
- animal experiments, VII-X: 9090
- HYPERVENTILATION** (*see also* Hypocapnia)
- cause of:
- apnea, III: 2653, 2872, 2873; IV: 4071; VII-X: 8872, 8890
  - fainting, VII-X: 8734
  - hypocapnia, V: 5363; VII-X: 8803
- caused by:
- anoxia, I: 166, 451; VI: 6836, 6854; VII-X: 10326, 10621, 10633
  - electrophrenic respiration, VI: 6807
  - helicopter flight, VII-X: 9936
  - high speed flight, VII-X: 9877
  - hyperoxia, VI: 6836
  - pressure breathing, II: 1521; IV: 5111; VII-X: 12003
- effects on:
- alveolar carbon dioxide tension, VI: 6852
  - auditory perception, VII-X: 8889
  - blood carbon dioxide tension, VII-X: 10568
  - blood glucose content, II: 2282
  - blood oxygen tension, II: 1521
  - blood pH, III: 3137; V: 5327, 5338; VII-X: 8855
  - blood plasma, V: 5323
  - blood pressure, V: 5322; VII-X: 8778
  - brain, VI: 7378
  - brain oxygen tension, VII-X: 8870
  - circulation, V: 5339; VII-X: 8764
    - peripheral circulation, VII-X: 8753
  - electrocardiogram, V: 5362
  - electroencephalogram, II: 1168, 2282; III: 3316, 3431; IV: 5189; VI: 6848; 6947, 7194; VII-X: 8733, 8828, 8898, 9763
  - electrolyte distribution, IV: 4736; VI: 6848
  - flicker fusion frequency, II: 1615; VII-X: 9253
  - gastric secretion, VII-X: 9122
  - kidney function, II: 2205; VI: 6927; VII-X: 8855
  - metabolism, V: 5368
  - neuromuscular performance, VI: 6854
  - nitrogen elimination, I: 179
  - oxygen consumption, V: 5348, 5353; VII-X: 8878
  - potassium metabolism, V: 5338
  - psychomotor performance, IV: 4540; V: 5315, 5320, 5363, 6546; VI: 6810
  - reaction time, VI: 8099; VII-X: 9636
  - speaking, VII-X: 8889
  - urine pH, III: 3137
  - vital capacity, III: 3527
  - voluntary apnea, II: 1100
  - water exchange, IV: 4016
- general physiological effects, II: 1155; IV: 4392; V: 5330; VI: 6824; VII-X: 8898
- relation to accidents, IV: 4392; V: 6546
- HYPNOSIS** (*see also* Autohypnosis; Suggestibility)
- effects on circulation, VI: 6804
- use in:
- prevention and treatment of motion sickness, VII-X: 11852
  - space flight research, VII-X: 8441
- HYPNOTICS** (*see also* specific hypnotics, e.g., Morphine)
- effects on altitude tolerance, IV: 4436
- HYPOCAPNIA** (*see also* Alkalosis; Hyperventilation)
- caused by:
- altitude, I: 898

- hyperventilation, V: 5363; VII-X: 8803  
 effects on:  
 adrenal glands, VII-X: 9829  
 anoxia tolerance, III: 3051  
 blood glucose content, VII-X: 10498  
 brain lactic acid content, VII-X: 10499, 10500  
 circulation, III: 2557; VI: 6845; VII-X: 10500, 10502  
 cold tolerance, III: 3051  
 electroencephalogram, II: 1591  
 heart function, II: 1717  
 hematopoiesis, VII-X: 9820  
 intracranial pressure, II: 1476  
 tissue metabolism, VII-X: 8914
- HYPOCAPNIA TOLERANCE**  
 effects of training, VI: 6810; VII-X: 10534  
 general physiological factors, VII-X: 8803
- HYPOGLYCEMIA**, *see* Blood, glucose content
- HYPOPHYSIS** (*see also* Adrenocorticotrophic hormone; Intermedin; Somatropin; Thyrotropin; Vasopressin)  
 effects of:  
 anoxia, IV: 5041  
 cold, III: 2995; IV: 5007; V: 6041; VII-X: 10643, 10788  
 heat, IV: 5041  
 hibernation, VII-X: 8643  
 hypercapnia, III: 3004  
 hypothermia, V: 5431, 5465  
 role in:  
 acceleration tolerance, VII-X: 10148  
 anoxia, I: 614; II: 2207  
 fatigue, II: 1797  
 heat tolerance, VII-X: 10792  
 hyperoxia tolerance, I: 125, 126, 127; II: 1054  
 hypothermia, V: 5465  
 lipid metabolism, III: 3049
- HYPOTHALAMUS** (*see also* Hypophysis)  
 role in:  
 mental stress, VII-X: 11178  
 stress, VII-X: 9830  
 temperature regulation, V: 5438; VI: 7426
- HYPOTHERMIA** (*see also* Hibernation; Precooling), III:  
 2693; VII-X: 9093  
 aftereffects, IV: 3733; 4136; V: 5373, 5388, 5418, 5421,  
 5447, 5448, 5454, 5463, 5751; VI: 6906, 6912,  
 6915; VII-X: 8931, 8957, 8975, 8998, 9049,  
 9113  
 animal experiments, III: 3496; IV: 3906; V: 5437;  
 VI: 6868; VII-X: 8592, 8940, 8957, 8982,  
 9009, 9048, 9061, 9065, 9072  
 body temperature gradient, V: 5468, 5471; VII-X: 9025  
 caused by acidosis, V: 5395; VI: 6896  
 caused by restraint, V: 5748; VI: 7617  
 congresses, meetings, and symposia, V: 5458; VII-X:  
 9084  
 effects of anoxia, V: 5911  
 effects on:  
 acceleration tolerance, VII-X: 10020, 10021  
 adrenal glands, IV: 4102, 4103, 4198; V: 5287,  
 5431, 5445; VII-X: 9030, 9055, 9066, 9088,  
 9114  
 altitude tolerance, VII-X: 10300  
 anaphylactic shock, VI: 6871, 6901  
 anoxia tolerance, III: 2850; V: 5919; VII-X: 8929,  
 9113, 9114, 10543  
 antibodies, IV: 3797  
 aqueous humor, VII-X: 8945  
 autonomic nervous system, IV: 4207  
 ballistocardiogram, V: 5474  
 blood, III: 2626, 2982; IV: 5003; V: 5406, 5455,  
 5466; VI: 6917, 6920; VII-X: 8941, 8998,  
 9023, 9050, 9074, 9089, 9092, 9102, 9116  
 blood calcium content, V: 5401  
 blood cells, V: 4334; V: 5275, 5475; VI: 6887;  
 VII-X: 8994, 8995, 9088, 9111  
 blood coagulation, V: 5404, 5449; VI: 6905  
 blood pH, III: 3273; IV: 4002; V: 5420; VII-X: 9106  
 blood plasma, V: 5374; VII-X: 8995  
 blood plasma proteins, VI: 6865; VII-X: 9077  
 blood pressure, III: 2881; VI: 6922; VII-X: 8966,  
 9006  
 blood volume, III: 2637; VII-X: 9050  
 body fluid distribution, VII-X: 8993  
 brain, VII-X: 9091  
 brain activity, V: 5447; VI: 6912; VII-X: 8957  
 brain oxygen tension, VII-X: 9049  
 central nervous system activity, V: 5450  
 cerebrospinal fluid oxygen tension, VII-X: 9096  
 cerebrospinal fluid pressure, VI: 7341  
 circulation, III: 2983; IV: 4304, 4891, 5113;  
 V: 5378, 5380, 5388, 5397, 5405, 5408,  
 5413, 5436, 5480; VI: 6870, 6877, 6891,  
 6892, 6893, 6895, 6898, 6908, 6916; VII-X:  
 8891, 8928, 8956, 8974, 8985, 9011, 9065,  
 9079, 9115  
 cerebral circulation, III: 3393; IV: 4469;  
 V: 5439, 5470; VII-X: 9096  
 coronary circulation, III: 2974; V: 5386, 5424,  
 5433  
 peripheral circulation, VII-X: 9057  
 pulmonary circulation, VII-X: 9057  
 renal circulation, IV: 4650  
 reviews, V: 5394  
 cochlea, VII-X: 9079  
 drug action, VII-X: 9117, 12001  
 electrical potentials of cochlea, VII-X: 8996, 8968  
 electroencephalogram, III: 2556, 2730; IV: 4144,  
 4145, 4932; V: 5385, 5443, 5472; VI: 6867,  
 6886; VII-X: 8965, 8971, 8972, 8977, 9077,  
 9112, 9162  
 electrolyte distribution, IV: 4736; V: 5422, 5477,  
 5478; VI: 6846, 7351; VII-X: 8943, 8944,  
 9024, 9104  
 electromyogram, VII-X: 9033, 9062, 9143  
 fertility, V: 5421  
 gastric secretion, V: 5419  
 heart, V: 5415, 5464  
 heart function, III: 2475, 2982; IV: 4005, 4329,  
 4709; V: 5391, 5418, 5424, 5425, 5441,  
 5455; VI: 6862, 6875, 6924; VII-X: 8936,  
 8937, 8939, 8942, 8944, 8979, 8980, 8981,  
 9008, 9056, 9059, 9095  
 electrocardiogram, IV: 4003, 4004, 4599; V:  
 5275, 5319, 5402, 5412, 5437, 5452, 6355;  
 VI: 6860, 6866, 6923; VII-X: 8958, 9018,  
 9087  
 pulse rate, III: 2591; V: 5446; VII-X: 8965  
 hypophysis, V: 5431, 5465  
 immunity to infectious diseases, VII-X: 8994  
 kidney function, III: 2471; IV: 4650, 4673, 5113;  
 V: 5372, 5427, 5451; VII-X: 8956; 9028,  
 9042, 9043  
 labyrinth, VI: 6900  
 liver, V: 5286  
 liver function, IV: 4304; VII-X: 8961  
 memory, V: 5463; VII-X: 9064  
 mental performance, V: 5373  
 metabolism, VI: 6925, 7377; VII-X: 9023, 9032,  
 9033  
 enzyme activity, VII-X: 8955, 8970, 8983,  
 8997, 9017  
 oxygen consumption, III: 2965; IV: 4891;  
 V: 5370, 5416; VI: 6875; VII-X: 9006  
 reviews, V: 5428  
 metabolism of organs:

- brain, III: 3393; IV: 4469; V: 5385, 5470; VII-X: 8934, 8951, 9075
- heart, III: 3525; IV: 4002; V: 5375, 5398, 5399, 5433, 5460, 5473; VI: 6881; VII-X: 8934, 8952, 8958, 8982, 9018, 9058, 9074, 9094
- liver, V: 5409, 5411, 5413; VII-X: 8961
- myocardial tissue, VII-X: 9016
- tissues, V: 5453; VII-X: 9004
- metabolism of substances, VII-X: 8978
- carbohydrates, V: 5479; VII-X: 9058, 9075
- citrate, VII-X: 9019
- electrolytes, VII-X: 8960, 9074
- phosphorus, VII-X: 9075
- potassium, V: 5473; VII-X: 9027
- steroids, V: 5387
- sulphydryls, III: 2452; 3361
- muscular function, VII-X: 9062, 9074
- nerves, VII-X: 9080
- nervous system activity, V: 5390; VI: 6926; VII-X: 9051, 9097
- reviews, V: 5444
- performance, VII-X: 8938
- plasma histamine content, VII-X: 9103
- radiation tolerance, VII-X: 11345
- reflexes, III: 2556; IV: 5038, 5039; V: 5378, 5751; VI: 6886, 6891, 6899, 6906; VII-X: 9086
- carotid sinus reflexes, VII-X: 9052
- conditioned reflexes, V: 5448; VI: 6911; VII-X: 8931, 9037
- postural reflexes, VI: 6919
- respiratory reflexes, VI: 6872
- respiration, III: 3273; V: 5396, 5435, 5436, 5440, 5456, 5457, 5467, 5926; VI: 6885, 6886, 6907, 6908; VII-X: 8891, 8956, 8965, 8974, 9011, 9045, 9092, 9106
- reticulo-endothelial system, VI: 6897
- sexual potency, VI: 6920; VII-X: 9102
- spleen, VI: 6903
- temperature regulation, III: 2897; IV: 4448; V: 5381, 5476; VI: 6921
- tissue oxygen tension, VII-X: 8968
- urine composition, V: 5466; VII-X: 9089
- vascular tonus, VII-X: 9053
- X-ray tolerance, I: 535, 537; II: 2141; VII-X: 11346
- general physiological effects, IV: 3787, 3940, 4051, 4815, 4918; V: 5385, 5392, 5394, 5417, 5438, 5462; VI: 6909; VII-X: 8930, 8946, 8959, 9010, 9024, 9108
- reviews, VI: 6882
- handbooks and treatises, VI: 6913; VII-X: 9109
- heat loss, V: 5468
- induced by:
- carbon dioxide, VII-X: 9085
- drugs, III: 2983; IV: 3906; V: 5416; VII-X: 9060
- induction, V: 5383; VII-X: 8933, 8953, 11346
- pathological effects, IV: 4684, 4918; VII-X: 8978, 9010
- psychological factors, III: 2450, 2451; V: 6136; VII-X: 11270
- resuscitation, IV: 4815; V: 6369; VI: 6880, 6909, 6912, 6915; VII-X: 8929, 8933, 8935, 8953, 8959, 8985, 8986, 9009, 9010, 9048, 9071, 9072
- reviews, IV: 4819; VII-X: 8946, 9108
- role of hypophysis, V: 5465
- use in space flight, VII-X: 12578
- HYPOTHERMIA TOLERANCE**, VII-X: 9021, 12578
- animal experiments, V: 5454, 5455; VI: 6867, 6889, 6904, 6915; VII-X: 8935, 8937, 9034, 9054, 9071, 9081, 9082, 9083, 11345
- effects of:
- acetylcholine, V: 5430
- cold acclimatization, VI: 6869; VII-X: 9060
- drugs, VI: 6889; VII-X: 9071
- physostigmine, V: 5430
- general physiological factors, VII-X: 9054
- relation to age, IV: 4599
- role of nervous system activity, V: 5440; VII-X: 9047
- time factors, VII-X: 9061
- HYPOXEMIA, HYPOXIA** see Anoxia
- IDENTIFICATION** see Target identification; Voice identification. Also see under Aviation casualties; Personnel
- IDENTIFICATION CARDS**, VII-X: 12026
- IDIOPHONIC EFFECT** see under Auditory stimuli
- ILLUMINATION** (see also Intermittent light; see also under Cockpits; Instrument panels)
- effects on:
- activity rhythm, III: 2403; IV: 3746, 4169; V: 5257; VII-X: 8565
- alertness, VII-X: 9788
- auditory perception, V: 5638
- auditory thresholds, VII-X: 9409
- biological rhythms, III: 2961; VII-X: 8546
- body temperature rhythm, VII-X: 8569
- brightness discrimination, IV: 3835, 4330, 4522
- color vision, II: 1146, 1605, 1817, 1974, 2062; III: 3356; IV: 4470; VII-X: 9258
- contour perception, II: 1218
- dark adaptation, I: 200, 601; II: 1855; III: 3650; VII-X: 9188
- depth perception, II: 1353, 2009, 2014; III: 3232, 3409; VII-X: 9467
- dynamic visual acuity, V: 5525; VII-X: 9203, 9311
- electroretinogram, VI: 6983, 6986; VII-X: 9281, 9291
- fertility, VII-X: 8566
- flicker fusion frequency, VII-X: 9251, 9321
- form perception, II: 1218; III: 3031; V: 5633
- hibernation, VII-X: 8639
- motion perception, II: 2014; III: 3075; IV: 4521; VII-X: 9467
- peripheral vision, VII-X: 9329
- pineal gland, VII-X: 11486
- psychomotor performance, II: 1732, 1770; IV: 3795; VI: 7117
- pupil size, VI: 7008
- radar operation, VI: 8193
- retinal adaptation, V: 6610
- scale reading, V: 5812
- size perception, II: 2009
- spatial orientation, I: 424, 425
- thymus, VII-X: 8589
- thyroid gland, VII-X: 10086
- time estimation, V: 5706
- visual accommodation, V: 5528; VII-X: 9184, 9185
- visual acuity, I: 514; II: 2298; IV: 3825, 4069; VII-X: 9318
- visual illusions, II: 2014
- visual perception, I: 201, 276, 760; II: 2014; IV: 4998; V: 5544; VI: 6992; VII-X: 9350
- visual thresholds, VII-X: 9189
- relation to night myopia, IV: 3955; 4403, 4405; V: 5491, 5528
- ILLUMINATION (FLICKER)** see Intermittent light
- ILLUSIONS** see Sensory illusions; Visual illusions
- IMAGE** see Retinal image position; Visual afterimages
- IMAGE DISPARITY** see Binocular vision, effects of image disparity
- IMAGINARY MOTOR PERFORMANCE** see Motor performance (Imaginary)
- IMMERSION** (see also Cold water immersion; Hot water i.; Warm water i.)
- effects on:



- acceleration tolerance, VII-X: 10020, 10021, 10023, 10048, 10082, 10086, 10106, 10129, 10130, 10141, 10206, 12231
- body temperature, VII-X: 9036, 9046, 10675
- body temperature gradient, VII-X: 10684
- impact tolerance, VII-X: 10139
- kidney function, VII-X: 9120, 10226
- oxygen consumption, VII-X: 10675
- respiration, VII-X: 8844, 10226
- spatial orientation, VI: 7074; VII-X: 9473, 10267
- IMMERSION (CONTINUOUS)**
- aftereffects, VII-X: 10246
- effects on:
- autonomic nervous system, VII-X: 10266
- circulation, VII-X: 8759, 10242, 10243
- muscular strength, VII-X: 10243
- performance, VII-X: 10230
- positive acceleration tolerance, VII-X: 10224, 10225
- psychomotor performance, VII-X: 10224
- respiration, VII-X: 10224
- general physiological effects, VII-X: 10243, 10244, 10245, 10246
- general psychological effects, VII-X: 10246
- IMMOBILIZATION (see also Restraint)**
- effects on electromyogram, VII-X: 11278
- relation to phlebitis, VII-X: 11941
- IMMUNITY see under Infectious diseases; Respiratory diseases. Also see Antibodies**
- IMMUNIZATION (see also Communicable diseases, control; Smallpox vaccination), I: 772; 773; II: 1357**
- IMPACT (see also Tumbling)**
- analysis, II: 2033; VII-X: 10115
- cause of:
- injuries, VI: 7218; VII-X: 12394
- brain injuries, VII-X: 10069
- cardiovascular injuries, VII-X: 11884
- head injuries, IV: 4290
- lung injuries, IV: 5012
- spine injuries, VII-X: 12415
- visceral displacement, VII-X: 10155
- effects on:
- blood pressure, VII-X: 10121
- brain, IV: 4287; VII-X: 10081
- intracranial pressure, III: 2856; VII-X: 10126
- lipid metabolism, VII-X: 10102
- general physiological effects, II: 2033, 2276; IV: 4141, 4290; VII-X: 10972, 12816
- bibliography, VII-X: 10044, 10047
- research methods, VII-X: 10075
- measurement, VII-X: 10171
- pathological effects see Crash injuries
- post-mortem findings, VI: 8084
- protection, VII-X: 12384, 12394, 12418
- IMPACT TOLERANCE, II: 1388, 2132; IV: 4999, 5000; V: 5774; VI: 8070, 8090; VII-X: 10087, 10152, 10171, 12240, 12394, 12816**
- animal experiments, VI: 7225; VII-X: 10055, 10059, 10103, 10146, 10152
- effects of:
- immersion, VII-X: 10139
- posture, VII-X: 10059, 10061, 10190
- restraining devices, VII-X: 10061
- research methods, V: 5807; VI: 7216; VII-X: 10081
- sex factors, VII-X: 10103
- time factors, VII-X: 10116
- IMPEDANCE see Respiratory impedance**
- IMPURITIES see Contaminants**
- INACTIVITY see Immobilization; Physical inactivity**
- INDIA see under Aviation medicine; Personnel, selection; Pilots, selection**
- INDOCHINA see under Aviation medicine**
- INDOCHINA CAMPAIGN see under Air transportation of patients**
- INDUSTRY see Aircraft industry**
- INERTIA see Moments of inertia**
- INFECTIOUS DISEASES (see also Communicable diseases; Food poisoning; Pneumonia; Syphilis)**
- effects of cold, VII-X: 10813
- immunity
- effects of:
- altitude, II: 1538, 2106; III: 2476; IV: 4352, 5107; V: 5847; VI: 7283
- altitude acclimatization, I: 148, 149, 150; IV: 3830, 3831; V: 5822, 5829, 6338; VI: 7247
- cold, VII-X: 10812, 10813
- cold acclimatization, VII-X: 10811
- heat, IV: 4302
- hypothermia, VII-X: 8994
- relation to citrate metabolism, VII-X: 10553
- IN-FLIGHT FEEDING see Flight feeding; Space flight feeding**
- INFLUENZA A VIRUS, I: 148; IV: 3831**
- INFORMATION see Advance information; Misinformation; Transfer of information**
- INFORMATION FEEDBACK (see also Misinformation feedback)**
- effects on:
- learning, VII-X: 9578
- performance, VI: 7089
- pilot performance, VII-X: 12553
- psychomotor performance, IV: 4270, 4757, 4919; V: 5663, 5666, 5667, 5694, 5703, 5704; VI: 8182; VII-X: 9572
- INFRARED RADIATION see Thermal radiation**
- INFUSIONS see Venous infusions**
- INGUINAL HERNIA**
- caused by acceleration, VI: 7857
- INHABITANTS OF MOUNTAINS, IV: 3723, 3777, 4388, 4389, 4544, 4614, 4663, 4881, 5130; V: 5827, 5838, 5839, 5853, 5863, 5864, 5867, 5873, 5880, 5884, 6322; VII-X: 10287, 10295, 10319, 10353, 10361, 10362, 10363, 10410, 10411, 10415, 10431, 10455, 10458, 10466, 10467, 11811**
- bibliography, VII-X: 10400
- blood types, VI: 7297
- body composition, VII-X: 10416
- body measurements, I: 861, 862; IV: 4880; VI: 7263
- incidence of:
- arterial hypertension, VI: 7784
- malaria, V: 6346
- peptic ulcer, VI: 7853; VII-X: 11899, 11993
- INJURIES (see also Battle wounds; Blast injuries; Bone i.; Brain i.; Burns; Crash i.; Cardiovascular i.; Dental i.; Hand i.; Head i.; Leg i.; Lung i.; Neck i.; Shoulder i.; Spine i.; Tissue trauma)**
- caused by:
- accidents, VII-X: 12392, 12398, 12400
- atomic explosions,
- bailout, V: 6351; VI: 7840, 8051; VII-X: 12379, 12400
- ejection from aircraft, VII-X: 12330, 12352
- at high speed, IV: 3999; VII-X: 11881, 12342
- impact, VI: 7218; VII-X: 12394
- parachute jumping, V: 6338, 6498, 6502; VI: 7825, 7826; VII-X: 11911
- analysis, IV: 4578
- effects on:
- blood plasma lipid content, VII-X: 11892
- blood plasma proteins, VII-X: 11892
- statistics, IV: 4089
- INNER EAR see Labyrinth**
- INSECTICIDES (see also Tetraethyl pyrophosphate), VI: 7936**

- general physiological effects, VII-X: 12099
- INSECTS** (see also *Drosophila*; Wasps)
- altitude tolerance, IV: 4743; VII-X: 12098
- cold tolerance, IV: 4743
- effects of:
- altitude, II: 1907; IV: 4744
- cold, II: 1907; IV: 4745
- on aircraft, I: 553; II: 1357, 1907; IV: 4743, 4744, 4745
- control, II: 921; III: 2511, 3317; V: 6431, 6433, 6434; VI: 7931, 7936; VII-X: 12099, 12100, 12101, 12102
- INSOMNIA** see Sleep deprivation
- INSTRUCTORS** (see also Training officers)
- duties, III: 2719, 3327; IV: 5139
- morale, I: 737; II: 1581, 1851; IV: 4503
- performance, I: 550, 585; VI: 7706
- tests, III: 3615
- personality, I: 493; II: 1019; III: 2942; V: 6213
- rating, I: 460, 659; II: 1081; III: 3613
- selection, IV: 4530; V: 6185
- training
- prediction of success, VII-X: 11662
- vocational interest, V: 6266, 6267
- INSTRUCTORS (FEMALE)**
- performance, II: 1850
- INSTRUMENT CONTROL SYSTEMS**, IV: 4431
- INSTRUMENT DIALS** (see also Scale reading)
- human engineering, I: 240, 259; II: 1026, 1213, 1214, 1862, 1863, 2021, 2031, 2071, 2139, 2245; III: 2331, 2336, 2426, 2522, 2523, 2620, 2731, 2777, 2997, 3255, 3605, 3634; IV: 3964, 3967, 3992, 4053, 4088, 4160, 4563, 4876, 4938, 4939, 4940; V: 6625, 6626, 6633, 6636, 6644, 6649, 6660, 6662, 6670; VI: 8192, 8205, 8217, 8221; VII-X: 12625, 12695
- INSTRUMENT FLIGHT** (see also Automatic pilot; Electronic equipment, use in piloting), I: 36, 599, 707, 794; II: 1410, 1763; IV: 5075; V: 6620; VII-X: 11560, 12586, 21718
- accidents, VII-X: 12436
- cause of motion sickness, VI: 7798
- galvanic skin response, IV: 4391
- general physiological effects, IV: 4789, VI: 7797
- general psychological effects, IV: 4789
- learning, IV: 4855
- medical problems, IV: 3891
- spatial orientation, I: 36; VII-X: 12399
- training devices, III: 3562, 3653; VII-X: 11642
- training methods, IV: 4009
- INSTRUMENT FLIGHT TRAINING**, V: 6675
- INSTRUMENT GUIDANCE SYSTEMS** (see also Automatic pilot), III: 2614, 3489; IV: 4629
- INSTRUMENT LANDINGS**, I: 646, 647, 648; IV: 4872; VI: 8116, 8165, 8166
- INSTRUMENT PANELS** (see also Instrument dials)
- color, II: 2213; III: 3040; IV: 4968; VII-X: 12691
- human engineering, I: 36, 79, 130, 277, 280, 342, 646, 648, 760, 776, 780; II: 1156, 1166, 1395, 1953, 1955, 2070, 2081, 2185; III: 2317, 2327, 2426, 2603, 2635, 2739, 2950, 2997, 3249, 3262, 3388; IV: 3879, 3896, 4155, 4275, 4371, 4372, 4374, 4459, 4726, 5005, 5095; V: 6596, 6627, 6632, 6652, 6653, 6654, 6655, 6656, 6658, 6661, 6663, 6664, 6671; VI: 8165, 8194, 8197, 8206, 8213, 8227; VII-X: 12427, 12482, 12517, 12622, 12641, 12645, 12667, 12669, 12690, 12711, 12721
- illumination, I: 200, 794, 886; II: 2127, 2128; III: 3141, 3650; IV: 4014; VI: 8220; VII-X: 12796
- visibility
- effects of high altitude flight, III: 2680
- INSTRUMENTAL MAGNIFICATION**
- effects on:
- form perception, III: 3206
- visual acuity, III: 3007
- use in aerial searching, VI: 8171
- INSTRUMENTATION (PHYSIOLOGICAL)** (see also entries under Telemetry), VII-X: 12663, 12708
- INSTRUMENTS**
- human engineering, V: 5489; VI: 8234
- use in piloting, VII-X: 12618
- INTELLECTUAL ABILITY** see Mental ability
- INTELLIGENCE TESTS** see Mental ability, test methods
- INTELLIGIBILITY** see under Auditory signals; Codes; Color codes; Messages; Radar signals; Speech; Visual signals; Written tests. Also see subdivisions Interpretation; Legibility; Recognition
- INTERCOM SYSTEMS**, II: 1662; VI: 8181
- INTEREST** (see also Reading interest; Vocational i.)
- relation to time estimation, VII-X: 8600
- INTERMEDIN**
- effects on:
- biological rhythms, III: 2804
- dark adaptation, IV: 4641
- INTERMITTENT ANOXIA**
- cause of altitude acclimatization, VII-X: 10435
- INTERMITTENT LIGHT** (see also Flicker fusion frequency; Signal lights (Flashing))
- cause of epileptic seizures, III: 2328
- effects on:
- brightness discrimination, VII-X: 9316
- consciousness, VII-X: 9170
- electroencephalogram, VII-X: 9175
- electroretinogram, VI: 6976, 6977
- psychomotor performance, IV: 3795, 4445, 4446; V: 5700
- spatial orientation, III: 2415
- visual acuity, VII-X: 9316
- visual perception, II: 1443; III: 3454; VI: 6960; VII-X: 9242
- time factors, III: 2791, 2792; VI: 8209
- general physiological effects, VII-X: 9175, 11467
- perception
- tests, VII-X: 9157, 9245
- INTERMITTENT NOISE**
- effects on vigilance, VII-X: 9783
- general physiological effects, VII-X: 11043
- INTERMITTENT SOUND**
- cause of auditory fatigue, VII-X: 10985
- INTERNATIONAL MILITARY AERONAUTICAL PENTATHLON** see Sport activities
- INTEROCEPTORS**
- effects of:
- anoxia, II: 965
- hypercapnia, II: 964
- INTERPLANETARY SPACE** (see also Space environment)
- solar radiation, VII-X: 11410
- INTERPLANETARY SPACE FLIGHT** see Space flight (Interplanetary)
- INTERPRETATION** see under Visual displays; Visual signals. Also see subdivisions Intelligibility; Legibility; Recognition
- INTERVIEWS** see Psychological interviews
- INTESTINAL DISEASES** (see also Amebiasis; Peptic ulcer),
- cause of vestibular disturbances, VI: 7834
- effects on:
- aviator performance, VI: 7846
- physical fitness of aviators, VII-X: 11952
- incidence in aviators, IV: 3720; VII-X: 11952
- INTESTINAL SECRETION**

- effects of acceleration, VII-X: 10187  
**INTESTINE** *see* Digestive system  
**INTRACRANIAL PRESSURE**  
 effects of:  
 anoxia, I: 405; II: 1476  
 explosive decompression, II: 2247  
 hypocapnia, II: 1476  
 impact, III: 2856; VII-X: 10126  
**INTRAOCULAR PRESSURE** (*see also* Glaucoma)  
 effects of pressure breathing, VII-X: 8839  
 measurement, VII-X: 12677  
**INTRAPULMONARY PRESSURE** (*see also* Pressure breathing; Thoracic Pressure; Valsalva maneuver)  
 cause of gas bubble formation in blood, VI: 7307  
 effects of explosive decompression, IV: 4571, 5122; V: 5904, 5905  
 effects on:  
 blood pressure, II: 1106; VI: 6799  
 cardiovascular system, III: 2999  
 heart function, VI: 6834  
 respiration, II: 1013  
**INTRATHORACIC PRESSURE** *see* Thoracic pressure  
**INVENTORY** *see* Biographical inventory  
**IODINE CONTENT** *see under* Blood  
**IODINE METABOLISM**  
 effects of:  
 cold, V: 6012  
 heat acclimatization, IV: 3986; VI: 7407  
**IONIZED ATMOSPHERE**  
 effects on:  
 mental performance, VII-X: 11474  
 reaction time, VII-X: 11476, 11483  
 vigilance, VII-X: 11474  
 general physiological effects, VII-X: 11477, 11478  
 general psychological effects, VII-X: 11477  
**IONIZING RADIATIONS** (*see also* Cosmic rays; Nuclear radiations; X-rays)  
 aftereffects, VII-X: 11322, 11355  
 biological effects, I: 546, 547; III: 3505; V: 6162; VII-X: 11335, 11370, 11399, 11419, 11420  
 effects on:  
 alertness, VII-X: 11293  
 enzyme activity, I: 338  
 eye, II: 1638; VII-X: 11334  
 learning, VII-X: 11294, 11322, 11355  
 life expectancy, VII-X: 9839  
 psychomotor performance, VII-X: 11293, 11371  
 visual acuity, VII-X: 11296  
 general physiological effects, VII-X: 11399  
 hazards, VII-X: 11338, 11370  
 in cockpits, VII-X: 11423  
 measurement, VII-X: 11338  
 protection, V: 6162; VI: 7623; VII-X: 11308, 11370, 11416, 11419, 11420  
**IRON CONTENT** *see under* Blood plasma  
**IRON METABOLISM**, VI: 7336  
 effects of:  
 altitude, V: 5881; VII-X: 10342, 10421, 10422  
 altitude acclimatization, II: 2223  
 anoxia, IV: 4903; V: 5965  
 nuclear radiation, VII-X: 11331  
 relation to:  
 altitude tolerance, III: 2629  
 diurnal cycle, IV: 3868  
 hematopoiesis, VII-X: 10421, 11331  
**ISCHEMIA**  
 effects on:  
 brain activity, II: 1328  
 brain metabolism, III: 3549  
**ISOLATION** *see* Adaptability to isolation; Social isolation  
**ISOMETRIC EXERCISE** *see* Physical exercise (Static)  
**ISOPHENERGAN**  
 use in motion sickness, I: 236  
**ISOTOPES** *see* Radiosotopes  
**ITALY** *see under* Air Transportation of patients; Aviation medicine  
**JAW INJURIES** *see* Head injuries  
**JAW MOVEMENTS**  
 effects on auditory perception, II: 1420  
 in speaking, I: 459  
**JET ENGINE CONTROLS**  
 human engineering, III: 3042  
**JET ENGINE NOISE**  
 analysis, I: 378; II: 1599, 1705, 1962, 2216; III: 2590, 3253; IV: 4262; V: 6088; VI: 7827; VII-X: 9426, 12582  
 effects on:  
 auditory perception, VII-X: 10947  
 cochlea, II: 973; V: 6084  
 electrocardiogram, VII-X: 10944  
 hearing, I: 62, 743; II: 1871, 1935, 2049; III: 3420; IV: 4787; VII-X: 9426, 9450, 10741  
 labyrinth, VII-X: 10947  
 patellar reflex, VII-X: 10947  
 general physiological effects, I: 42; II: 1127, 1285; V: 6072; VI: 8189; VII-X: 11812  
 general psychological effects, II: 1823; VI: 8189  
 reduction, I: 62; II: 1285, 1391, 1956, 2217; III: 2590; IV: 3824, 3917, 3969, 4056, 4552, 5091; V: 6072, 6088, 6478, 6490, 6601; VI: 8160, 8161, 8162, 8169; VII-X: 11023, 12565, 12567, 12568, 12569, 12585  
**JET FUELS** (*see also* Kerosene)  
 toxic effects, I: 80; IV: 4024; VI: 7945, 7947; VII-X: 12105  
**JET PLANE FLIGHT** (*see also* High altitude flight; High speed flight)  
 cause of:  
 fatigue, VII-X: 11157  
 motion sickness, VII-X: 11849  
 effects on:  
 blood glucose content, VII-X: 9950  
 vision, VII-X: 9932  
 medical problems, I: 105, 423, 724; III: 3641; V: 6587; VII-X: 8271, 8283, 9871, 9873, 9884, 9904, 9957, 12028  
 public health aspects, VII-X: 11803  
 safety, V: 6569; VI: 7987; VII-X: 12437, 12439  
 sanitary aspects, VII-X: 11803  
**JET PLANE FLIGHT SIMULATORS**, IV: 3889  
**JET PLANE NOISE** (*see also* Jet engine noise)  
 analysis, II: 2177; III: 3244, 3253; IV: 3860; V: 6070; 6614; VI: 8173; VII-X: 12572, 12583  
 effects on hearing, I: 28; II: 1301, 1721, 1871, 1935; III: 2309; IV: 4785, 4787; VI: 7517; VII-X: 9430  
 bibliography, V: 5600  
 general psychological effects, VII-X: 10958  
 pathological effects, III: 2309  
 reduction, II: 1721; IV: 4262, 4785; V: 6614; VI: 7510, 8179, 8180; VII-X: 12572  
 tolerance, IV: 4108  
**JET PLANE NOISE (INTERIOR)**  
 cause of auditory fatigue, III: 2665  
 reduction, III: 2665; IV: 4262  
**JET PLANE PILOTING**  
 cause of anxiety, IV: 3799; V: 5734, 5739; VII-X: 9691, 9751  
 effects on:  
 ballistocardiogram, IV: 4642  
 blood cells, V: 5768  
 cardiovascular system, III: 3398  
 electroencephalogram, VII-X: 9962  
 fatigue, I: 628; II: 1075, 2262; IV: 5129; V: 5739

- general psychological effects, I: 21; II: 1598;  
V: 5726  
medical problems, VII-X: 9823  
mental stress, II: 1598  
training devices, IV: 5079  
use of contact lenses, VII-X: 9228
- JET PLANE PILOTS**  
incidence of arteriosclerosis, VII-X: 11916  
occupational hazards, VI: 7857  
personality, VII-X: 9823  
selection, VII-X: 11509, 11560, 11593  
training, IV: 3799, 4707; VI: 7690, 7702  
vocational interest, V: 6268
- JET PLANES**  
equipment, VII-X: 12481  
human engineering, VII-X: 12481
- JET TRAINERS** *see* Jet Plane flight simulators
- JOB ANALYSIS**, I: 746; II: 2228; III: 2969; IV: 5019;  
VII-X: 11699  
bibliography, II: 1640; VII-X: 11700  
reviews, VII-X: 11712
- JOYSTICKS** *see* Aircraft controls
- JUDGMENT** *see* Reasoning
- JUMPING** *see* Locomotion; Parachute jumping
- KEMADRIN**  
use in motion sickness, V: 6333
- KEROSENE**  
toxic effects, I: 629; III: 2655, 3586; VII-X: 12127
- KETONE METABOLISM**  
effects of:  
annual cycle, VII-X: 10866  
anoxia, II: 1681  
cold, III: 3417; VII-X: 8923, 8925, 10866  
diet, VII-X: 8925  
heat, VII-X: 10670  
physical work, III: 3417; VII-X: 8923, 8925  
water intake, VII-X: 8923
- KETOSTEROIDS** *see* Steroids
- KIDNEY** (*see also* Renal circulation; Urine)  
effects of:  
altitude, II: 1169  
anoxia, V: 5938  
cold, II: 1842  
cold acclimatization, VI: 7457  
mental stress, IV: 4408  
positive acceleration, VII-X: 10161  
metabolism  
effects of cold, II: 1842  
pathology, II: 2153  
effects on air transportability, V: 6400  
research methods, III: 2715
- KIDNEY FUNCTION** (*see also* Excretory rhythm)  
effects of:  
altitude, I: 625; II: 1392  
altitude acclimatization, II: 974; V: 5827; VI: 7244  
anoxia, I: 108, 109, 771; II: 974, 1392, 2076, 2205;  
IV: 3697, 4031, 4032; V: 5913, 5941;  
VI: 7344, 7350; VII-X: 10539, 10541, 10628  
apnea, IV: 4173  
carbon dioxide, VI: 6927; VII-X: 12142  
cold, IV: 4724; V: 6028, 6031, 6135; VI: 7439  
environmental temperature, V: 6063  
hypercapnia, II: 1326  
hyperthermia, VII-X: 10720, 10779  
hyperventilation, II: 2205; VI: 6927; VII-X: 8855  
hypothermia, III: 2471; IV: 4650, 4673, 5113;  
V: 5372, 5427, 5451; VII-X: 8956, 9028, 9042,  
9043  
immersion, VII-X: 9120, 10226  
motion sickness, VI: 7820  
negative pressure breathing, II: 2095; III: 2783,  
3469; IV: 5036; VI: 6814  
nuclear radiations, VII-X: 11428  
physical work, VI: 7559, 7562; VII-X: 10720; 11109  
positive acceleration, VII-X: 10073, 10132, 10134  
postural change, V: 6171  
posture, V: 6168, 6172; VII-X: 11442  
Salyrgan, I: 108  
transversal acceleration, VII-X: 10201  
vasopressin, VII-X: 11428  
water intake, VI: 6930  
relation to:  
age, VI: 6931  
diurnal cycle, VII-X: 8556  
respiration, VII-X: 8822
- KINESTHESIA** *see* Proprioception
- KINETIC VISUAL ACUITY** *see* Dynamic visual acuity
- KITCHEN FACILITIES** *see under* Airplanes; Space vehicles
- KITS** *see* Medical kits; Survival kits
- KNEE JERK REFLEX** *see* Patellar reflex
- KNOBS** *see* Control knobs; Door knobs
- KOREAN CAMPAIGN** *see under* Air transportation of patients; Flight surgeons, duties; Military medicine
- LABORATOIRE MÉDICO-PHYSIOLOGIQUE DE BRETIGNY**, VI: 6755
- LABORATORIES (TRANSPORTABLE)**, VI: 7919
- LABORATORY FACILITIES** *see under* Physical examination
- LABYRINTH** (*see also* Cochlea; Equilibrium; Vestibular disturbances; Vestibular habituation; Vestibular reflexes; Vestibular training)  
abnormalities  
effects on spatial orientation, VII-X: 9475  
action potentials *see* Labyrinth, electrical potentials  
anatomy, V: 5608  
effects of:  
acceleration, I: 408; II: 1474, 1550; III: 2852, 2975, 3057, 3412; IV: 4501; VI: 7205; VII-X: 9505, 12063, 12557  
research methods, VII-X: 10107  
acrobatic flight, VII-X: 10036  
airplane flight, II: 1439; III: 2401; V: 5772  
auditory stimuli, V: 6085  
caloric stimuli, III: 3059; VII-X: 9460  
drugs, VI: 6906; VII-X: 9180, 11989  
acetylsalicylic acid, II: 2859  
codeine, II: 2859  
diisopropyl fluorophosphate, III: 3373  
meperidine, II: 2859  
methadone, II: 2859  
morphine, II: 2859  
motion sickness drugs, III: 3062  
opium, II: 2859  
electrical stimuli, II: 1010, 1665  
hypothermia, VI: 6900  
jet engine noise, VII-X: 10947  
noise, II: 952; VII-X: 11007, 11013, 11059  
rotation (*see also* Cupulogram), I: 99, 253, 407, 616, 620; II: 996, 1447, 1500, 1501, 1502, 1528, 1529, 1550, 1666, 1819, 1877, 1878, 1898, 2299; III: 3058, 3060, 3433, 3445, 3446; V: 5796; VII-X: 11036, 10080  
test methods, III: 3434; IV: 4666; V: 5610  
sound, VII-X: 11052  
subgravity, I: 475; II: 931; III: 2319; IV: 4964; VI: 7241; VII-X: 10261  
vibration, VII-X: 11013, 11049  
electrical potentials, VI: 7049  
effects of rotation, III: 2698; IV: 4666  
examination, III: 3059, 3061; VII-X: 9665  
function tests, IV: 4497, 4702; V: 5605; VI: 7914, 7925; VII-X: 9457, 9495, 11515, 11703, 11708, 12048, 12063  
handbooks and treatises, V: 5606

- oxygen tension  
 effects of sound, VII-X: 9407  
 pathology, VII-X: 11920  
 relation to:  
   nystagmus, VII-X: 11883  
   spatial orientation, VII-X: 9469  
 physiology, II: 1497, 1529, 1818; III: 2701; V: 5605, 5608; VI: 7043, 7044, 7048; VII-X: 9451, 9457, 9458  
 congresses, meetings, and symposia, VII-X: 8395  
 handbooks and treatises, V: 5606  
 research methods, VII-X: 12735  
 relation to:  
   equilibrium, II: 1665, 1876; III: 3339; VII-X: 12048  
   muscular function, II: 1490  
   neuromuscular reactions, II: 1447; VII-X: 9494  
 role in:  
   motion sickness, V: 6334; VII-X: 11830, 11848  
   passive motion perception, VII-X: 9462, 9463  
   postural reflexes, VI: 7046; VII-X: 10257  
   spatial orientation, I: 410, 411, 556, 903; II: 1079, 1482, 2166; IV: 3827, 5185; VI: 7052; VII-X: 9470, 9480, 9674, 10140, 10268  
 stimulation see Vestibular stimulation
- LACK OF ADAPTATION see under Flight duty; Hot climates
- LACTATE CONTENT see under Blood
- LACTIC ACID CONTENT see under Blood; Brain
- LACTIC ACID METABOLISM  
 effects of:  
   altitude acclimatization, IV: 3830  
   anoxia, III: 3577; IV: 5104  
   oxygen breathing, V: 5367  
 relation to work capacity, V: 6117
- LAMBLIASIS see Giardiasis
- LANDING see Aircraft landings; Instrument l.; Lunar l. Visual l. Also see under Space vehicles
- LANDING STRIPS  
 human engineering, IV: 4363
- LATENT NYSTAGMUS see Nystagmus (Latent)
- LAUNCHING see Balloon launching
- LEAD POISONING  
 treatment, VII-X: 12123
- LEADERSHIP, I: 653; II: 1231, 1530, 1531, 1587, 1589, 1632, 1846; III: 2941, 2944, 2945, 2946, 3329, 3421, 3614, 3688; IV: 4368, 4986; V: 6256; VII-X: 9722  
 bibliography, II: 2039  
 effects on:  
   team morale, IV: 4943  
   team performance, IV: 4943; V: 6244  
 relation to physical fitness, III: 2964; VI: 7738  
 test methods, III: 2500, 2876, 3250; IV: 3828, 4305, 4735; V: 5719; 6189; VI: 7148; 7722; VII-X: 9726, 9728, 9764, 11535, 11564
- LEARNING (see also Practice; Training), I: 160, 711, 712, 713, 714; II: 946; 947, 983, 1024, 1095, 1397, 1494, 1667, 1723, 1726, 1727, 1764, 1999, 2098, 2109, 2113, 2186; III: 2498, 2772, 2869, 3089, 3222, 3365; IV: 4292; VII-X: 9649  
 analysis, III: 3382; IV: 4250; VI: 7139; VII-X: 9681  
 animal experiments, VII-X: 9672; 9679, 9680, 9686, 9708, 9709, 9714, 11294  
 effects of:  
   anxiety, II: 1292, 2163; III: 3159; IV: 4661; V: 5722; VII-X: 9727  
   cold, VII-X: 10842  
   cold acclimatization, VII-X: 10842  
   information feedback, VII-X: 9578  
   ionizing radiations, VII-X: 11294, 11322, 11355  
   misinformation, IV: 4671  
   motivation, II: 2024  
   nuclear radiations, VII-X: 11358, 11426  
   sensory deprivation, V: 6134; VI: 7616  
   sleep deprivation, VI: 7593  
   visual displays, V: 5711  
   X-rays, VII-X: 11362  
 in instrument flight, IV: 4855  
 in visual flight, IV: 4855  
 psychological factors, IV: 4597; VII-X: 9686, 9704  
 relation to ocular dominance, VII-X: 9710  
 role of practice, VII-X: 11656  
 social factors, VII-X: 9767  
 tests, IV: 4713; V: 6240  
 transfer of training, V: 5716; VII-X: 9580
- LEFTHANDEDNESS see Handedness
- LEG INJURIES, I: 261; VI: 7852  
 caused by parachute jumping, III: 3276
- LEGAL ASPECTS see under Air transportation of patients; Airplane noise; Aviators, occupational diseases; Fatigue; Personnel, occupational diseases; Personnel, occupational hazards; Space flight
- LEGIBILITY see under Charts; Letters and numerals. Also see subdivisions Intelligibility; Interpretation; Recognition. Also see Scale reading
- LEISURE TIME ACTIVITIES, VII-X: 12474
- LENSES see Contact lenses
- LERGIGAN  
 use in motion sickness, I: 230, 231, 233, 234, 236, 768; II: 1225
- LETTERS AND NUMERALS (see also Printed words)  
 legibility, I: 79, 276, 581, 582, 760; II: 1005, 1156, 1778; III: 2630, 3064, 3114; IV: 4562, 4987, 4988; V: 6642; VI: 8187, 8199, 8206, 8236; VII-X: 9267  
 effects of motion, VI: 6966  
 physical factors, VI: 7003; VII-X: 9268
- LEUKEMIA  
 effects of altitude, VII-X: 10367  
 effects on air transportability, VII-X: 10367
- LEUKOCYTES see Blood cells
- LEVERS see Control levers; Hand cranks
- LICORICE see Glycyrrhizin
- LIFE (see also Extraterrestrial life; Plant l.; Terrestrial l.)  
 evolutionary aspects, VII-X: 8712  
 origin (see also Prebiochemistry), VI: 6795, 6797, 6798; VII-X: 8674; 8680, 8702, 8703, 8712, 8727, 8728, 8730  
 suspension, VII-X: 9034  
 caused by cold, III: 2462; VII-X: 9078
- LIFE CONDITIONS see under Earth; Mars; Moon; Planets; Venus
- LIFE EXPECTANCY (see also Age. See also under Aviators. See Also Vital statistics under Pilot candidates)  
 animal experiments, VII-X: 9839, 10764  
 effects of:  
   cold acclimatization, VII-X: 10764, 10786  
   heat, VII-X: 9839  
   ionizing radiations, VII-X: 9839
- LIFE PRESERVERS, V: 6537  
 hazards, VII-X: 12214
- LIFE RAFTS, II: 1366  
 color, I: 34, 144; II: 1785
- LIFTING see Weight lifting
- LIGHT ADAPTATION see Retinal adaptation
- LIGHT DEPRIVATION see Visual deprivation
- LIGHT FILTERS see Optical filters
- LIGHT SIGNALS see Signal lights
- LIGHT STIMULI (see also Color stimuli; Intermittent light; Visual stimuli)  
 cause of pupillary reactions, V: 5538; VI: 6952  
 detection  
 thresholds, VI: 6959

- effects on:  
 auditory perception, II: 1489; IV: 4884  
 auditory thresholds, VII-X: 9386  
 blinking, VII-X: 9278  
 brightness discrimination, II: 1051, 1300  
 chronaxia, VII-X: 9150  
 color adaptation, II: 1683  
 dark adaptation, I: 864; II: 1387, 1427, 1779, 1825, 1854; VI: 8225; VII-X: 9314  
 electrical potentials of visual cortex, VII-X: 9158, 9315  
 electroencephalogram, I: 853, 906; II: 1168, 2112, 2202, 2203, 2204; III: 2855, 3572, 3573; V: 5531; VII-X: 8977, 9159, 9162, 9163, 9322, 11467  
 electroretinogram, II: 1796, 2112; VI: 6949, 6950; VII-X: 9164; 9331, 9322  
 eye movements, II: 1444; VII-X: 9788  
 night vision VII-X: 9214  
 nystagmus, VII-X: 9554  
 oxygen consumption, III: 2961, 3154  
 reaction time, II: 2002  
 retinal adaptation, I: 198, 294, 480, 864; II: 1135, 1426; V: 5521  
 scale reading, VI: 8225  
 spatial orientation, I: 424  
 velocity discrimination, III: 2548  
 frequency estimation, VI: 6958
- LIGHTING** *see* Illumination  
**LIGHTS** *see* Signal lights  
**LINK TRAINERS** *see* Flight simulators  
**LIPASE** *see* Lipase content *under* Blood  
**LIPEMIA** *see* Blood, lipid content; Hyperlipemia  
**LIPID CONTENT** *see under* Blood; Blood plasma  
**LIPID METABOLISM**  
 effects of:  
 altitude acclimatization, VII-X: 10397  
 anoxia, III: 3049  
 cold, III: 2888; IV: 3813, 5080, 5081; V: 5749, 6000, 6013, 6014, 6026, 6047; VI: 7465; VII-X: 10816, 10817; 10818, 10819, 10820, 10821, 10893, 10898  
 cold acclimatization, III: 3280, 3452; VI: 7441; VII-X: 10397, 10713, 10815, 10818, 10840  
 environmental temperature, IV: 4728, 5196  
 ethionine, V: 6014  
 flight duty, VII-X: 9813  
 heat acclimatization, VII-X: 10397  
 impact, VII-X: 10102  
 physical work, IV: 3813; V: 5749; VI: 7561  
 sensory deprivation, VII-X: 11262  
 starvation, IV: 3812; VII-X: 10819, 10821, 11484  
 stress, IV: 3813; V: 5749  
 tissue trauma, II: 1992, 1993; III: 3201, 3202, 3203, 3358
- relation to:  
 cardiovascular diseases, II: 1820; III: 3203  
 oxygen consumption, IV: 4728
- role of:  
 adrenal glands, IV: 4728; V: 5274  
 hypophysis, III: 3049
- LIPIDS** (*see also* Steroids)  
 effects on:  
 altitude tolerance, VII-X: 10354  
 cold tolerance, VI: 7430  
 relation to arteriosclerosis, VII-X: 10285
- LIPOIC ACID**  
 effects on:  
 blood plasma, VII-X: 12005  
 fatigue, VII-X: 11146  
 mental performance, VII-X: 12005
- LIPOIDS** *see* Lipids  
**LIPOPROTEINS** *see* Lipid metabolism
- LIPSTICKS**  
 effects of oxygen, VII-X: 12450
- LIQUID DIETS**  
 in high altitude flight, IV: 4366; VI: 8263; VII-X: 12855
- LISERGAN**  
 use in motion sickness, I: 142, 336
- LISTENING PERFORMANCE** (*see also* Speech, intelligibility), V: 5548, 5589  
 effects of noise, IV: 4775; V: 5584  
 physical factors, IV: 4997  
 relation to psychomotor performance, IV: 4076  
 tests, VII-X: 9434
- LITTERS** *see* Stretchers
- LIVER**  
 effects of:  
 altitude, III: 3437  
 altitude acclimatization, I: 237  
 anoxia, III: 2936; V: 5936, 5938  
 cold acclimatization, VII-X: 10746  
 hypothermia, V: 5286  
 mental stress, IV: 4691  
 starvation, V: 5936  
 ultrasonic vibrations, VI: 7478  
 examination, III: 3396  
 metabolism  
 effects of:  
 altitude, I: 362  
 altitude acclimatization, VII-X: 10340, 10450  
 anoxia, IV: 3794, 4489; V: 5920  
 ascorbic acid, III: 2658  
 carbon dioxide, IV: 4457  
 cold, III: 2658, 3452, 3642; IV: 4617, 5145; V: 5989, 6013, 6014; VII-X: 8642, 10745, 10816, 10819, 10821, 10841, 10900  
 cold acclimatization, VII-X: 10713, 10743, 10748, 10749, 10815, 12369  
 diet, IV: 4809; VII-X: 9128, 10900  
 emergency rations, VII-X: 12369  
 food intake, VII-X: 9128  
 hypothermia, V: 5409, 5411, 5413; VII-X: 8961  
 starvation, IV: 4617; VII-X: 9128, 10819, 10821  
 relation to diurnal cycle, V: 5265, 5267; VII-X: 8548  
 role of adrenal glands, V: 5274  
 role in:  
 hibernation, VII-X: 8642  
 potassium metabolism, IV: 4601
- LIVER FUNCTION**  
 effects of hypothermia, IV: 4304; VII-X: 8961  
 relation to diurnal cycle, VII-X: 8556
- LOCALIZATION** *see under* Sound; Visual stimuli
- LOCOMOTION**  
 analysis, VII-X: 9575  
 effects of:  
 magnetic shoes, VII-X: 10270  
 subgravity, VII-X: 10227, 10254
- LONGEVITY** *see* Life expectancy
- LOUDNESS** *see under* Sound; Speech
- LOUDNESS DISCRIMINATION**, I: 709, 710; II: 2167; IV: 4811, 4816; V: 5596; VII-X: 9410  
 effects of noise, II: 1203; VII-X: 9411, 11044  
 measurement, IV: 5009, 5069  
 relation to binaural hearing, VII-X: 9393  
 test methods, I: 191; III: 3333; IV: 5008; V: 5577, 5578; VII-X: 9389  
 tests, IV: 3848; V: 5588, 5597; VI: 7020; VII-X: 9375, 9376, 9384, 9397, 9413  
 thresholds, IV: 5069
- LOW ALTITUDE** *see* Bailout at low altitude; Ejection from aircraft at low altitude
- LOW ALTITUDE FLIGHT**  
 visual problems, VII-X: 9303

- LOW PRESSURE see Altitude
- LOW PRESSURE CHAMBERS see Decompression chambers
- LOW TEMPERATURE see Cold; Hypothermia
- LUBRICANTS (see also Engine oils)  
hazards, IV: 3707  
toxic effects, III: 3564; VII-X: 12105
- LUCIDRIL  
effects on acceleration tolerance, VII-X: 10149
- LUNAR ATMOSPHERE see Moon, atmosphere
- LUNAR CYCLE  
relation to:  
activity rhythm, V: 5257  
biological rhythms, IV: 3895; VII-X: 8558
- LUNAR EXPEDITIONS, III: 3451, 3600; V: 5224, 5225, 5303; VI: 6710, 6716, 8240; VII-X: 8272, 8294, 8306, 8489, 8500, 8669, 8673, 8686, 8690, 8713, 8714, 8719, 8723, 11290, 11744, 11800, 12255, 12486, 12597, 12891
- LUNAR LANDINGS, VII-X: 12543
- LUNAR STATIONS  
equipment, VII-X: 8726
- LUNG (see also Alveolar carbon dioxide tension; Alveolar oxygen tension; Carbon monoxide, diffusion in lung; Intrapulmonary pressure; Pulmonary blood vessels; Pulmonary circulation; Respiration)  
effects of:  
altitude, II: 1169; VII-X: 12085  
anoxia, I: 404, 470; II: 1264, 1432; III: 2622  
blast, I: 225, 226; III: 2576, 2597  
carbon dioxide, V: 5358  
cold air breathing, VI: 6868  
explosive decompression, I: 418, 623, 855, 856, 868; II: 1432, 1477, 1656, 2208, 2249; III: 2597, 2891, 3340, 3592; IV: 4319; VI: 7266, 7268, 7289, 7299, 7319; VII-X: 10429  
flight duty, VII-X: 11903  
hyperoxia, I: 126, 127; II: 1054; III: 2418, 2832, 2845; IV: 4282; V: 5314, 5326; VII-X: 8874, 8896, 8904  
negative acceleration, IV: 3809  
oxygen breathing, IV: 4283; V: 5358; VI: 6829  
pressure breathing, II: 1656; III: 3340  
examination, VI: 7921; VII-X: 12087  
use of roentgenogram, VII-X: 10406, 12076  
function tests, I: 181, 820; III: 3171, 3172, 3418; IV: 3816, 4907; V: 5361; VI: 6832, 7902, 7909; VII-X: 8807, 8808, 8809, 8823, 8875, 12042, 12080, 12081, 12084, 12085, 12091  
use of electroencephalogram, VII-X: 12068  
mechanical properties, V: 5945  
metabolism, IV: 3867  
pathology (see also Pneumothorax; Pulmonary diseases; Pulmonary edema), II: 1322  
caused by:  
acceleration, VII-X: 11990  
oxygen breathing, VII-X: 11990  
effects on air transportability, I: 303  
physical properties, II: 1808; VI: 6817, 6839  
temperature  
effects of explosive decompression, II: 2210
- LUNG INJURIES  
caused by impact, IV: 5012
- LYMPH  
effects of anoxia, V: 5956
- LYMPH FLOW  
effects of anoxia, III: 3028; V: 5956
- LYSERGIC ACID DERIVATIVES  
general psychological effects, VII-X: 11218
- MACHINE ANALOGS  
of brain activity, VII-X: 12626, 12763  
of cochlea, VII-X: 12769  
of heat loss, VI: 6861  
of mental performance, VII-X: 12626  
of nervous system, VI: 7128  
of psychomotor performance, V: 5683; VI: 7108  
of respiration, VII-X: 12746  
of sensory perception, VII-X: 8504, 12626, 12743, 12765  
of temperature regulation, VII-X: 12638, 12773
- MACHINES see Computers; Man-machine systems; Teaching machines
- MAGNESIUM METABOLISM  
effects of cold acclimatization, VII-X: 10836
- MAGNETIC FIELDS  
general physiological effects, VII-X: 11433
- MAGNETIC SHOES, VII-X: 10270, 12268, 12269  
effects on locomotion, VII-X: 10270
- MAGNIFICATION see Instrumental magnification
- MAINTENANCE PERSONNEL  
classification, II: 1271  
medical care, VII-X: 11796  
occupational deafness, II: 2233; III: 3078; IV: 3707, 4480; V: 6084; VI: 7827, 7843, 7864; VII-X: 9396, 9430, 11874, 11976  
occupational diseases, VII-X: 11973  
prevention, IV: 4090  
occupational hazards, III: 3266, 3284, 3408; V: 6429, 6556, 6566; VII-X: 11796, 11936  
performance, I: 151, 485; II: 959, 2100, 2228, 2272; VI: 7741  
test methods, II: 2094; III: 2969, 3473  
tests, II: 1636; VI: 7725  
rating, I: 412, 486; II: 1636; VI: 7671  
selection, I: 485, 486; II: 1271; V: 6179; VII-X: 11544, 11648  
training, II: 961, 963; III: 2350, 2351, 2354; IV: 3703, 4956; V: 6179, 6221, 6239; VI: 7682  
France, VI: 7693  
prediction of success, VII-X: 11544, 11647, 11648
- MALARIA, III: 3607  
effects of:  
altitude, V: 6345  
altitude acclimatization, IV: 5143  
incidence in:  
aviators, IV: 3720  
inhabitants of mountains, V: 6346
- MAMMALS (see also Bears; Cats; Chimpanzees; Horses; Monkeys; Space dogs; Swine)  
body composition, VII-X: 11499
- MANEUVER see Flight maneuvers; Respiratory m.; Valsalva m.
- MANHIGH PROJECT see Balloon flights
- MANIKINS see Dummies
- MANIPULATION TESTS see Manual dexterity, tests
- MAN-MACHINE SYSTEMS (see also Psychomotor performance, analysis), III: 2325, 2803, 3034; IV: 3709, 3740, 3843, 3882, 4018, 4120, 4232, 4235, 4703, 4766; V: 5755, 6578, 6592, 6595, 6643, 6653, 6667, 6672; VI: 6744, 7177, 8113, 8131, 8133, 8136, 8137, 8142, 8144, 8146, 8147, 8150, 8155, 8214, 8228; VII-X: 9591, 9600, 9612, 9817, 9978, 11744, 12422, 12454, 12458, 12462, 12466, 12467, 12470, 12477, 12478, 12482, 12488, 12494, 12496, 12497, 12498, 12503, 12505, 12509, 12515, 12516, 12518, 12519, 12520, 12522, 12525, 12532, 12538, 12543, 12545, 12547, 12577, 12584, 12611, 12645, 12701, 12715, 12801  
bibliography, V: 6591  
handbooks and treatises, VI: 8152  
human engineering, VII-X: 12504, 12508, 12511, 12513  
research, VII-X: 12483  
research methods, VII-X: 12506, 12512  
social factors, VII-X: 9766, 9980

- MAN-MADE SATELLITES** (see also Space stations),  
 III: 3087; VII-X: 12471, 12529  
 equipment, VII-X: 12459, 12475  
 handbooks and treatises, VII-X: 12531  
 human engineering, VI: 8135, 8139; VII-X: 9866,  
 10273, 12455, 12472, 12487, 12521, 12523,  
 12535
- MAN-PROPELLED AIRCRAFT**, VII-X: 12491, 12540,  
 12542
- MANNED SATELLITE FLIGHT** see Space flight  
 (Orbital)
- MANUAL DEXTERITY**  
 effects of:  
 cold, V: 6023; VI: 7396, 7438, 7446, 7463; VII-X:  
 10683, 10822  
 gloves, VII-X: 12232  
 tests, I: 736; III: 2907
- MANUALS** see items under Handbooks and treatises
- MAREZINE** see Cyclizine
- MARROW** see Bone marrow
- MARS (PLANET)**  
 atmosphere, III: 2677, 3120, 3457; IV: 4244; V: 5224,  
 5294, 5297, 5302; VI: 6780; VII-X: 8724  
 expeditions, V: 5210, 5215; VI: 6710, 6723, 6724;  
 VII-X: 8689, 12476  
 life conditions, I: 810; II: 2146, 2147, 2148; III: 3512;  
 V: 5295, 5296, 5297, 5298, 5302, 5304, 5215;  
 VI: 6784, 6787, 6789, 6790, 6791, 6793;  
 VII-X: 8671, 8677, 8678, 8679, 8682, 8696,  
 8698, 8705, 8711, 8721, 8722  
 plant life, VII-X: 8672
- MASKS** (see also Oxygen masks)  
 evaluation, II: 1754; VI: 8007
- MAST CELLS**  
 effects of cold, VI: 7429
- MATERIALS**  
 toxicity, VI: 7941; VII-X: 12104, 12108, 12109  
 test methods, VI: 7943
- MEALS** see Diet; Food intake
- MEASUREMENTS** see Body measurements. Also see  
 Measurement under items measured; e.g., Acceleration,  
 measurement; Cerebral circulation, measurement;  
 Cosmic rays, measurement
- MECHANICAL PROBLEMS** see Problem solving  
 (Mechanical)
- MECHANICAL RESISTANCE**  
 effects on respiratory movements, V: 5347
- MECHANICAL RESPIRATORS** see Respirators  
 (Mechanical)
- MECHANICS (Personnel)** see Maintenance personnel
- MECLIZINE AND DERIVATIVES**  
 effects on brain activity, VII-X: 11992  
 use in motion sickness, IV: 4460, 5023; VII-X: 11867
- MEDICAL ATTENDANTS**  
 duties, III: 2419; V: 6401  
 training, I: 302, 807; IV: 4052
- MEDICAL CARE** see under Aviators; Maintenance personnel;  
 Passengers; Personnel; Pilots. Also see  
 Dental care; Neuropsychiatric care; Royal Flying  
 Doctor Service, Australia
- MEDICAL EXAMINATION** see Neuropsychiatric examination;  
 Physical examination
- MEDICAL HISTORIES** see under Astronauts; Aviators
- MEDICAL KITS**, II: 1748  
 use in parachute jumping, III: 2394
- MEDICAL PERSONNEL** (see also Flight nurses; Flight  
 surgeons; Medical attendants; Medical teams; Pharmacists;  
 Psychiatrists; Space flight nurses; Space flight  
 surgeons)  
 air transportation, I: 57; IV: 5192; V: 6411  
 duties, II: 956, 998, 1852; III: 3243; VI: 7793  
 France, I: 157  
 orientation and guidance, III: 3140  
 selection, VII-X: 11512  
 training, II: 1896, 1899; III: 3140
- MEDICAL SERVICE** see Emergency medical service
- MEDICAL SUPPLIES** see Aeroplast; Medical kits
- MEDICAL TEAMS** (see also Parachute medical teams;  
 Rescue medical teams)  
 air transportation, V: 6387
- MEDICINE** see Aerospace medicine; Aviation m.; Military  
 m.; Occupational m.; Preventive m.; Psychosomatic  
 m.; Space m.
- MEETINGS** see under Congresses, meetings, and  
 symposia
- MEGAPHEN** see Chlorpromazine
- MEMORY** (see also Retention under Messages)  
 effects of:  
 anoxia, III: 2506; IV: 5068; VII-X: 10527  
 explosive decompression, III: 3135  
 hypothermia, V: 5463; VII-X: 9064  
 oxygen breathing, III: 3337  
 starvation, II: 1663  
 role in pattern discrimination, IV: 3756  
 tests, IV: 3883; VI: 7154  
 time factors, VI: 7154
- MENIÈRE'S SYNDROME** see Labyrinth, pathology
- MENINGES**  
 electrical potentials  
 effects of:  
 anoxia, V: 5346  
 carbon dioxide, V: 5346
- MENISCOCYTOSIS** see Sicklemia
- MENSTRUATION** (see also Ovulation)  
 effects on:  
 equilibrium, II: 2038  
 spatial orientation, II: 2038
- MENTAL ABILITY** (see also under Officer candidates;  
 Officers; Pilot candidates. See also Memory)  
 relation to:  
 age, VI: 7783  
 anxiety, IV: 4453  
 motivation, VII-X: 9743  
 originality, VI: 7145  
 pilot training, VII-X: 11678  
 training, III: 3548  
 vigilance, VII-X: 9754  
 visual accommodation, I: 258  
 test methods, V: 5718; VI: 7155  
 tests, I: 849, 907; III: 2970
- MENTAL DISEASES**  
 caused by flight duty, VII-X: 9773  
 effects on air transportability, I: 808; III: 2419, 3509;  
 IV: 3854; V: 6409; VI: 7881, 7888; VII-X:  
 12020  
 incidence in pilots, VII-X: 9771  
 social factors, VII-X: 9772
- MENTAL FATIGUE**, II: 1024  
 reviews, II: 1646
- MENTAL PERFORMANCE** (see also Decision making  
 performance; Problem solving; Reasoning)  
 effects of  
 acceleration, VII-X: 10138  
 advance information, II: 1809, 1810  
 altitude, VII-X: 10315, 10359  
 anoxia, I: 164, 167; III: 2486, 2487; IV: 4688, 5024;  
 V: 5933, 5943, 5960; VI: 7353, 7358  
 anxiety, II: 1647; III: 3159; VI: 7146; VII-X: 11184  
 auditory fatigue, V: 5760  
 drowsiness, VII-X: 9177  
 drugs, VI: 7876  
 Benadryl, I: 689; II: 1917  
 dimenhydrinate, I: 689; II: 1917  
 glycyrrhizin, IV: 4309  
 motion sickness drugs, IV: 4761  
 scopolamine, I: 689; II: 1917; IV: 3716



- environmental temperature, VII-X: 9853  
 fatigue, IV: 4416  
 heat, II: 1047; VI: 7390; VII-X: 10681  
 humidity, VII-X: 9853  
 hypercapnia, III: 2486, 2487  
 hyperoxia, I: 164, 167  
 hypothermia, V: 5373  
 ionized atmosphere, VII-X: 11474  
 lipoic acid, VII-X: 12005  
 mental stress, II: 1647, 1710; III: 3504  
 mental work, VII-X: 11185  
 noise, II: 1809, 1810; III: 2971; IV: 3736, 4416, 4874; V: 5760, 6091; VI: 7497; VII-X: 10941, 11046, 11057  
 pain, V: 6173  
 physical work, VII-X: 11131  
 sensory deprivation, VII-X: 11210, 11267  
 simulated space flight, VII-X: 11204  
 sleep deprivation, IV: 3953, 3954; VI: 7603  
 social isolation, VII-X: 11232, 11244  
 subgravity, III: 2601  
 fatigue, II: 1646  
 general physiological effects, VII-X: 9890  
 machine analogs, VII-X: 12626  
 of chimpanzees, VII-X: 9706  
 psychological factors, II: 1809, 1810  
 relation to:  
   age, V: 6294; VI: 7771, 7776; VII-X: 11767  
   diurnal cycle, IV: 3846  
   electroencephalogram, VII-X: 9164  
   muscular tonus, VII-X: 9688  
   personality, IV: 3736  
   work-rest cycle, VII-X: 11690  
 test methods, IV: 4839  
 time factors, VII-X: 9688  
 transfer of training, II: 1723
- MENTAL STRESS** (see also Anxiety)  
 effects on:  
   adrenal glands, III: 2770  
   blood, II: 1925  
   blood cells, II: 1320; VI: 7175  
   blood plasma proteins, V: 6130  
   circulation, II: 1776  
   flicker fusion frequency, III: 2558  
   galvanic skin response, VII-X: 11183  
   gastric secretion, III: 3153  
   hippuric acid metabolism, II: 1925  
   kidney, IV: 4408  
   liver, IV: 4691  
   mental performance, II: 1647, 1710; III: 3504  
   psychomotor performance, I: 884; III: 2642, 3472, 3663; VII-X: 9591  
   pulse rate, VII-X: 11183  
   reasoning, II: 1761  
   testis, IV: 4407  
   time estimation, VII-X: 11182  
 general physiological effects, IV: 5011; VI: 7608; VII-X: 9907, 11181  
   bibliography, VI: 7607  
 general psychological effects, VI: 7608; VII-X: 11181  
 in jet plane piloting, II: 1598  
 role of:  
   adrenal glands, VII-X: 11178  
   hypothalamus, VII-X: 11178
- MENTAL WORK**  
 effects of noise, VII-X: 10994  
 effects on:  
   brain metabolism, IV: 4989  
   cerebral circulation, IV: 4989  
   circulation, III: 3290  
   electroencephalogram, VII-X: 9151  
   flicker fusion frequency, VII-X: 9252  
   mental performance, VII-X: 11185  
   nystagmus, VII-X: 9151, 9484  
   respiration, III: 3290
- MEPERIDINE**  
 effects on:  
   labyrinth, II: 2859  
   respiration, IV: 5026
- MEPROBAMATE**  
 general physiological effects, VII-X: 11996  
 general psychological effects, VII-X: 11996
- MESCALINE**  
 effects on:  
   brain metabolism, IV: 4093  
   cerebral circulation, IV: 4093
- MESSAGES**  
 intelligibility, II: 1117, 1148, 1149, 1150, 1672; III: 3306, 3553; IV: 3890, 4340, 4341, 4342, 4997, 5066, 5141; V: 5548, 5589, 5598; VII-X: 12559  
 effects of task complexity, VII-X: 9149, 9693  
 tests, IV: 3849  
 time factors, VII-X: 9693  
 retention, I: 711, 712, 713, 714; IV: 3890  
 effects of drugs, IV: 4762  
 psychological factors, IV: 4762  
 transmission, V: 5599  
 tests, V: 5743; VII-X: 10937, 12559  
 time factors, IV: 4835
- METABOLIC RHYTHM**  
 effects of cold, V: 6009  
 relation to:  
   activity cycle, VII-X: 8621  
   annual cycle, VII-X: 8641  
   body temperature rhythm, VII-X: 8592  
   cosmic ray cycle, VII-X: 8552  
   diurnal cycle, V: 5274
- METABOLISM** (see also Bacteria, metabolism; Carbon dioxide production; Enzyme activity; Oxygen consumption. See also metabolism of individual substances: Acetylcholine metabolism; Amino acid m.; Ascorbic acid m.; Carbohydrate m.; Carotene m.; Chloride m.; Citrate m.; Electrolyte distribution; Electrolyte m.; Glucose m.; Glutamine m.; Hippuric acid m.; Histamine m.; Iodine m.; Iron m.; Ketone m.; Lactic acid m.; Lipid m.; Magnesium m.; Nicotinic acid m.; Nitrogen m.; Nucleic acid m.; Oxygen m.; Phosphorus m.; Potassium m.; Protein m.; Riboflavin m.; Sodium m.; Sodium chloride m.; Steroid m.; Succinic acid m.; Sulfhydryl m.; Thiamine m.; Vitamin m.; Water exchange. See also Metabolism under tissues and organs: Adrenal glands; Blood cells; Bone marrow; Brain; Central nervous system; Cochlea; Heart; Kidney; Liver; Lung; Muscular system; Myocardial tissue; Retina; Salivary glands; Skin; Spleen; Testis; Thyroid gland; Tissues)  
 effects of:  
   altitude, III: 3080, 3543; IV: 4632; V: 5845; VII-X: 10394  
   altitude acclimatization, III: 3574; IV: 3976, 4633; V: 5890, 5893; VI: 6858, 7974; VII-X: 10308, 10363, 10396, 10415  
   anoxia, I: 469, 565; II: 1036; VI: 7334, 7352, 7377; VII-X: 10552  
   brain temperature, VII-X: 8963  
   carbon dioxide, III: 2447; VII-X: 12135  
   climate; VI: 6856  
   reviews, V: 6052  
   cold, I: 469; III: 2619, 2659, 2889, 3278, 3461, 3499; IV: 4027, 4613; V: 5429, 5972, 5978, 5982, 6007, 6048; VI: 7389, 7395, 7418; VII-X: 8915, 10740, 10750, 10857, 10900, 10909, 10914, 11770, 12135  
   race factors, IV: 4635; VI: 7768  
   cold acclimatization, III: 2619; IV: 3778, 3976,

- 4040, 4482; V: 5982; VI: 6858, 7406, 7455;  
VII-X: 10661, 10686, 10696, 10698, 10709,  
10750, 10752, 10753, 10758, 10781, 10786,  
10825, 10852, 10859, 10872, 12369
- cold climates, V: 6053; VII-X: 10826, 12371
- diet, III: 2560, 3278, 3499; VII-X: 10900, 12371
- drugs:
- adrenocorticotrophic hormone, VII-X: 9133, 9878
  - ascorbic acid, VI: 7395
  - barbituric acid derivatives, VI: 6925
  - chlorpromazine, IV: 5044
  - flavones, V: 6362
  - glutamic acid, VII-X: 8918
  - glycine, VI: 7869
  - Prednisone, V: 5414
- emergency rations, VII-X: 12369, 12371
- environmental temperature, V: 5988; VI: 7388,  
7440; VII-X: 10394, 10672, 10849, 10925
- fatigue, IV: 3789
- flight duty, VII-X: 9812
- food intake, V: 5988; VI: 6856, 7548; VII-X: 8915,  
8916
- heat, III: 2893; V: 6051; VII-X: 10891, 10894
- heat acclimatization, IV: 3976; VI: 6858
- hibernation, V: 5286; VII-X: 8656
- hyperoxia, IV: 3789
- hyperthermia, VII-X: 9033
- hyperventilation, V: 5368
- hypothermia, V: 5428; VI: 6925, 7377; VII-X: 8978,  
9023, 9032, 9033
- oxygen breathing, VI: 6809; VII-X: 10724
- physical work, II: 1812; III: 2732, 3152, 3534, 3574,  
3587; V: 5368, 6101, 6115, 6116; VI: 6856, 7545,  
7548, 7560; VII-X: 11103, 11113, 11114, 12296
- piloting, V: 5764; VI: 7191
- positive acceleration, VII-X: 10004
- posture, VII-X: 11436
- pressure suits, VI: 8025; VII-X: 12296
- sleep, V: 5988; VII-X: 8915
- space flight, VII-X: 9867
- sport activities, VI: 6855
- starvation, III: 3499, 3534; VII-X: 8916, 8922
- stress, VII-X: 9878
- vibration, VII-X: 10949
- yoga practice, VII-X: 8731
- general physiological factors, III: 3152
- race factors, VII-X: 11779
- relation to:
- age, V: 5995; VI: 7334
  - body temperature, IV: 4219
  - body weight, VII-X: 8917, 8922
  - heat tolerance, III: 2732
  - respiration, IV: 4091; V: 6112
  - temperature regulation, V: 5987, 5999, 6003;  
VII-X: 8969, 8973
- role of adrenal glands, III: 2513
- METARAMINOL**  
effects on positive acceleration tolerance, V: 6364
- METEORITES**  
evidence of extraterrestrial life, VII-X: 8674, 8680
- METEOROIDS**  
hazards, I: 880; VI: 8127, 8128; VII-X: 12449  
protection, VI: 8127, 8128
- METEOROLOGY** *see* Weather
- METHADONE**  
effects on labyrinth, II: 2859
- METHENAMINE**  
effects on anoxia tolerance, IV: 3762, V: 5824
- METHYL BROMIDE**  
toxic effects, II: 1634
- METHYL SILOXANE**  
effects on explosive decompression tolerance, VII-X:  
10389
- METRAZOL (Cardiazol)**  
effects on:  
anoxia tolerance, II: 1400  
electroencephalogram, II: 1168
- MICOREN**  
effects on:  
altitude tolerance, VII-X: 10511  
electrocardiogram, VII-X: 10511
- MICROORGANISMS** (*see also* Bacteria; Fungi)  
effects of simulated space environment, VII-X: 8716
- MICROORGANISMS (AIRBORNE)** (*see also* Bacteria  
(Airborne)), III: 3212  
distribution, III: 2766  
in upper atmosphere, III: 2767, 2768, 3550  
research methods, VI: 6783; VII-X: 8695
- MICROPHONES**  
effects on speaking, III: 3557
- MICROWAVE RADIATION**  
effects on:  
adrenal glands, VII-X: 11351  
blood, VII-X: 11329  
blood coagulation, VII-X: 11379  
body temperature, V: 6145; VII-X: 11413  
brain activity, VI: 7625  
conditioned reflexes, VI: 7625; VII-X: 11411  
cutaneous circulation, VII-X: 11325  
embryonic development, VII-X: 11376  
eye, V: 6143, 6163; VII-X: 11304  
nerves, VII-X: 11369  
nervous system, VI: 7630; VII-X: 11372  
nervous system activity, VII-X: 11352  
reproductive system, VII-X: 11376  
skin temperature, VI: 7631; VII-X: 11325, 11336,  
11377  
testis, VII-X: 11326, 11327  
general physiological effects, II: 1152; IV: 3782;  
V: 6139, VI: 7618; VII-X: 9989, 11288, 11291,  
11324, 11365  
congresses, meetings, and symposia, V: 6161  
research methods, VII-X: 11397  
reviews, VI: 7626; VII-X: 11353  
hazards, III: 2549; IV: 4928; V: 6141, 6149, 6150,  
6155; VII-X: 11286, 11291, 11312, 11313,  
11341, 11342, 11799  
protection, VII-X: 11324, 11341
- MICROWAVE RADIATION TOLERANCE**  
animal experiments, V: 6144; VII-X: 11366, 11413  
effects of environmental temperature, VII-X: 11311  
general physiological factors, VII-X: 11366
- MICTURITION**  
effects of subgravity, VII-X: 10275
- MIDDLE EAR** (*see also* Tympanic muscles)  
effects of:  
altitude, I: 48; V: 5902  
barometric pressure, II: 2154  
explosive decompression, III: 3065; V: 5848  
Valsalva maneuver, II: 1702  
examination, III: 3063  
function tests, IV: 5055  
gas composition  
effects of oxygen breathing, VII-X: 8854  
effects on ear pressure gradient, VII-X: 9391  
pathology *see* Aerotitis media  
physiology (*see also* Hearing), II: 2045; IV: 5158;  
VII-X: 9424, 10366, 10405  
surgery, VII-X: 11922
- MIGRAINE** *see* Headache
- MIGRATORY BIRDS**  
biological orientation, VII-X: 8658, 8660, 8664
- MILITARY MEDICINE** (*see also* Aviation medicine);  
VII-X: 8275  
bibliography, II: 2020  
congresses, meetings, and symposia, VI: 6742

- Korean campaign, II: 2020; III: 2389  
 Russia, VII-X: 8284  
 United States, II: 1852
- MILITARY PSYCHIATRY**, VII-X: 9713  
 bibliography, IV: 4534
- MILITARY PSYCHOLOGY** (see also Aviation psychology), IV: 4355; VII-X: 9713
- MILITARY SERVICE** see Adjustment to military service
- MILK**  
 composition  
 effects of anoxia, II: 1478, 1480; IV: 4253
- MIRROR VISION PERFORMANCE**, II: 1548
- MISINFORMATION**  
 effects on learning, IV: 4671
- MISINFORMATION FEEDBACK**  
 effects on reaction time, VII-X: 9797
- MITOTIC RHYTHM** (see also under Cornea)  
 relation to diurnal cycle, VI: 6770; VII-X: 8548, 8561
- MITOSIS** see Cell division
- MOBILE MEDICAL TEAMS** see Medical teams
- MOISTURE** see Humidity
- MOLDS** see Fungi
- MOMENTS OF INERTIA** see under Animal containers (Sealed)
- MONAURAL HEARING**  
 effects on auditory perception, III: 2482; IV: 3838
- MONITORING DEVICES** (see also Warning devices), VII-X: 12633
- MONKEYS**  
 psychomotor performance, VII-X: 9634  
 training, VII-X: 8477, 9634
- MONOCULAR VISION**  
 relation to:  
 depth perception, I: 301, 740; II: 1068, 1211, 1233, 1451, 2115; III: 2979, 3538; IV: 5047; VII-X: 9515  
 retinal adaptation, V: 5508; VII-X: 9191, 9212  
 size perception, II: 1211, 2115; IV: 4870
- MOON** (see also Lunar cycle; Lunar expeditions)  
 atmosphere, VII-X: 8684, 8694  
 bibliography, VII-X: 8687  
 biological contamination, VII-X: 8277, 8707, 12440, 12443, 12444, 12445, 12447  
 gravitational field, VII-X: 8718  
 life conditions, VI: 6786, 6794; VII-X: 8669, 8670, 8684, 8685, 8686, 8696, 8697, 8701, 8702, 8706, 8707, 8709, 8719, 8723, 8726, 12440
- MORALE** (see also under the various personnel categories, e.g., Aviators, morale)  
 measurement, VII-X: 9683, 11752  
 psychological factors, VI: 7760  
 social factors, VI: 7760; VII-X: 11750  
 test methods, VII-X: 9762
- MORPHINE AND DERIVATIVES**  
 effects on:  
 anoxia tolerance, III: 3529  
 behavior, V: 6375  
 labyrinth, II: 2859  
 psychomotor performance, V: 6356, 6370  
 toxic effects, II: 1205; IV: 4696; VII-X: 10910  
 use in motion sickness, I: 234
- MOSIDAL**  
 use in motion sickness, I: 236
- MOTION** (see also Acceleration; Locomotion; Oscillation; Target motion)  
 effects on:  
 brightness discrimination, V: 5630  
 depth perception, II: 1450, 2222  
 eye movements, V: 5790  
 legibility of letters and numerals, VI: 6966  
 psychomotor performance, VII-X: 9582  
 spatial orientation, V: 5636
- MOTION ESTIMATION**  
 on visual displays, IV: 3873  
 physical factors, IV: 4965
- MOTION PERCEPTION** (see also Dynamic visual acuity; Velocity discrimination), III: 3075  
 aftereffects, VII-X: 9465  
 effects of illumination, II: 2014; III: 3075; IV: 4521; VII-X: 9467  
 physical factors, III: 3074, 3224, V: 5616, 5639  
 relation to:  
 dark adaptation, II: 1593  
 depth perception, VI: 7075  
 size perception, VII-X: 9465  
 role in aircraft landings, IV: 4224  
 test methods, II: 1255  
 tests, IV: 4225, 4240; VII-X: 9199, 9249, 9579  
 time factors, IV: 4521; VII-X: 9579
- MOTION PERCEPTION (ILLUSORY)**, III: 2880; VII-X: 9535  
 general physiological factors, V: 5658  
 relation to dark adaptation, II: 1593  
 tests, IV: 4984
- MOTION PERCEPTION (PASSIVE)** (see also Vibration perception), IV: 3998  
 relation to nystagmus, VI: 7086  
 role of labyrinth, VII-X: 9462, 9463  
 tests, VI: 7045
- MOTION PICTURES** (see also under Aerospace medicine; Deafness, prevention; Hearing, effects of noise; Human engineering; Noise, general physiological effects)  
 as training devices, IV: 4836; VII-X: 12464  
 use in:  
 aerospace medicine research, VII-X: 8464  
 astronaut training, VII-X: 11646  
 pilot training, IV: 4274, 4742, 4933
- MOTION SICKNESS** (see also Space sickness), I: 4, 84, 89, 142, 143, 156, 230, 231, 232, 233, 234, 235, 236, 292, 293, 333, 336, 382, 517, 518, 689, 738, 745, 768, 870; III: 2810; IV: 3924, 4054, 4433, 4715, 5002; V: 6321, 6323, 6328, 6330, 6332; VI: 7812, 7816; VII-X: 11864, 11871  
 animal experiments, VII-X: 11830  
 bibliography, V: 6331  
 caused by:  
 acceleration, VII-X: 11833  
 ejection from aircraft, VII-X: 11818  
 instrument flight, VI: 7798  
 jet plane flight, VII-X: 11849  
 negative acceleration, III: 3122  
 rotation, VII-X: 11830  
 simulated helicopter flight, VII-X: 11850  
 space flight, VII-X: 11834  
 subgravity, VII-X: 11879  
 complications, III: 2810; IV: 5077  
 effects on:  
 kidney function, VI: 7820  
 psychomotor performance, IV: 3718  
 etiology, II: 1216, 2212; III: 3458, 3603; IV: 3990, 4200, 4317, 4615, 4917, 4927  
 general physiological factors, IV: 4007, 4510; VII-X: 11849  
 incidence, I: 458; II: 1534; IV: 3717, 4510  
 physical factors, IV: 4420  
 predisposition, I: 517, 555; III: 3338; IV: 3961, 3990, 4917; VI: 7822; VII-X: 11838  
 psychological factors, VII-X: 11855  
 relation to:  
 cupulogram, V: 5610  
 galvanic skin response, VII-X: 11842  
 personality, VII-X: 11842  
 test methods, II: 1272; III: 3056, 3662; IV: 3717,

- 4104, 4818; VII-X: 11836, 11837, 11866, 12771
- prevention and treatment (see also Motion sickness drugs, evaluation; Vomiting, prevention), I: 4, 84 89, 142, 333, 336, 382, 745, 768; II: 1004, 1228, 1372, 1509, 1914, 1915, 1916, 2180, 2212, 2219; III: 2441, 2860; IV: 3959, 4317, 4917, V: 6325; VI: 6325, 7808; VII-X: 8423, 11818, 11828, 11843, 11867, 12771
- use of hypnosis, VII-X: 11852
- psychological factors, VII-X: 11838, 11858
- relation to:
- fatigue, VI: 7813
  - head movements, I: 517, 518; II: 1629; III: 3338; IV: 4422, 4450; V: 6324, 6325
  - neuroses, II: 1216
  - posture, IV: 4420
- research methods, III: 3501
- reviews, IV: 3957, 4594; V: 6329
- role of:
- autonomic nervous system, I: 738; VI: 7821, 7823 cerebellum, V: 6334
  - labyrinth, V: 6334; VII-X: 11830, 11832, 11848
  - nervous system, IV: 5133
  - visual perception, VII-X: 11833
- use of drugs, see items listed under Motion sickness drugs
- visual factors, VII-X: 11838
- MOTION SICKNESS DRUGS** (see also Amphetamine; Antihistaminics; Antistine; Atropine; Banthine; Barbituric acid derivatives; Belladonna; Benadryl; Bentyll; Buscopan; Chlorpromazine; Cyclizine; Diatrin; Dibenzylene; Dimenhydrinate; Diparcol; Isophenergan; Lergigan; Kemadrin; Lisergan; Meclizine; Morphine; Mosidal; Multergan; Pagitane; Parsidol; Perphenazine; Phenothiazine; Postafene; Probanthine; Prochlorperazine; Promethazine; Pyribenzamine; Pyridoxine; Pyrolazote; Scopodex; Scopolamine; Soventol; Thephorine; Trifluoperazine; Trimeton; Vomex A), IV: 4138, 4715; V: 6328, 6330, 6333; VI: 7816, 7881
- effects on:
- alertness, III: 3062
  - labyrinth, III: 3062
  - mental performance, IV: 4761
  - psychomotor performance, IV: 4761
  - reaction time, III: 3062
  - spatial orientation, VI: 7874
- evaluation (see also Motion sickness, prevention and treatment), I: 230, 231, 232, 233, 234, 235, 236; III: 2395, 2582, 2878, 3048, 3576; IV: 3958, 4510, 5023; V: 6321, 6358, 6367; VII-X: 11817, 11824, 11828, 11982, 11988, 11997, 11999, 12010
- general psychological effects, I: 689
- reviews, VI: 7872
- side effects, III: 2395; IV: 4229
- test methods, V: 6363
- MOTIVATION** (see also Vocational interest; see also under the various personnel categories, e.g., Pilot candidates, motivation), II: 1017, 1018, 1588, 1590; V: 6168; VII-X: 11596
- effects on:
- learning, II: 2024
  - performance, IV: 4186; V: 5712
  - psychomotor performance, III: 3295; VI: 7092
  - work capacity, VII-X: 11721
- relation to mental ability, VII-X: 9743
- MOTOR ACTIVITY**
- effects of:
- anoxia, VII-X: 10618
  - tranquilizers, VII-X: 10618
- relation to temperature regulation, V: 6137
- MOTOR PERFORMANCE** (see also Neuromuscular performance; Psychomotor performance)
- effects of body fat, VI: 6938
  - role of conditioned reflexes, VI: 7132
- MOTOR PERFORMANCE (IMAGINARY)**
- effects on physical training, VI: 7701
- MOUNTAIN SICKNESS** see Altitude sickness
- MOUNTAINS** see Inhabitants of mountains
- MOUTH-TO-MOUTH RESUSCITATION** see Artificial respiration
- MOVEMENTS** see Arm movements; Body m.; Eye m.; Head m.; Jaw m.; Motor activity; Respiratory m.; Shivering. Also see Motion
- MOVIES** see Motion pictures
- MOVING OBJECTS**
- visual perception, VII-X: 9220
  - eye movements, VII-X: 9221, 9222
  - head movements, VII-X: 9222
- MOVING SCALE INDICATORS** see Instrument dials
- MULTERGAN**
- use in motion sickness, I: 236
- MUNITIONS SPECIALISTS**
- training, III: 2353
- MUSCLE TISSUE**
- effects of altitude, I: 257
- MUSCULAR COORDINATION** see Neuromuscular performance
- MUSCULAR FATIGUE**, I: 854
- effects of:
- cold, VII-X: 11149
  - heat, VII-X: 11149
- effects on:
- electroencephalogram, VII-X: 11112
  - electromyogram, VII-X: 11110, 11111, 11158, 11176
- measurement, I: 492; III: 2939; IV: 3977
- MUSCULAR FUNCTION** (see also Electromyogram; Motor activity; Muscular fatigue; Neuromuscular performance; Neuromuscular reactions; Psychomotor performance; Shivering)
- effects of:
- anoxia, I: 492, 854
  - auditory stimuli, VII-X: 9648
  - electrical stimuli, II: 1490
  - hypothermia, VII-X: 9062, 9074
  - physical work, I: 854
  - veratrine, II: 1490
- measurement, VII-X: 9142
- relation to:
- age, II: 1137
  - labyrinth, II: 1490
  - temperature regulation, IV: 4871; V: 5999, 6003
- role in respiration, II: 1193, 1194
- tests, VI: 6939; VII-X: 9145
- MUSCULAR STRENGTH**; VII-X: 9141
- effects of:
- continuous immersion, VII-X: 10243
  - posture, IV: 4387, 4829; VII-X: 11439, 11440, 11441, 11464, 12495
  - starvation, IV: 3903
  - vibration, VI: 7498
- physical factors, V: 6167
- relation to diurnal cycle, VII-X: 8632
- MUSCULAR SYSTEM** (see also Muscular function; Myocardial tissue; Tympanic muscles)
- action potentials see Electromyogram
- effects of:
- altitude acclimatization, I: 257; VII-X: 10328
  - anoxia, I: 386, 492; II: 1421
  - carbon dioxide, I: 758; II: 1421
  - cold, IV: 4536; V: 6006
  - cold acclimatization, VII-X: 10765
  - continuous anoxia, VII-X: 10630
  - physical training, V: 6097

- physical work, I: 257, 854; VII-X: 11089  
 X-rays, I: 373  
 electrical properties  
 effects of anoxia, VII-X: 10487  
 fatigue see Muscular fatigue  
 mechanical properties, VII-X: 10957  
 metabolism (see also Heart, metabolism; Myoglobin)  
 effects of:  
 altitude, V: 5860  
 anoxia, II: 1793, 2097; III: 3577; IV: 5104;  
 VI: 7374, 7376; VII-X: 10610  
 cold, V: 5997  
 electric fields, VI: 7635; VII-X: 11434  
 physical work, VII-X: 11089  
 positive acceleration, IV: 3910  
 sodium-potassium ratio  
 effects of acceleration, VII-X: 10034  
 temperature  
 effects of cold water immersion, VII-X: 10867  
**MUSCULAR TONUS** (see also Dystonia)  
 effects of:  
 acceleration, VII-X: 10071, 10105  
 anoxia, VII-X: 10555, 10556  
 subgravity, VII-X: 10105  
 effects on:  
 ballistocardiogram, VII-X: 8776  
 positive acceleration tolerance, IV: 4256  
 reaction time, VI: 7121  
 measurement, II: 2253  
 relation to:  
 circulation, IV: 4494  
 fainting, IV: 4494  
 fatigue, II: 2253  
 mental performance, VII-X: 9688  
 neuromuscular performance, VII-X: 12237  
 psychomotor performance, III: 2333; V: 5674,  
 5675; VI: 7092; VII-X: 9584  
**MUSCULAR WORK** see Physical work  
**MYOCARDIAL TISSUE**  
 action potentials, VII-X: 8789  
 effects of anoxia, I: 565; II: 1718  
 metabolism, I: 565  
 effects of hypothermia, VII-X: 9016  
**MYOGLOBIN**  
 effects of:  
 altitude, VI: 7284  
 altitude acclimatization, I: 257; IV: 4013, 5109;  
 V: 5894, 5901; VII-X: 10289, 10451, 10452  
 physical work, IV: 4013  
**MYOPIA** (see also Night myopia; Space myopia)  
 effects on depth perception, VII-X: 9489  
 follow-up studies, VII-X: 11696  
 incidence in pilots, VI: 7226  
**NAILS**  
 growth  
 effects of cold acclimatization, V: 6038; VII-X:  
 10730  
**NALORPHINE**  
 effects on:  
 behavior, V: 6375  
 psychomotor performance, V: 6370  
**NARCOTICS** (see also Cocaine; Morphine)  
 effects on vomiting center, III: 3038  
**NASAL PASSAGES** (see also Otorhinolaryngology)  
 congestion  
 effects of:  
 antihistaminics, II: 1438  
 ephedrine, I: 566  
 pathology  
 relation to eye diseases, III: 3378  
**NASAL STIMULATION**  
 effects on:  
 electrocardiogram, II: 2285  
 electroencephalogram, II: 2285  
 respiration, II: 2285  
**NAUTAMINE** see Dimenhydrinate  
**NAVIGATION**  
 role of visual perception, III: 2399  
 training devices, IV: 4178  
**NAVIGATIONAL EQUIPMENT**, VII-X: 9543  
 for orbital space flight, VII-X: 12673  
 for space flight, VII-X: 12641  
 human engineering, II: 1953, 1954, 1955; IV: 4941;  
 VI: 8202, 8215  
**NAVIGATORS**  
 duties, V: 6249  
 performance, V: 6249; VII-X: 9700  
 selection, II: 1745  
**NECK INJURIES**  
 effects on air transportability, IV: 4220  
**NEGATIVE ACCELERATION** see Acceleration  
 (Negative)  
**NEGATIVE PRESSURE BREATHING**  
 effects on:  
 circulation, VI: 6853; VII-X: 8902  
 peripheral circulation, VII-X: 8812  
 pulmonary circulation, VII-X: 8899  
 kidney function, II: 2095; III: 2783, 3469; IV: 5036;  
 VI: 6814  
 respiration, VII-X: 8830, 8903  
 sodium metabolism, VII-X: 8845  
 urine composition, VII-X: 8845  
**NEGROES** see Personnel (Negro)  
**NEOSTIGMINE** see Physostigmine  
**NERVE FUNCTION**  
 effects of:  
 body temperature, VII-X: 9166  
 hyperoxia, VII-X: 8880  
**NERVES** (see also Auditory nerve; Carotid sinus n.;  
 Neuritis; Phrenic n.)  
 action potentials  
 telemetry, VII-X: 12685  
 effects of:  
 anoxia, III: 3011  
 cold, V: 6006  
 hypothermia, VII-X: 9080  
 microwave radiation, VII-X: 11369  
 ultrasonic vibrations, II: 1807  
 pathology, II: 2277  
 physiology, II: 1818  
**NERVOUS SYSTEM** (see also Analyzers; Autonomic  
 nervous system; Brain; Central nervous system;  
 Chronaxia; Nerves; Neuromuscular performance;  
 Neuromuscular reactions; Reflexes; Spinal cord)  
 effects of:  
 blast, III: 3386  
 hyperoxia, VII-X: 8912  
 microwave radiation, VI: 7630; VII-X: 11372  
 machine analogs, VI: 7128  
 role in:  
 altitude tolerance, VII-X: 10325  
 motion sickness, IV: 5133  
**NERVOUS SYSTEM ACTIVITY**  
 effects of:  
 altitude, IV: 3942, 4509  
 altitude acclimatization, III: 2823  
 drugs, VI: 7871  
 hypothermia, V: 5390, 5444; VI: 6926; VII-X: 9051,  
 9097  
 microwave radiation, VII-X: 11352  
 role in:  
 hypothermia tolerance, V: 5440  
 temperature regulation, IV: 3946, 4036; VII-X:  
 9047  
**NETHERLANDS** see under Aviation medicine  
**NEURITIS**, VII-X: 11897

- NEUROMUSCULAR PERFORMANCE** (see also Manual dexterity; Motor performance; Psychomotor performance, Reaction time; Rhythmic ability), VII-X: 9575  
analysis, III: 2736; VII-X: 9641, 9642  
effects of:  
acceleration, VI: 7227  
alcohol, III: 3136  
altitude, II: 1892; VI: 7090, 7255; VII-X: 10320  
anoxia, II: 1009, 1677; VI: 6854, 7337; VII-X: 10497  
anxiety, III: 3394  
body temperature, VII-X: 10728, 10729  
change of acceleration, VII-X: 10085  
clothing, IV: 4901; VII-X: 12237  
cold, I: 119, 595; II: 1765; III: 3136; VII-X: 10728, 10729, 10854  
cold acclimatization, VII-X: 10822  
continuous rotation, VII-X: 10042  
drugs, III: 2898  
fatigue, III: 3394; V: 6126; VI: 7605; VII-X: 11173  
gloves, VII-X: 12246  
hand temperature, VII-X: 10682, 10728, 10729  
hyperventilation, VI: 6854  
physical work, III: 3570  
rest, III: 3570  
sensory deprivation, VII-X: 11200  
skin temperature, VII-X: 10682  
sleep deprivation, VII-X: 11151  
social isolation, VII-X: 11200  
stress, V: 5745  
subgravity, I: 116; III: 2601; IV: 4960; VII-X: 10229, 10252, 10277  
vibration, III: 3105, VII-X: 11015, 11039  
visual deprivation, VII-X: 11213  
relation to:  
age, II: 1892  
muscular tonus, VII-X: 12237  
reaction time, VII-X: 9643  
role of proprioception, VII-X: 9453  
tests (see also Manual dexterity, tests), I: 162, 831; III: 2736, 2907
- NEUROMUSCULAR REACTIONS**  
caused by physical work, III: 2930  
effects of:  
anoxia, III: 2505  
noise, V: 6064  
relation to:  
labyrinth, II: 1447; VII-X: 9494  
pilot performance, III: 2930
- NEUROPSYCHIATRIC CARE** see under Aviators
- NEUROPSYCHIATRIC DISTURBANCES** see Anxiety; Neuroses
- NEUROPSYCHIATRIC EXAMINATION** (see also Mental ability, tests), I: 83, 91, 168, 318, 610, 774, 819; II: 2077, 2078, 2188, 2281; III: 2510, 2578, 2807; IV: 4935; V: 7643, 7900, VII-X: 11519, 11530, 11579, 11583, 11595, 11909, 12066, 12071
- NEUROPSYCHIATRIC FITNESS** (see also under Astronauts; Aviators; Pilot candidates; Pilots), VI: 7655, 7658  
relation to:  
age, III: 3223  
flying ability, VII-X: 11716  
reaction time, VII-X: 11717  
test methods, II: 1042, 1043, 1115, 1621; III: 2445, 2550, 2970, 3026; VII-X: 9752  
tests, II: 1625, 1857; III: 2378
- NEUROSES** (see also Anxiety), I: 177, 819; VII-X: 11909  
caused by:  
accidents, IV: 4060  
combat stress, II: 1729, 2268; III: 3571  
diurnal cycle changes, VII-X: 8562  
pilot training, III: 2638  
prevention and treatment, II: 1860, 2268; IV: 4630  
psychological factors, III: 2796  
relation to:  
accident proneness, VI: 8094  
flight duty, I: 590; II: 1437; VII-X: 11715  
motion sickness, II: 1216  
stress, II: 1145  
stress tolerance, II: 1145
- NIACIN** see Nicotinic acid
- NICOTINE** (see also Tobacco)  
effects on:  
electrocardiogram, III: 2344  
visual perception, II: 1393
- NICOTINIC ACID**  
effects on visual perception, I: 192  
use in treatment of deafness, II: 1685
- NICOTINIC ACID METABOLISM**  
effects of anoxia, V: 5964
- NIGHT FLYING**, IV: 4380, 4730; V: 6250; VII-X: 9282  
handbooks and treatises, IV: 3951  
retinal adaptation, I: 243, 247; VII-X: 12583  
training methods, IV: 4009
- NIGHT MYOPIA**, II: 1123, 1195, 1680, 1895; V: 5539  
relation to:  
illumination, IV: 3955, 4403, 4405, V: 5491, 5528  
ocular convergence, IV: 4402, 4403, 4405
- NIGHT VISION** (see also Night myopia), I: 153, 243, 247; II: 1294; III: 3409; IV: 4044, 4641, 4958; VI: 6997; VII-X: 9351  
bibliography, I: 703  
effects of:  
ephedrine, III: 2836  
light stimuli, VII-X: 9214  
noise, VII-X: 10977  
handbooks and treatises, VII-X: 9282  
ocular convergence, IV: 3871, 4405; VI: 6954  
psychological factors, IV: 4411  
relation to:  
color vision, IV: 4639; V: 5518  
form perception, II: 1826  
foveal vision, II: 2046  
peripheral vision, I: 420; II: 2046  
visual accommodation, II: 1680  
visual acuity, IV: 4731  
reviews, VI: 7009  
test methods, I: 742; II: 1067, 2201, 2298; III: 2966, 2967, 3173, 3296; IV: 4612; VI: 6967, 6974; VII-X: 9289, 9299, 9347  
tests, II: 1123; VII-X: 9281  
training devices, IV: 4044, 4764, 5186  
training methods, I: 432; IV: 4712
- NIKETHAMIDE** (Coramine)  
effects on anoxia tolerance, II: 1400
- NITRITES** (Amyl nitrite)  
effects on visual perception, I: 192; II: 1393
- NITROGEN**  
measurement, IV: 5165; VII-X: 8495
- NITROGEN BREATHING**  
effects on:  
blood oxygen tension, II: 1930  
pulmonary circulation, II: 1930
- NITROGEN CONTENT** see under Tissues
- NITROGEN ELIMINATION**, II: 1112, 1758; III: 2913; IV: 5112  
effects of:  
altitude, II: 1756; V: 6327; VII-X: 11847  
carbon dioxide, II: 1522  
hyaluronidase, VI: 7824  
hyperventilation, I: 179  
oxygen breathing, I: 178, 179; II: 1561, 1756, 2036; III: 2433, 3130; V: 6327; VI: 7814, 7815, 7824; VII-X: 8818, 10279, 11840, 11844  
physical work, III: 2433

- measurement, III: 2429  
 relation to:  
   decompression sickness, VI: 7814; VII-X: 11846, 11847  
   pulmonary circulation, III: 2430
- NITROGEN METABOLISM** (see also Protein metabolism)
- effects of:  
   diet, III: 2562  
   environmental temperature, IV: 5197  
   water deprivation, VI: 6929
- NOCICEPTION** see Pain
- NOISE** (see also Acoustical comfort; Aircraft noise; Auditory stimuli; Engine n.; Helicopter n.; Intermit- tent n.; Jet engine n.; Jet plane n.; Rocket n.; Side- tone; Sound; Space vehicle n. (Interior); Visual n.), I: 176, 709; IV: 4800
- aftereffects, VII-X: 10941  
 analysis, IV: 5198; VII-X: 10943  
 bibliography, VI: 7479  
 cause of:  
   ear pain, IV: 4864  
   fatigue, III: 2971  
   tympanic muscle reflexes, VII-X: 9369
- effects on:  
   adrenal glands, I: 449; II: 1519; IV: 3739; VII-X: 10929, 10930  
   alertness, VII-X: 10994  
   auditory perception, I: 837, 840; II: 1003, 1110, 1536, 1868, 2178, 2179; IV: 4099, 4538, 4708; V: 5567, 5574; VII-X: 10562, 10932, 10988, 11013  
   auditory thresholds, VI: 7489; VII-X: 9372, 9447, 11051, 11055  
   ballistocardiogram, V: 6075  
   behavior, VII-X: 10930  
   blood, I: 449  
   blood cells, II: 1171, 1172; IV: 3738, 3739  
   brain, III: 2553  
   brightness discrimination, I: 193  
   circulation, II: 1268; V: 6074  
   cochlea, I: 271, 427, 428, 838, 839, 917; III: 2623, 3482; VII-X: 10493  
   color vision, VII-X: 10976, 10977  
   conditioned reflexes, VII-X: 10938, 11003  
   depth perception, II: 1068; VII-X: 10976  
   electrical potentials of cochlea, I: 838  
   electroencephalogram, II: 2225; III: 2553, 2566; VII-X: 9440  
   electromyogram, II: 2044; VI: 7488  
   endocrine system, II: 1174, 1176; VI: 7523  
   eye movements, V: 6073  
   finger tremor, IV: 4551  
   flicker fusion frequency, VI: 7512, VII-X: 11008  
   hand, VII-X: 11033  
   hearing, I: 350, 383, 428, 542, 641, 743, 917; II: 941, 1171, 1175, 1302, 1304, 1536, 1537, 1592, 1594, 1685, 1704, 1730, 1775, 1871, 2027, 2042, 2068, 2102, 2175; III: 2663, 2972, 3078, 3094, 3161, 3162, 3404, 3405, 3419, IV: 3745, 3861, 3866, 4080, 4140, 4311, 4376, 4708, 4864, 4874; V: 5546, 5556, 5590, 6069, 6074, 6077, 6308; VI: 7507, 7520, 7521; VII-X: 9378, 9396, 9398, 9445, 10973, 10974, 10984, 10986, 10995, 11005, 11012, 11016, 11017, 11021, 11031, 11032, 11042, 11921  
   handbooks and treatises, V: 5582; VII-X: 9382  
   intelligibility of auditory signals, II: 940; V: 5560; VII-X: 9428, 10965, 10982  
   labyrinth, VII-X: 11007; 11013, 11059  
   listening performance, IV: 4775; V: 5584  
   loudness discrimination, II: 1203; VII-X: 9411, 11044
- mental performance, II: 1809, 1810; III: 2971; IV: 3736, 4416, 4874; V: 5760, 6091; VI: 7497; VII-X: 10941, 11046, 11057  
 mental work, VII-X: 10994  
 neuromuscular reactions, V: 6064  
 night vision, VII-X: 10977  
 performance, V: 6063; VI: 7509; VII-X: 11010, 11028, 11035  
 pitch discrimination, V: 5555  
 potassium metabolism, VII-X: 11040  
 psychomotor performance, II: 2273; III: 2532, 2534; V: 6066; VI: 7483, 7488, 7526; VII-X: 9628, 10943, 10975  
 pulse rate, IV: 4864  
 reaction time, VI: 8009  
 sodium metabolism, VII-X: 11040  
 spatial orientation, II: 952  
 speaking, V: 5549  
 speech intelligibility, I: 551, 837; II: 1108, 1573, 1731, 1872, 2027, 2102, 2232, 2273; III: 2482, 2932, 3205, 3270, 3305, 3307, 3555; IV: 3838, 4100, 4483, 4776, 4777, 4797, 4810; V: 5559, 5587, 6083; VI: 7014, 7036, 7040, 7491, 7496, 7513, 7518; VII-X: 9412, 10937, 10945, 10946, 10971, 11027, 11029  
 tactile perception, II: 1532  
 time estimation, IV: 4417, 4970; V: 5706; VI: 7501; VII-X: 10993, 10994  
 velocity discrimination, VI: 7501; VII-X: 10993  
 vigilance, III: 2537; VI: 7502, 7503; VII-X: 9796, 11035  
 visual acuity, IV: 4551  
 visual perception, V: 6065; VII-X: 10976  
 work capacity, VII-X: 11021, 11024
- general physiological effects, I: 501, 552, 650; II: 952, 1171, 1175, 1176, 1286, 1532, 1810, 1912, 2102, 2211; III: 3065, 3105, 3563, 3629; IV: 3982, 6114; V: 5562, 6082, 6087; VI: 7482, 7499, 7500, 7514; VII-X: 10928, 10934, 10942, 10996, 11012, 11020, 11023, 11028, 11043
- animal experiments, VII-X: 10930  
 bibliography, III: 3116; IV: 4396  
 handbooks and treatises, VI: 7495  
 motion pictures, V: 6078  
 research methods, VII-X: 11054
- general psychological effects, I: 552; II: 1268, 1286, 1519, 1532, 1951, 2027, 2028, 2135; III: 3078; IV: 3745, 4708; V: 5562, 6082, VI: 7482; VII-X: 10996, 11028, 11059
- measurement, II: 1775, 2241; VII-X: 10960, 10986  
 bibliography, IV: 4396  
 handbooks and treatises, III: 3309  
 pathological effects, II: 3563  
 reduction (see also Ear defenders), I: 176, 501, 650; II: 1317, 1408, 1425, 1700, 1912, 2028, 2174, 2303; III: 3162, 3620, 3629; IV: 4280, 4311, 4322, 4752; V: 6081, 6468, 6613; VI: 7514; VII-X: 10948, 10986, 11016, 11020, 11057  
 bibliography, IV: 4396  
 handbooks and treatises, VI: 7495
- research, VI: 7519  
 reviews, II: 2028  
 tolerance see Noise tolerance
- NOISE (HIGH-INTENSITY)**  
 effects on deaf, VII-X: 10926  
 general physiological effects, VII-X: 10959  
 general psychological effects, VII-X: 10959
- NOISE TOLERANCE** (see also Jet plane noise, toler- ance), IV: 4438; V: 5579  
 test methods, III: 3066; VI: 7918; VII-X: 10967, 10970
- NONCOMMISSIONED OFFICERS**  
 attitudes, III: 2516

- rating, I: 653; II: 1846, 1847
- NON-PROTEIN SYLFHYDRYL** see Carbohydrate metabolism; Lipid metabolism
- NORADRENALINE** see Norepinephrine
- NOREPINEPHRINE** (see also Epinephrine)
- effects on:
- blood pressure, III: 2825; VI: 6922; VII-X: 10795
  - oxygen consumption, II: 2239
  - positive acceleration tolerance, VII-X: 10160
  - respiration, II: 2239; VII-X: 8821
- NOREPINEPHRINE CONTENT** see under Blood plasma; Brain; Organs
- NOREPINEPHRINE EXCRETION** see Catecholamine excretion
- NOVAMINE** see Dimenhydrinate
- NOVOCAINE** see Procaine
- NUCLEAR PROPELLED AIRCRAFT**
- hazards, II: 1936, 1937; VI: 7629; VII-X: 11287, 11348, 11374, 11412, 11418
- NUCLEAR PROPELLED SPACE VEHICLES**
- hazards, VII-X: 11343
  - human engineering, VII-X: 11343, 12539
- NUCLEAR RADIATION TOLERANCE**
- effects of:
- altitude acclimatization, IV: 3775
  - anoxia, IV: 3776; VII-X: 10513
  - drugs, VII-X: 11384
- NUCLEAR RADIATIONS**
- aftereffects, VII-X: 11431
  - biological effects, I: 824; VII-X: 11303, 11310
- effects on:
- alertness, VII-X: 11357
  - behavior, VII-X: 11360
    - animal experiments, VII-X: 11356, 11359
  - blood cells, VII-X: 11350
  - hematopoiesis, VII-X: 11384
  - iron metabolism, VII-X: 11331
  - kidney function, VII-X: 11428
  - learning, VII-X: 11358, 11426
  - oxygen supply, VII-X: 12250
  - psychomotor performance, VII-X: 11357
  - general physiological effects, VII-X: 11343, 11431
  - hazards, II: 1936; IV: 5169; VII-X: 11290, 11302, 11305, 11314, 11330, 11343, 11344, 12539
  - pathological effects, VII-X: 11332, 11374
  - protection, VII-X: 11302, 11305, 11314, 11333, 11343, 11418, 11425, 11280, 12740
- NUCLEIC ACID METABOLISM**
- effects of:
- anoxia, II: 1984, 1985; V: 5946
  - ultrasonic vibrations, VII-X: 10998, 10999, 11045
- NUCLEOTIDES** see Nucleotide content under Blood.
- Also see Adenosine monophosphate; Adenosine triphosphate
- NUMERALS** see Letters and numerals
- NURSES** see Flight nurses; Space flight nurses
- NUTRITION** (see also Diet; Flight feeding; Food; Space feeding; Space flight feeding; Starvation; Water deprivation; see also Nutrition under Air crews; Aviators; Pilots)
- effects on:
- altitude tolerance, IV: 4012; VII-X: 8783
  - cold tolerance, III: 3277
  - hemoglobin, IV: 4012
- NUTRITIONAL REQUIREMENTS** (see also under Air-plane flight; Altitude; Aviators; Cold climates; Hot climates; Pilot candidates; Space flight, Space flight (Simulated); Sport activities)
- effects of:
- environmental temperature, IV: 4809
  - heat, VII-X: 10685
- NYSTAGMUS** (see also Optokinetic nystagmus), I: 750; II: 996, 1527, 1528, 1550, 1819; III: 2948, 3059, 3412, 3446; VII-X: 9523, 9652
- animal experiments, VII-X: 9487
- caused by:
- cerebral stimulation, VII-X: 9526
  - continuous rotation, VII-X: 9510
  - rotation, IV: 3864, 4588; V: 5603, 5614, 5800; VI: 7202, 7204; VII-X: 9482, 9487, 9511, 9519, 9521, 9526, 9545, 10089, 10144
  - sound, VI: 7050
  - vestibular stimulation, IV: 3785; VI: 7073, 7078; VII-X: 9518, 9526, 9536, 9557
  - visual stimuli, IV: 3864; V: 5614; VII-X: 9516
- effects of:
- acceleration, VII-X: 10015
  - arousal, VII-X: 9481, 9482, 9483, 9485, 9486
  - drugs, III: 3115; V: 6372; VII-X: 9478, 11988
    - amphetamine, VII-X: 9481
    - anticholinesterase, III: 3241
    - antihistaminics, III: 3373
    - Benadryl, IV: 3785
    - chlorpromazine, V: 5603, 6357
    - cocaine, V: 7879
    - dimenhydrinate, III: 3373
    - light stimuli, VII-X: 9554
    - mental work, VII-X: 9151, 9484
    - visual fixation, VII-X: 9483
    - visual stimuli, VII-X: 9511
  - general physiological factors, V: 5607, 5631, 5653
- relation to:
- brain activity, II: 1819
  - electroencephalogram, VII-X: 9153, 9527
  - flying ability, VII-X: 11703, 11708
  - labyrinth pathology, VII-X: 11883
  - passive motion perception, VI: 7086
  - visual illusions, V: 5627; VI: 7219; VII-X: 9474
  - research methods, V: 5632, 5805
  - role of cerebellum, VII-X: 9493
  - tests, VI: 7071
- NYSTAGMUS (LATENT)**, VII-X: 9528
- OBESITY**
- relation to:
- blood lipid content, VII-X: 11917
  - decompression sickness, VII-X: 11826, 11847, 11851, 11860
  - pulmonary circulation, VII-X: 10402
  - shivering, VII-X: 10691
- OCCCLUSION** see Carotid occlusion
- OCCUPATIONAL DEAFNESS** (see also under Aviators; Maintenance personnel; Personnel; Pilots; Radio operators)
- handbooks and treatises, V: 5595; VI: 7858
- OCCUPATIONAL DISEASES** see under Aviators; Bombardiers; Maintenance personnel; Personnel; Pilots; Radar operators. Also see Occupational deafness
- OCCUPATIONAL HAZARDS** see under Aviators; Jet plane pilots; Maintenance personnel; Personnel; Traffic control operators. Also see Hazardous duty
- OCCUPATIONAL MEDICINE**
- handbooks and treatises, VI: 7789
- OCULAR CONVERGENCE** (see also Heterophoria)
- in empty visual field, IV: 4404; VI: 6954
  - in night vision, IV: 3871, 4405; VI: 6954
- relation to:
- depth perception, V: 5532, 5646, 5657; VII-X: 9499, 9500, 9501
  - night myopia, IV: 4402, 4403, 4405
  - size perception, VII-X: 9502
- OCULAR DOMINANCE** (see also Retinal rivalry)
- relation to:
- depth perception, II: 1533, 1821
  - learning, VII-X: 9710
  - visual acuity, VII-X: 9227
  - reviews, I: 380



- role in visual perception, III: 3602
- OCULAR RHYTHMS**  
effects of altitude, IV: 5172
- OCULAR STIMULATION** see Eye stimulation
- OCULOCARDIAC REFLEX**  
effects of anoxia, VII-X: 10599
- OCULOGRAVIC ILLUSION** see Visual illusions
- OCULOGYRAL ILLUSION** see Visual illusions
- ODONTALGIA** see Dental disturbances
- ODORS** (see also Deodorants)  
detection, VII-X: 12808  
removal see Deodorization
- OFFICE OF NAVAL RESEARCH (U.S.), III: 3281**
- OFFICER CANDIDATES**  
attitudes, VI: 7762  
mental ability, V: 6180  
personality, VII-X: 11608, 11793  
rating, VI: 7662, 7664; VII-X: 11608  
selection, VII-X: 11601, 11610, 11793  
training  
prediction of success, VI: 7664; VII-X: 11601, 11639
- OFFICERS** (see also Training officers)  
attitudes, II: 950, 1028, 1029; III: 2520  
classification, VI: 7663  
mental ability, VI: 7669  
performance  
relation to rating, VII-X: 11507  
personality, III: 3291; VII-X: 9729, 11769  
rating, II: 1530, 1531, 2194, 2195; III: 2876; V: 6197; VI: 7644, 7649, 7668, 7669; VII-X: 11535, 11564, 11626, 11563, 11769  
relation to performance, VII-X: 11507  
selection, I: 347, 594, 847, 848, 849, 850, 911; II: 1414, 1584, 2195, 2197; III: 2940, 3383, 3656; IV: 4729, 5037, 5086, 5087; V: 6189, 6207; VI: 7662, 7663; VII-X: 11501, 11503, 11517, 11572, 11609  
training, I: 850  
prediction of success, IV: 5037, 5086; VII-X: 11501, 11610  
vocational interest, V: 6270
- OILS** see Engine oils
- OLFACTORY PERCEPTION** (see also under Contaminants; Oxygen)  
effects of fatigue, II: 2254  
test methods, II: 2254
- OLFACTORY STIMULI**  
effects on visual perception, VI: 6961
- OPERATING ROOMS (TRANSPORTABLE), II: 1192; III: 2921, IV: 4504**
- OPIUM AND DERIVATIVES** (see also Codeine; Morphine)  
effects on labyrinth, II: 2859
- OPTICAL FILTERS, I: 894**  
effects on:  
visual acuity, I: 894  
visual perception, VII-X: 9183  
use in color vision, IV: 4838
- OPTICAL ILLUSIONS** see Visual illusions
- OPTICAL PRISMS**  
effect on spatial orientation, V: 5645
- OPTICAL PROPERTIES** see under Eye; Sunglasses; Visors
- OPTOKINETIC NYSTAGMUS, VI: 7060**  
effects of:  
alertness, VII-X: 9471  
drugs, VII-X: 9471  
relation to flying ability, VI: 7729  
reviews, VII-X: 9544  
role of brain activity, VII-X: 9552
- ORAL SURGERY** (see also Dental care)  
effects on air transportability, VI: 7896
- ORBITAL SPACE FLIGHT** see Space flight (Orbital)
- ORGAN WEIGHT**  
effects of:  
altitude acclimatization, VII-X: 9881  
auditory stimuli, VII-X: 11034  
cold, VII-X: 9881  
cold acclimatization, VII-X: 10832  
heat, VII-X: 9881
- ORGANIC SOLVENTS** (see also Carbon tetrachloride; Dichloroethane; Furfural)  
toxic effects, III: 2771; VI: 7950
- ORGANIZATIONAL ASPECTS** see Administrative and organizational aspects
- ORGANS** (see also names of specific organs, e.g., Brain)  
effects of altitude acclimatization, VII-X: 10311  
epinephrine content  
effects of cold acclimatization, VII-X: 10832  
norepinephrine content  
effects of cold acclimatization, VII-X: 10832
- ORGANS (ISOLATED)**  
effects of centrifugation, VII-X: 10113
- ORIENTATION** see Biological orientation; Spatial orientation; Topographical orientation
- ORIENTATION AND GUIDANCE** see under Medical personnel
- ORIGIN** see under Life
- ORIGINALITY**  
psychological factors, IV: 4456  
relation to:  
mental ability, VI: 7145  
personality, VI: 7145  
tests, IV: 3783
- OSCILLATION**  
general physiological effects  
research methods, VII-X: 10075
- OSCILLATION TOLERANCE, VI: 7195; VII-X: 10109, 10153**
- OTITIS EXTERNA** (see also Pseudomonas in otitis externa), II: 1206, 2103, 2288, IV: 4527  
treatment  
use of:  
sulfonamide compounds, II: 1535  
terramycin, II: 1535
- OTOLITHS** see Labyrinth
- OTORHINOLARYNGOLOGY, V: 6304, 6308; VI: 7654, 8159**  
handbooks and treatises, V: 5593
- OTOSCLEROSIS, VII-X: 11919**
- OVERPRESSURE**  
general physiological effects, VI: 7298; VII-X: 10425
- OVULATION** (see also Menstruation)  
effects of:  
altitude, VII-X: 7560  
cold, VII-X: 8560  
heat, VII-X: 8560
- OXYGEN** (see also Anoxia; Hyperoxia; Ozone)  
effects on lipsticks, VII-X: 12450  
measurement, III: 2525; VI: 8223; VII-X: 12303, 12689  
olfactory perception, VII-X: 8806  
tolerance see Hyperoxia tolerance
- OXYGEN (STORED IN BODY)**  
effects of respiration, III: 2723
- OXYGEN BREATHING** (see also Hyperoxia), IV: 4142, 4966; VII-X: 12222  
at altitude, III: 2580; VI: 8004; VII-X: 10291, 10305, 10327, 12233  
cause of lung pathology, VII-X: 11990  
effects on:  
acceleration tolerance, VII-X: 10100  
alkalosis, VII-X: 8887  
altitude tolerance, I: 381, 621; III: 3185, 3341; VII-X: 10312, 10333, 10527

- alveolar oxygen tension, III: 3128; VII-X: 8858  
 auditory thresholds, VII-X: 9408  
 blood, II: 1578; III: 2752  
 blood oxygen tension, IV: 5126; V: 6093; VI: 6840  
 blood pressure, IV: 4889  
 brain lactic acid content, VII-X: 10465  
 brain oxygen tension, VII-X: 10372  
 carbon monoxide poisoning, III: 2757  
 circulation, II: 1570; IV: 4631; V: 5336; VII-X:  
   8743, 8829, 8868, 12261  
   cerebral circulation, VI: 6801; VII-X: 8911  
   retinal circulation, II: 2096; VII-X: 8763  
 cold tolerance, VII-X: 10724  
 color vision, I: 175  
 ear pressure gradient, VII-X: 10365, 10366  
 electrocardiogram, I: 607; IV: 4247  
 explosive decompression tolerance, VII-X: 10331  
 gustatory perception, VI: 7135; VII-X: 10337  
 heterophoria, IV: 3836  
 lung, IV: 4283; V: 5358; VI: 6829  
 memory, III: 3337  
 metabolism, VI: 6809; VII-X: 10724  
   carbon dioxide production, VII-X: 8913  
   oxygen consumption, VI: 7399; VII-X: 8835,  
   11104  
 metabolism of substances:  
   histamine, V: 5344  
   lactic acid, V: 5367  
 middle ear gas composition, VII-X: 8854  
 nitrogen elimination, I: 178, 179; II: 1561, 1756,  
   2036; III: 2433, 3130; V: 6327; VI: 7814,  
   7815, 7824; VII-X: 8818, 10279, 11844  
 psychomotor performance, VI: 7116; VII-X: 9593  
 respiration, II: 1034, 1433, 2165; III: 2437, 2615,  
   3129; IV: 3786, 4949; VI: 6809, 6822, 6823,  
   6481, 6842, 7259, 7571; VII-X: 8829, 8831,  
   8840, 8893, 8900, 10373  
 tissue oxygen tension, V: 5342  
 visual acuity, VII-X: 9305  
 visual field, VII-X: 9305  
 work capacity, II: 1034; III: 2437, 3204; IV: 4685;  
   VII-X: 8829  
 general physiological effects, I: 630, 803; VII-X: 8814,  
   8873, 12791  
 hazards, VII-X: 10365  
 paradoxical effects, I: 223, 396; III: 2806, 3080; VII-X:  
   8892, 8911  
**OXYGEN BREATHING TOLERANCE**, VII-X: 8873  
**OXYGEN CONSUMPTION** (see also under Hibernators)  
 effects of:  
   altitude, VII-X: 10418  
   altitude acclimatization, V: 5928; VII-X: 10317  
   anoxia, I: 187, 469, 565; II: 988, 1036; III: 3289;  
   IV: 4692, 4794, 4795; V: 5928; VI: 7343;  
   VII-X: 10480, 10550, 10556, 10590, 10591  
   body fat, VI: 6859  
   brain temperature, VII-X: 8732  
   carbon dioxide, IV: 4947; VI: 7958  
   cold, III: 2513, 2658; IV: 3788; V: 5980, 6009;  
   VI: 7399, 7404, 7461, 7469; VII-X: 8988,  
   10698  
   cold acclimatization, VII-X: 8835  
   drugs, III: 2434  
   ascorbic acid, III: 2658  
   chlorpromazine, IV: 3945; V: 6361  
   epinephrine, II: 2239  
   hexamethonium, V: 6360  
   norepinephrine, II: 2239  
   procaine, V: 6359  
   environmental temperature, III: 2434; VII-X: 10739  
   heat acclimatization, III: 2457  
   hyperthermia, VI: 7343  
   hyperventilation, V: 5348, 5353; VII-X: 8878  
   hypothermia, III: 2965; IV: 4891; V: 5370, 5416;  
   VI: 6875; VII-X: 9006  
   immersion, VII-X: 10675  
   light stimuli, III: 2961, 3154  
   oxygen breathing, VI: 7399; VII-X: 8835, 11104  
   passive body movements, VI: 6936  
   physical work, II: 939, 1000, 1352; III: 2613; IV:  
   4555; V: 5400, 6104, 6114; VI: 7556, 7564,  
   7575; VII-X: 11064, 11069, 11101, 11104,  
   11129  
   step test, VII-X: 11092, 11093  
   positive acceleration, VII-X: 10101  
   respiratory movements, VII-X: 8869  
   restraint, IV: 3788; VII-X: 11269  
   shivering, V: 5934; VII-X: 10509  
   sleep, VII-X: 8597  
   subgravity, II: 992  
   transversal acceleration, VII-X: 10221  
   work-rest cycle, VII-X: 11090, 11091  
   measurement, III: 2465, 2621; IV: 4973; V: 5869;  
   VII-X: 8920, 11069, 11129  
 relation to:  
   age, V: 6307  
   anoxia tolerance, VII-X: 10587  
   body temperature, IV: 4794, 4795  
   diurnal cycle, V: 5261  
   lipid metabolism, IV: 4728  
   physical fitness, IV: 4187  
   pulse rate, VII-X: 8920  
   respiration, V: 5435; VI: 6811  
   temperature regulation, III: 2679; IV: 3788  
   sex factors, II: 1000  
**OXYGEN CONTAINERS**, I: 588; VII-X: 12248  
**OXYGEN DEFICIENCY** see Anoxia  
**OXYGEN EQUIPMENT** (see also Breathing apparatus  
 (Underwater); Oxygen containers; Oxygen helmets;  
 Oxygen masks; Oxygen regulators), I: 132, 133, 297,  
   454, II: 923, 1050, 1627; III: 2518, 2567,  
   2616, 3090, 3267, 3354, 3375, 3402, 3403,  
   3644, 3679; IV: 3707, 3858, 4147, 4206, 4722,  
   4858; V: 6495; VI: 8012; VII-X: 12180, 12182,  
   12196, 12212, 12229, 12236, 12251, 12266,  
   12277, 12283, 12300, 12306, 12315  
   evaluation, II: 1816; VII-X: 12210, 12222, 12245  
   failure, I: 578; II: 1511; IV: 3706, 3708, 4929  
   test methods, III: 2318, 2525; V: 6494  
**OXYGEN EQUIPMENT (TRANSPORTABLE)**, VII-X:  
   12187  
**OXYGEN HELMETS**, I: 90  
**OXYGEN MASKS**, I: 300, 642; II: 1253, 1467; III: 2604,  
   2618, IV: 4097; VI: 7991, 8018; VII-X: 12183,  
   12184, 12185, 12285, 12286  
   effectiveness, VII-X: 10312  
   evaluation, I: 262; V: 6457, 6458, 6475; VI: 8024  
   human engineering, VII-X: 12219  
   protection against explosive decompression, II: 1754  
   sterilization, III: 2769  
**OXYGEN METABOLISM** (see also Oxygen consumption;  
 Oxygen (Stored in body)), III: 2512  
 effects of:  
   altitude acclimatization, VII-X: 9846  
   cold acclimatization, VII-X: 9846  
   heat acclimatization, VII-X: 9846  
**OXYGEN POISONING** see Hyperoxia  
**OXYGEN RECOVERY**, VI: 8267  
   from biological waste products, VII-X: 12889, 12890  
   from carbon dioxide, VI: 8267; VII-X: 8517  
**OXYGEN REGULATORS**, V: 6474  
   evaluation, III: 2861; VII-X: 12265  
   failure, V: 6489  
**OXYGEN REQUIREMENTS** see under High altitude  
 flight; Passenger transportation; Physical work; Space  
 flight (Orbital); Space flight (Simulated)

- OXYGEN SOURCES, III: 2697; V: 6483; VII-X: 8510, 8726, 12803, 12835  
 bibliography, VII-X: 8532
- OXYGEN SUPPLY  
 contamination, VII-X: 12106, 12188, 12189, 12247, 12271, 12272  
 effects of nuclear radiations, VII-X: 12250  
 recirculation, VII-X: 12233, 12300, 12306
- OXYGEN TENSION see under Blood; Brain; Cerebrospinal fluid; Cochlea; Labyrinth; Tissues; Vitreous humor. Also see Alveolar oxygen tension
- OXYGEN TOLERANCE see Hyperoxia tolerance
- OXYGEN VALVES; VII-X: 12284  
 evaluation, V: 6476; VII-X: 12221
- OZONE  
 effects on immunity to respiratory diseases, VII-X: 12163  
 general physiological effects, VI: 7975, 7986  
 hazards, VII-X: 12161  
 measurement, VII-X: 12160  
 toxic effects, I: 732; VI: 7976, 7982, 7983, 7984, 7985; VII-X: 8892
- OZONE TOLERANCE  
 effects of preadaptation, VI: 7981
- PAGITANE  
 use in motion sickness, V: 6333
- PAIN (see also Headache; see also under Ear)  
 caused by:  
 cold, VII-X: 10917  
 cold water immersion, VII-X: 10706  
 ear pressure gradient, VII-X: 10449  
 thermal radiation, V: 6160; VII-X: 11404, 11406  
 vibration, VII-X: 10204  
 effects on:  
 coronary circulation, VII-X: 9810  
 mental performance, V: 6173  
 psychomotor performance, V: 6173  
 sensory perception, IV: 3821  
 relation to:  
 auditory perception, III: 2788  
 cutaneous circulation, VI: 7136  
 tissue trauma, III: 3095  
 visual perception, III: 2788  
 tests, VI: 7137
- PAIN SENSITIVITY  
 effects of:  
 anoxia, VII-X: 10510  
 cold, III: 3537; IV: 5048  
 sensory deprivation, VII-X: 11257
- PALLESTHESIA see Vibration perception
- PANCREAS  
 effects of cold acclimatization, VII-X: 10644  
 role in hibernation, V: 5276
- PANCREATIC RHYTHM, IV: 3771
- PANCREATIC SECRETION  
 effects of:  
 anoxia, V: 5922  
 heat, VII-X: 9948, 10855  
 physical work, VII-X: 9948
- PANELS see Instrument panels
- PANTOPON see Opium
- PANTOTHENIC ACID  
 effects on cold tolerance, V: 5973; VI: 7470
- PARA-AMINOBENZOIC ACID  
 effects on altitude tolerance, VII-X: 10462
- PARABIOSIS, I: 491; II: 1582; III: 2937, 2938
- PARACHUTE HARNESSSES, III: 2324; IV: 4369  
 evaluation, I: 666
- PARACHUTE JUMPING, I: 421, 534, 751, 809; II: 2229, 2230; IV: 4628; VII-X: 12327  
 acceleration, IV: 4559  
 cause of:  
 anxiety, V: 5735  
 dystonia, V: 6514, 6524  
 injuries, V: 6339, 6498, 6502; VI: 7825; VII-X: 11911  
 dental injuries, VI: 7865  
 hand injuries, IV: 4746  
 leg injuries, III: 3276  
 from helicopters, V: 6501  
 hazards, V: 6520; VII-X: 12355  
 in the Arctic, V: 6500  
 in winter, III: 3551  
 use of medical kits, III: 2394
- PARACHUTE MEDICAL TEAMS, II: 1896; III: 2363; IV: 4581
- PARACHUTE RIGGING  
 handbooks and treatises, V: 6447  
 tests, II: 960
- PARACHUTE TRAINING, IV: 4750; VII-X: 12355
- PARACHUTES  
 evaluation, II: 962; III: 3682; V: 6503; VII-X: 12354
- PARACHUTISTS  
 personality, VI: 7144  
 physical fitness, VI: 7840  
 training, V: 6175  
 use in disaster rescue, V: 6175
- PARADOXICAL EFFECTS see under Oxygen breathing
- PARANASAL SINUSES (see also Sinus barotrauma)  
 effects of airplane flight, II: 1302; VII-X: 11878
- PARASYMPATHETIC NERVOUS SYSTEM see Autonomic nervous system
- PAROTID GLANDS see Salivary glands
- PARSIDOL  
 use in motion sickness, I: 236
- PASSENGER COMFORT, II: 1635, 1692, 1735; III: 3045; VI: 8258, 8259; VII-X: 12805, 12825  
 effects of vibration, V: 6583
- PASSENGER TRANSPORTATION (see also Air transportation of patients)  
 medical problems, II: 1076, 1773, 1870, 2259, 2260; V: 6311, 6312, 6401, 6583; VI: 7804  
 oxygen requirements, VI: 8001; VII-X: 11812  
 public health aspects, VII-X: 12103  
 regional factors, VI: 7792  
 safety, I: 395; V: 6564; VI: 7987  
 sanitary aspects, I: 431; IV: 4934; V: 6425; VI: 7939; VII-X: 12103
- PASSENGERS  
 behavior, VII-X: 9765  
 medical care, VII-X: 11812
- PASSIVE BODY MOVEMENTS see Body movements (Passive)
- PASSIVE MOTION PERCEPTION see Motion perception (Passive)
- PATELLAR REFLEX  
 effects of:  
 jet engine noise, VII-X: 10947  
 physical work, VII-X: 11125  
 pressure breathing, V: 5328  
 vibration, III: 3405
- PATHOLOGY see under names of organs, e.g., Heart, pathology. Also see entries under Diseases, Disturbances, and Sicknesses
- PATIENTS (see also Air transportation of patients)  
 morale, II: 2041  
 rehabilitation, III: 3677
- PATTERN DISCRIMINATION, II: 1424; III: 2869; IV: 4292; VI: 7068  
 animal experiments, VII-X: 9546, 9635  
 effects of visual noise, V: 5512  
 relation to peripheral vision, VII-X: 9329  
 reviews, VI: 7067  
 role of memory, IV: 3756  
 tests, VI: 7079; VII-X: 9187, 9313, 9509  
 time factors, VII-X: 9537

**PEDALS**

human engineering, I: 627; IV: 3907

**PEER RATINGS** *see* subdivision Rating

**PELVIS**

mechanical properties, IV: 4129

**PEMMICAN** *see* Emergency rations

**PEPTIC ULCER**

caused by:

altitude, VII-X: 11899

space flight, VII-X: 11944

incidence in:

aviators, IV: 4131, 4556; V: 6352

inhabitants of mountains, VI: 7853; VII-X: 11899, 11993

relation to:

flight duty, III: 2639; VII-X: 11928

personality, IV: 4313

treatment, VI: 7855

**PERCEPTION** (*see also* Auditory perception; Contour p.; Cutaneous p.; Depth p.; Dynamic contour p.; Form p.; Gustatory p.; Motion p.; Olfactory p.; Sensory p.; Size p.; Tactile p.; Vibration p.; Visual p. *See also under* Auditory flutter)

reviews, VII-X: 9703

**PERCEPTUAL DEPRIVATION** *see* Sensory deprivation

**PERCEPTUAL-MOTOR PERFORMANCE** *see* Psychomotor performance

**PERFORMANCE** (*see also under* the various personnel

categories, e.g., Pilots, performance. *See also* Decision making performance; Listening p.; Mental p.;

Motor p.; Neuromuscular p.; Psychomotor p.)

analysis, VII-X: 12768

effects of:

acceleration, IV: 3900; V: 5775; VII-X: 10230

amphetamine, VII-X: 11152

cold climates, VI: 7411

confinement, VII-X: 11691

continuous immersion, VII-X: 10230

continuous rotation, VII-X: 10114, 12455

exposure suits, VII-X: 12200

fatigue, VII-X: 11152

heat, V: 6033

humidity, V: 6033

hypothermia, VII-X: 8938

information feedback, VI: 7089

motivation, IV: 4186; V: 5712

noise, V: 6063; VI: 7509; VII-X: 11010, 11028, 11035

physical training, VII-X: 11694

restraint, VII-X: 11275

sleep deprivation, V: 6129; VII-X: 11175

starvation, VII-X: 9943

stress, V: 5747, 5755, 5756; VI: 7176, 7177; VII-X: 9855

subgravity, VI: 7233; VII-X: 9943, 10269, 12596

task complexity, VII-X: 11714, 12577

transversal acceleration, VII-X: 9943

work-rest cycle, VII-X: 8563, 8613, 11076, 11153, 11691

relation to:

body temperature rhythm, VII-X: 9584

diurnal cycle, VI: 6778, 8626; VII-X: 11152

personality, VII-X: 9729

social factors, VII-X: 9766

test methods, VII-X: 11729

**PERIPHERAL CIRCULATION**

effects of:

acceleration

research methods, VI: 7231

carbon dioxide, VI: 7964; VII-X: 8753

cold, V: 6059; VII-X: 10680, 10874, 10919, 10921

cold acclimatization, VII-X: 10919

cold water immersion, VII-X: 10706

environmental temperature, VII-X: 10877, 10895

heat, V: 6059

heat acclimatization, VII-X: 10718, 10918

hyperthermia, VII-X: 10800

hyperventilation, VII-X: 8753

hypothermia, VII-X: 9057, 10800

negative pressure breathing, VII-X: 8812

physical work, VII-X: 11074, 11077

posture, VII-X: 11452

pressure breathing, VII-X: 8812, 8876

static physical exercise, VI: 7534

role in temperature regulation, VII-X: 8785, 9014

role of autonomic nervous system, VII-X: 8785

**PERIPHERAL PRESSURE**

effects on:

circulation, II: 1064; III: 2841; IV: 4821; V: 5837; VI: 6803

perspiration, VII-X: 9138

respiration, II: 1064

retinal circulation, V: 5795

visual perception, V: 5795

measurement, I: 505

**PERIPHERAL VISION**, II: 1030; VI: 6969

effects of:

drugs, VII-X: 11983

illumination, VII-X: 9329

positive acceleration, IV: 4531

training, IV: 3963

relation to:

color vision, II: 1939

dark adaptation, II: 1120

depth perception, III: 2671

foveal vision, VI: 7001; VII-X: 9301

night vision, I: 420, II: 2046

pattern discrimination, VII-X: 9329

tests, IV: 4938

thresholds, II: 1122, 1781

time factors, II: 989, 2158; IV: 4938

transfer of training, III: 2589

**PERISCOPES**

effects on depth perception, IV: 4112

use in piloting, IV: 3920, 4112; V: 6631

**PERMEABILITY** *see under* Blood vessels

**PERPHENAZINE**

use in motion sickness, VII-X: 11867

**PERSONALITY** (*see also under* the various personnel

categories, e.g., Pilots, personality. *See also* Leadership; Originality), IV: 4368

analysis, II: 1557; IV: 4424; VII-X: 9749

relation to:

acceleration tolerance, VI: 7223

accident proneness, IV: 4154, 5083

adjustment to military service, V: 5725; VI:

7158

alertness, VII-X: 9753

anxiety, II: 1632

anxiety proneness, V: 5735

auditory fatigue, VII-X: 12077

auditory thresholds, VII-X: 12077

claustrophobia, IV: 4467

decision making performance, IV: 3857

dental disturbances, II: 1787; III: 3167; IV: 4607

electroencephalogram, IV: 4792; VII-X: 11533

flying ability, IV: 4168; VI: 7713

galvanic skin response, VII-X: 9761

mental performance, IV: 3736

motion sickness predisposition, VII-X: 11842

originality, VI: 7145

peptic ulcer, IV: 4313

performance, VII-X: 9729, 11537

physical fitness, IV: 4426

positive acceleration tolerance, VI: 7232

psychological testing, VII-X: 9758

- sensory deprivation tolerance, VII-X: 11216, 11217, 11240, 11263  
 sleep deprivation tolerance, VII-X: 11140  
 social isolation tolerance, VI: 7650; VII-X: 11243  
 success, IV: 4860  
 team behavior, VII-X: 9723  
 visual acuity, IV: 4046  
 test methods (*see also* Personality tests), II: 1413; IV: 3936; 4424, 4640, 5202; V: 6208; VII-X: 9737, 9757  
**PERSONALITY TESTS** (*see also* Rorschach test; Sentence completion test; Stipple test), I: 82, 112, 846, 847; II: 1011, 1041, 1365, 1412, 2025, 2196; III: 2378, 2383, 2472, 2926, 2977, 2978, 3026, 3149, 3164, 3187, 3188, 3258, 3389, 3565, 3656, 3660; IV: 3711, 3784, 3863, 4121, 4183, 4195, 4421, 4425, 4873, 4935, 5200; V: 5730, 5736, 5737, 5738, 5740, 6182, 6187; VI: 7147, 7651; VII-X: 9718, 9720, 9731, 9733, 9734, 9740, 9744; 9745, 11640  
 relation to personnel performance, III: 2947, 3250; VI: 7665  
 reliability, VII-X: 9760  
 results  
   effects of anoxia, IV: 4688; VI: 7153  
**PERSONNEL** (*see also* Astronauts; Aviators; Electricians; Electronics technicians; Instructors; Maintenance personnel; Medical personnel; Munitions specialists; Navigators; Noncommissioned officers; Officer candidates; Officers; Parachutists; Physiologists; Pilots; Radar operators; Radio operators; Space flight nurses; Space flight surgeons; Teams; Traffic control operators; Veterinarians; Weather observers)  
 age factors, I: 678  
 attitudes, I: 113, 146, 493, 851, 913; II: 1273, 1560, 2287; III: 2338, 2942, 3295; IV: 4252; V: 6275; VII-X: 11516, 11753  
 test methods, III: 3616  
 classification, I: 74, 239, 311, 389, 390, 391, 394, 429, 497, 560, 604, 700, 736, 746, 832, 833, 834, 908, 910, 912, 913, 914, 915; II: 1059, 1197, 1229, 1277, 1407, 1415, 1469, 1618, 1619, 2140, 2169, 2193, 2290, 2291, 2292, 2295, 2296; III: 2764, 3101; IV: 3728, 4258, 4550; V: 6184; VI: 7646; VII-X: 11511, 11512, 11546, 11554, 11599, 11606, 11614, 12602  
 identification, I: 279  
 incidence of:  
   ametropia, VII-X: 9264  
   deafness, VII-X: 11921  
   diseases, IV: 4089  
   glaucoma, VII-X: 11894  
   phakomatosis, VI: 7866  
   respiratory diseases, VI: 7829, 7861; VII-X: 11994  
 maintenance, I: 265, 522  
 medical care, III: 3450; IV: 4258, 5021; VII-X: 11742, 11806  
   administrative and organizational aspects, VII-X: 11804  
 morale, VII-X: 11753  
 motivation, VII-X: 11750  
 occupational deafness, I: 641, 663, 743, 976; II: 1704, 2042; III: 2663, 3183; V: 6082; VII-X: 9395, 11918, 12094  
 occupational diseases, I: 320; III: 3008, 3183; VII-X: 11897, 12008  
   legal aspects, VII-X: 8413  
 occupational hazards  
   legal aspects, VII-X: 8413  
 performance  
   relation to personality tests, III: 2947, 3250; VI: 7665  
   test methods, I: 329, 599; II: 1370  
   physical fitness, II: 1924; III: 2627; VII-X: 11994, 12058  
   statistics, IV: 3937  
   rating, I: 585; II: 1412, 1584; III: 2500, 2940, 2943, 3421, 3656; IV: 4191; V: 6195, 6198; VII-X: 9722, 9744, 11537, 11565, 11566, 11567, 11568, 11623  
   regional factors, II: 1780; IV: 4236; VII-X: 11792  
   research, I: 76  
     congresses, meetings, and symposia, V: 6176  
   selection, I: 91, 111, 228, 281, 318, 494, 522, 560, 700, 841, 842, 846, 851, 916; II: 1021, 1168, 1260, 1406, 1606, 1619, 1643, 1743, 1924, 2026, 2077, 2188, 2189, 2190, 2191, 2193, 2204, 2281, 2287; III: 2510, 2559, 2578, 2732, 2807, 3297, 3392, 3396, 3669, 3670; IV: 3728, 4181, 4258, 4550, 4553; V: 5725, 6181; VI: 6733, 7657, 7658, 7745, 7921; VII-X: 9741, 11516, 11519, 11534, 11538, 11621, 11949, 12069, 12080, 12081, 12170  
   India, IV: 4490  
   role of vocational interest, VII-X: 11522  
   training, I: 111, 124, 374, 432, 493, 494, 879; II: 1018, 1019, 1406, 1470, 1628, 2114; III: 2338, 2627, 2942, 3175, 3176; VI: 7683; VII-X: 11665  
   attrition  
     psychological factors, IV: 4478  
     prediction of success, IV: 3823, 4236; VII-X: 11600  
   visual requirements  
     reviews, VII-X: 9359  
     vocational interest, VII-X: 11747  
**PERSONNEL (NEGRO)**  
 classification, II: 1595  
**PERSONNEL CHANGES**  
 effects on combat crew performance, VI: 7731  
**PERSONNEL REQUIREMENTS**  
 bibliography, VII-X: 11494  
**PERSPIRATION** (*see also* Sweat; Sweat glands), V: 5410  
 effects of:  
   altitude, VII-X: 10349, 10388  
   anxiety, II: 1766, 1767  
   chlorpromazine, IV: 3979  
   environmental temperature, II: 1563, 1564, 1565, 1766, 1767; IV: 4975; V: 5389  
   heat, III: 2892, 3675; IV: 5052; V: 6055; VII-X: 10714, 10766, 10858  
   heat acclimatization, VII-X: 10717  
   humidity, II: 1564; IV: 4447, 4455; V: 6055; VII-X: 10349, 11469  
   peripheral pressure, VII-X: 9138  
   physical work, III: 2709, 2892; IV: 4975  
   posture, III: 2927; VII-X: 9138  
   pressure breathing, VII-X: 8856  
   water intake, III: 2709; IV: 4435  
   weather, IV: 4580  
 effects on:  
   skin temperature, IV: 3822; VII-X: 8947  
   sweat glands, VII-X: 9137  
   measurement, II: 1766, 1767, 1986  
   physical factors, II: 2161; III: 3148; IV: 4454  
   race factors, VI: 6910  
 relation to:  
   age, V: 6295  
   annual cycle, VII-X: 8584  
   blood glucose content, III: 2892  
   heat tolerance, V: 6055; VII-X: 10667, 10792  
   temperature regulation, IV: 4454  
   thermoreception, VII-X: 9670  
**PERTUSSIS** *see* Whooping cough

- PERVITIN *see* Ephedrine
- pH *see under* Blood; Brain; Cerebrospinal fluid; Saliva; Urine. *Also see* Acidosis; Alkali reserve; Alkalosis
- PHAKOMATOSIS  
incidence in personnel, VI: 7866
- PHARMACISTS  
duties, III: 3369
- PHENERGAN *see* Promethazine
- PHENOTHIAZINE AND DERIVATIVES  
use in motion sickness, V: 6323
- PHENTOLAMINE AND DERIVATIVES  
effects on blood coagulation, VII-X: 10594
- PHLEBITIS  
caused by airplane flight, VII-X: 11941  
relation to immobilization, VII-X: 11941
- PHOBIAS *see* Anxiety
- PHONES *see* Earphones
- PHONOCARDIOGRAM  
analysis, VII-X: 12052
- PHOSPHATES *see* Phosphate content *under* Blood;  
Blood plasma
- PHOSPHENES, II: 2079, 2531
- PHOSPHORUS METABOLISM  
effects of:  
acceleration, VII-X: 10166  
anoxia, II: 1496, 1793, 2111; VII-X: 10610, 10611  
carbon dioxide, VII-X: 12149  
cold, IV: 4710; V: 6030, 6039; VI: 7453  
cold acclimatization, VI: 7453; VII-X: 10837  
electric fields, VI: 7635; VII-X: 11434  
heat, IV: 4439; V: 6039  
hibernation, V: 5290  
hyperoxia, VII-X: 8901  
hypothermia, VII-X: 9075  
relation to anoxia tolerance, III: 2776
- PHOTOINTERPRETATION *see* Aerial photointerpretation
- PHOTORECEPTORS  
physiology, II: 2278
- PHOTOSYNTHESIS *see under* Algae
- PHOTOSYNTHETIC GAS EXCHANGERS (*see also* Use as gas exchanger *under* names of plants, e.g., Algae, use as gas exchanger), VII-X: 8525, 12803
- PHOTOTROPIC PHENOMENON, VII-X: 11316, 12216
- PHRENIC NERVE  
action potentials  
effects of apnea, IV: 4071
- PHYSICAL EXAMINATION (*see also* entries *under* Examination), I: 610, 684, 905; II: 1077, 1483, III: 2400, 2521, 2650, 3265; IV: 3761, 4163; V: 6418, 6421; VI: 7643, 7900, 7934  
follow-up studies, I: 684, 685; II: 1483  
laboratory facilities, IV: 3710; VI: 7919  
use of:  
ballistocardiogram, VII-X: 12047  
decompression chambers, VII-X: 12045  
electrocardiogram, VI: 7913, 7916; VII-X: 8793, 12044  
electroencephalogram, VII-X: 11562, 11603, 12055, 12078
- PHYSICAL EXERCISE *see* Physical training; Physical work; Sport activities
- PHYSICAL EXERCISE (STATIC)  
effects on:  
conditioned reflexes, VI: 7570  
electromyogram, VII-X: 11067, 11068, 11110, 11111  
peripheral circulation, VI: 7534  
general physiological effects, VI: 7582
- PHYSICAL FITNESS (*see also under* Astronauts; Aviators; Parachutists; Personnel; Pilot candidates; Pilots. *See also* entries *under* Hearing requirements and Visual requirements), I: 265, 876, 879; VI: 7658, 7734, 7745  
analysis, II: 1619  
congresses, meetings, and symposia, VI: 6748; VII-X: 11731  
effects of:  
diet, II: 1848; III: 2990, 3343  
physical training, VII-X: 11998  
physical work, IV: 4187; V: 6105; VI: 7718; VII-X: 11094  
tobacco, I: 332; VII-X: 12162  
weather, VII-X: 11479  
handbooks and treatises, III: 2934; VI: 6733  
psychological factors, I: 590  
relation to:  
activity rhythm, IV: 4799  
age, II: 1298; III: 3272; IV: 4096; V: 6308; VII-X: 11771, 11778  
ballistocardiogram, VI: 7718  
blood pressure, III: 2648; VII-X: 11711  
cold acclimatization, VII-X: 10754  
electrocardiogram, III: 3050; VI: 7529; VII-X: 12070  
flying ability, VII-X: 11716, 11724, 11743  
leadership, III: 2964; VI: 7738  
oxygen consumption, IV: 4187  
personality, IV: 4426  
respiration, IV: 4187  
somatotype, IV: 4075  
sport activities, I: 361; II: 1800, 1908, 2263; III: 2824, 2935, 3190, 3310; V: 6235; VI: 6940, 7728; VII-X: 11998  
statistics, II: 1899; III: 3044  
test methods (*see also* Step test), I: 332, 334, 564; II: 1313, 1643, 1743, 2168; III: 2404, 2559, 3025, 3360, 3626; IV: 4553; V: 6251; VI: 6846, 7739; VII-X: 11100, 11117, 11693, 11730, 12059
- PHYSICAL INACTIVITY (*see also* Immobilization; Restraint)  
effects on:  
blood lipid content, VII-X: 8773  
excretory rhythm, VII-X: 8921  
general physiological effects, VII-X: 10246
- PHYSICAL TRAINING (*see also* Sport activities)  
effects of imaginary motor performance, VI: 7701  
effects on:  
alkali reserve, VI: 7583  
altitude tolerance, VII-X: 10297, 10432  
anoxia tolerance, VII-X: 10534  
blood, VII-X: 11065  
blood lipid content, VII-X: 11121  
circulation, VII-X: 11085, 11100, 11117  
cold tolerance, VII-X: 10639  
electromyogram, VI: 7569  
muscular system, V: 6097  
performance, VII-X: 11694  
physical fitness, VII-X: 11998  
respiration, VII-X: 11100, 11117  
stress tolerance, VII-X: 9956, 11694  
work capacity, V: 6102; VI: 7639; VII-X: 10432, 11082, 11083, 11084, 11117  
general physiological effects, VII-X: 11122  
role of physical work, I: 335
- PHYSICAL WORK (*see also* Physical exercise (static); Physical training; Sport activities; Step test; Weight lifting; Work capacity)  
cause of:  
dehydration, VII-X: 10883  
fainting, IV: 4494; V: 6353  
fatigue, III: 3229, 3570; V: 6103  
neuromuscular reactions, III: 2930  
effects of subgravity, VII-X: 10235, 10250, 10253, 12473  
effects on:

- adrenal glands, II: 2220; V: 6102; VI: 7543;  
VII-X: 9928, 9999
- alkali reserve, VI: 7583
- alveolar carbon dioxide tension, II: 1035, 1686
- arm tremor, V: 6032
- autonomic nervous system, VI: 7541
- blood, VI: 7531, 7559; VII-X: 11080, 11107
- blood ammonia content, VII-X: 11123
- blood carbon dioxide tension, VII-X: 11123
- blood catalase content, III: 2801
- blood cells, I: 348; II: 2220; III: 2748; IV: 4967;  
V: 6102, 6113; VI: 7548, 7584; VII-X: 11081,  
11096, 11102, 11105, 11106
- blood lactate content, VII-X: 11124
- blood lactic acid content, V: 6117; VI: 7552; VII-X:  
11098
- blood lipid content, VI: 7552; VII-X: 11099, 11900
- blood oxygen tension, IV: 5126; V: 6093, 6107;  
VI: 7530, 7567
- blood pH, VI: 7579; VII-X: 11098, 11123
- blood plasma, VII-X: 11096
- blood plasma proteins, VI: 7536, 7574, 7636
- blood plasma sodium content, VII-X: 11097
- blood pressure, IV: 4464, 4481; VII-X: 8778, 8784
- blood pyruvate content, VII-X: 11124
- body fat, I: 670
- body temperature, II: 1812; III: 2617, 2892, 3674;  
V: 5400, 6109; VII-X: 9046
- body temperature rhythm, VII-X: 8603, 8625
- carbon dioxide elimination, VI: 7540
- catecholamine excretion, VII-X: 9889
- chronaxia, VII-X: 11066
- circulation, I: 115, 878; II: 1838; IV: 4555;  
V: 6103, 6110, 6116, 6118; VI: 7539, 7542,  
7547, 7550, 7574, 7581; VII-X: 8758, 9861,  
9992, 11064, 11070, 11079, 11113, 11114,  
11559, 11773, 12046
- cerebral circulation, III: 3432
- cutaneous circulation, IV: 4364
- peripheral circulation, VII-X: 11074, 11077
- pulmonary circulation, III: 2430, 3466; VII-X:  
9854
- reviews, V: 6098
- sex factors, VI: 7537
- cold tolerance, V: 6018
- conditioned reflexes, VII-X: 11086
- decompression sickness, III: 2433; V: 6320
- electroencephalogram, VII-X: 11088, 11112,  
11128
- electrolyte content of saliva, V: 6113
- electromyogram, VI: 7183; VII-X: 11120, 11127
- gastric secretion, VII-X: 9948
- heart, V: 6099; VII-X: 11089
- heart function, II: 1945; IV: 5053; V: 6099, 6106;  
VI: 7557; VII-X: 8782, 11126
- ballistocardiogram, III: 2504; VI: 7535, 7538;  
VII-X: 11072
- electrocardiogram, III: 3683; IV: 4486;  
V: 6019; VI: 7529, 7577, 7586; VII-X: 11073
- pulse rate, I: 878; II: 1644; VI: 7565, 7575,  
7576; VII-X: 10293, 11101, 11108, 12706
- pulse rate rhythm, VII-X: 8607, 8625
- vectocardiogram, VII-X: 11087
- heat loss, VI: 6902
- kidney function, VI: 7559, 7562; VII-X: 10720,  
11109
- mechanical properties of aorta, VII-X: 8743
- mental performance, VII-X: 11131
- metabolism, II: 1812; III: 2732, 3152, 3534, 3574,  
3587; V: 5368, 6101, 6115; VI: 6856, 7545,  
7548, 7560; VII-X: 11103, 11113, 11114,  
12296
- enzyme activity, VII-X: 11061
- oxygen consumption, II: 939, 1000, 1352;  
III: 2613; IV: 4555; V: 5400, 6104, 6114;  
VI: 7556, 7564, 7575; VII-X: 11064, 11069,  
11101, 11104, 11129
- metabolism of organs:  
brain, III: 3432  
heart, VII-X: 11075, 11089  
muscular systems, VII-X: 11089
- metabolism of substances:  
ascorbic acid, VI: 7549  
carbohydrates, VI: 7555, 7561  
glucose, VII-X: 11115  
ketones, III: 3417; VII-X: 8923, 8925  
lipids, IV: 3813; V: 5749; VI: 7561  
proteins, VII-X: 8919  
sodium chloride, VII-X: 10884
- muscular function, I: 854
- muscular system, I: 257, 854; VII-X: 11089
- myoglobin, IV: 4013
- neuromuscular performance, III: 3570
- nitrogen elimination, III: 2433
- pancreatic secretion, VII-X: 9948
- patellar reflex, VII-X: 11125
- perspiration, III: 2709, 2892; IV: 4975
- physical fitness, IV: 4187; V: 6105; VI: 7718;  
VII-X: 11094
- psychomotor performance, II: 1131; VII-X:  
11132
- respiration, I: 115, 878; II: 1208, 1416, 1686,  
1812; III: 2436, 2615, 2617, 3084, 3109,  
3288, 3371, 3395, 3575, 3587; IV: 3786,  
4555, 5163; V: 5903, 6094, 6096, 6100,  
6104, 6112, 6293; VI: 6808, 6846, 7544,  
7545, 7563, 7565, 7566, 7571, 7572;  
VII-X: 8825, 9861, 10418, 11064, 11079,  
11101, 11108, 11119, 11126, 11159,  
11582
- skin temperature, VI: 7558
- sodium chloride intake, VII-X: 10885
- steroid excretion, VII-X: 11116
- sweat composition, III: 2343, 2892
- temperature regulation, VI: 7419; VII-X: 9105
- thrombocytes, IV: 4967
- thyroid gland, VII-X: 11078, 11130
- urine composition, III: 2722, 3229; V: 6108; VII-X:  
11109
- urine protein content, VII-X: 11118
- uropepsin excretion, VII-X: 11134
- visual perception, VII-X: 11132
- voluntary apnea, IV: 5163
- water exchange rhythm, VII-X: 8606
- work capacity, VII-X: 11066
- fatigue, II: 1282, 1883; III: 3570
- general physiological effects, II: 1812; III: 2431, 3209,  
3219, 3407; IV: 4907; V: 6097; VI: 7553,  
7554; VII-X: 10167, 10657, 11063, 11071,  
11085, 11135
- in piloting, III: 3109; V: 5764
- oxygen requirements, VI: 7573
- relation to food intake, VI: 7387, 7585
- role in:  
physical training, I: 335  
pilot candidate training, IV: 4516
- time factors, V: 6103
- PHYSICAL WORK (STATIC)**  
general physiological effects, VII-X: 11137
- PHYSIOLOGICAL CORRELATES**  
of behavior, VII-X: 9181
- PHYSIOLOGICAL INSTRUMENTATION** *see* Instrumentation (Physiological)
- PHYSIOLOGICAL TELEMETRY**, II: 1457; III: 2442,  
3331, 3645; V: 6668; VII-X: 8455, 8492,  
8499, 8725, 9833, 9841, 9858, 9860, 9894,

- 9952, 10236, 12467, 12612, 12619, 12623, 12624, 12633, 12634, 12639, 12642, 12643, 12649, 12650, 12651, 12653, 12654, 12655, 12661, 12662, 12663, 12665, 12670, 12672, 12677, 12678, 12679, 12680, 12681, 12683, 12684, 12685, 12697, 12704, 12713, 12714, 12717, 12720, 12764
- PHYSIOLOGISTS**  
duties, VII-X: 11741
- PHYSIOLOGY** *see* Space physiology
- PHYSOSTIGMINE AND RELATED DRUGS**  
effects on:  
color vision, II: 1682  
dark adaptation, VI: 7006; VII-X: 9342  
hypothermia tolerance, V: 5430
- PIGEONS** (*see also* Homing pigeons), VII-X: 10257
- PIGMENT HORMONE** *see* Intermedin
- PIGS** *see* Swine
- PILES** *see* Hemorrhoids
- PILOCARPINE**  
effects on anoxia tolerance, I: 608
- PILOT CANDIDATES** (*see also* Helicopter pilot candidates)  
age factors, VII-X: 11688  
attitudes, II: 1018, 1019, 1020, 1021, 1022, 1023, 1394, 1587, 1588, 1590, 1671, 2188; III: 2421, 2433; IV: 3874, 4502; V: 6263, 6269, 6278, 6279; VII-X: 11751  
classification, IV: 4729; VII-X: 11549  
incidence of:  
cardiovascular diseases, VII-X: 11925  
diseases, VII-X: 11908, 11915  
psychosomatic disorders, VI: 7156  
sick calls, VII-X: 11814  
mental ability, V: 6180  
morale, VI: 7765, 7766, 7767; VII-X: 11748  
motivation, IV: 5088  
neuropsychiatric fitness, VII-X: 11594  
nutritional requirements, II: 1352  
performance  
test methods, IV: 4020  
personality, III: 2444, 2944, 2947, 3568; IV: 3717; VII-X: 9731, 11547, 11596  
relation to sick calls, VII-X: 11814  
test methods, VII-X: 11622  
tests, IV: 4184  
physical fitness, 6253  
prediction of success, III: 3323, 3391; IV: 3724  
rating, IV: 5136, 5138; V: 6191, 6192, 6193, 6194, 6218; VI: 7645; VII-X: 11607; 11619, 11624  
religious attitudes, V: 6274  
selection, III: 2574, 3050, 3102, 3168, 3321; IV: 3725, 3726, 4386, 4697, 4805, 5025, 5076; V: 6196, 6204, 6225, 6272, 6421; VI: 7161, 7227, 7645, 7665, 7667; VII-X: 11504, 11514, 11526, 11530, 11532, 11536, 11540, 11550, 11562, 11570, 11571, 11577, 11578, 11579, 11582, 11588, 11590, 11593, 11594, 11595, 11602, 11604, 11615, 11616, 11617, 11622, 11627, 11660, 11915, 11977, 12376  
use of electroencephalogram, VII-X: 11510, 11533  
training, III: 2423; IV: 5139; V: 6237, 6457; VI: 7675, 7696, 7700, 7710, 8092; VII-X: 11536, 11657, 11663, 11672, 11686, 12376  
attrition, V: 6215, 6216, 6220, 6274; VI: 7674, 7694, 7695, 7716, 7765; VII-X: 9717, 11504, 11530, 11680, 11688, 11855, 11908  
relation to age, VII-X: 11795  
deficiencies, VI: 7703  
general psychological effects, VI: 7706  
prediction of success, IV: 5076; V: 5738, 6187, 6202, 6220, 6222, 6233; VI: 7667, 7681, 7686, 7691, 7704, 7711, 7713, 7715, 7717; VII-X: 11579, 11604, 11612, 11620, 11624, 11644, 11645, 11660, 11661, 11664, 11679, 11680, 11681  
relation to anxiety, VI: 7159, 7685  
role of physical work, IV: 4516  
visual requirements, VII-X: 11531, 11541  
vital statistics, V: 6315  
vocational interest, V: 6266, 6277; VI: 7712; VII-X: 11751
- PILOT ERROR** (*see also* Accidents, human factors)  
VI: 8105; VII-X: 12381, 12438  
general physiological factors, VII-X: 12410, 12412  
psychological factors, VII-X: 12410
- PILOT SEATS**  
evaluation, VII-X: 12830  
human engineering, VII-X: 12841
- PILOT TRAINEES** *see* Pilot candidates
- PILOTING** (*see also* Fighter plane piloting; Glide p.; Helicopter p.; Jet plane p.)  
cause of:  
autohypnosis, V: 5746  
stress, V: 6174  
disturbances of spatial orientation, II: 1238; III: 2592; IV: 3884, 3973; V: 5615, 5618; VI: 8080, 8082, 8093, 8175; VII-X: 11636, 12397, 12399, 12417, 12562, 12594  
effects on:  
blood cells, V: 6174  
blood glucose content, I: 589  
electrocardiogram, II: 1457; VII-X: 9898  
electroencephalogram, VII-X: 9547  
galvanic skin response, VII-X: 9547  
metabolism, V: 5764; VI: 7191  
reproduction, VII-X: 9970  
respiration, VI: 7191  
sensory perception, VII-X: 9980  
eye movements, I: 325, 646, 647, 648; IV: 5135  
fatigue, I: 33, 326; III: 2329, 3229; IV: 4030; V: 6248; VI: 7590, 7599  
incidence of fainting, V: 6313; VII-X: 11856  
medical problems, VII-X: 9978, 12466  
physical work, III: 3109; V: 5764  
psychomotor performance, VII-X: 9604  
reaction time, VII-X: 9613  
role of:  
communication, VI: 8172  
equilibrium, IV: 4863  
sensory illusions, VI: 7084  
spatial orientation, IV: 3973; VII-X: 9604, 11709  
training devices (*see also* Flight simulators), IV: 5090  
use of:  
auditory signals, IV: 4092  
electronic equipment, II: 1953, 1954, 1955, 2084, 2289; IV: 4291  
instruments, VII-X: 12618  
periscopes, IV: 3920, 4112; V: 6631  
tactile signals, IV: 4348  
visual cues, IV: 4223  
visual displays, III: 2739, 2950, 3387; V: 6637; VII-X: 12587, 12622, 12645  
visual illusions, IV: 4501  
visual problems, VI: 8089, 8156
- PILOTS** (*see also* Automatic pilot; Combat pilots; Fighter plane pilots; Helicopter pilots; Jet plane pilots; Helicopter pilots; Jet plane pilots; Test pilots)  
age factors, I: 43, 44, 210, 211, 212, 213, 482, 596; II: 930, 1771, 1822; III: 2365, 2577, 2690, 2721, 2985, 3138, 3223, 3399, 3646; IV: 4096, 4166, 4583, 4687, 4992; V: 6281, 6284, 6285, 6287, 6288, 6300, 6301, 6304, 6306, 6308, 6309, 6310; VI: 7782, 7785, 8125, VII-X: 11771, 11772, 11778, 11781, 11782, 11787



- congresses, meetings, and symposia, V: 6282  
 attitudes, II: 1772; III: 3320; VI: 7756  
 attrition, IV: 4687  
 certification, I: 9, 44; IV: 3980, 4887, 4933; VI: 6747, 7648, 7749, 7934, 7935; VII-X: 8414, 8417, 8482, 11495, 11498, 11505, 11569, 11575, 11600, 11611, 11652, 11704, 11716, 11739, 11809  
 classification, II: 1715  
 contraindication of drugs, VII-X: 11984  
 dental requirements, III: 2981  
 hearing requirements, VI: 7719; VII-X: 11919  
 incidence of:  
   abnormalities in electrocardiogram, VII-X: 8744  
   focal infection, VI: 7844  
   mental diseases, VII-X: 9771  
   myopia, VI: 7726  
   pneumothorax, VII-X: 11979  
 medical care, VI: 7935; VII-X: 11778, 12089  
 motivation, VI: 7764  
 neuropsychiatric fitness, II: 1848; III: 2796, 3073; V: 6257; VI: 7720; VII-X: 9732, 11611, 11715, 11718, 11740  
 nutrition, III: 3588; VI: 6934  
 occupational deafness, II: 976; IV: 4399, 5082; V: 5772; VII-X: 9430  
 occupational diseases, I: 638; III: 3300; IV: 4556, 4665  
 performance (see also Accident proneness; Flying ability; Piloting), I: 145, 169, 327, 606, 646, 747, 804; II: 1213, 1238, 1362, 1879; III: 2592, 2641; IV: 5084; V: 6250, 6256, 6603, 6619; VI: 7756; VII-X: 11628, 11695  
 analysis, II: 1569; III: 3034; VII-X: 11697  
 effects of:  
   acceleration, IV: 3752; VI: 7197; VII-X: 10017, 10026, 10111, 10168, 10205, 11584  
   alcohol, I: 804; II: 936; III: 2360; VI: 7980  
   amphetamine, I: 353, 804  
   flight maneuvers, VII-X: 10136  
   information feedback, VII-X: 12553  
   positive acceleration, VII-X: 10002, 10065  
   safety harnesses, VII-X: 12292  
   spinning, VII-X: 11677  
   suggestibility, VII-X: 9736  
   training, IV: 4010  
   transversal acceleration, VII-X: 11057, 10112  
 psychological factors, VI: 7730  
 relation to:  
   age, II: 1822; III: 3110; IV: 4921; V: 6302; VI: 8081; VII-X: 11778  
   color vision, V: 5540  
   depth perception, IV: 4134  
   handedness, VII-X: 9592  
   neuromuscular reactions, III: 2930  
 test methods, I: 329, 599; III: 3562; V: 6258; VI: 7735  
 personality, I: 327, 358, 676, 904; II: 1362; III: 3164; IV: 4792; V: 5727, 6227; VI: 7747; VII-X: 9732, 9735, 9756, 11548  
 physical fitness, II: 1341, 1800, 1848, 2153; III: 2306, 2400, 2612, 2985, 3226, 3325, 3507; IV: 4675, 4788, 5042; V: 6304; VI: 7733, 7743, 7749; VII-X: 11495, 11498, 11505, 11569, 11575, 11576, 11600, 11701, 11704, 11711, 11713, 11718, 12043, 12092, 12405  
 relation to accidents, VII-X: 12053  
 rating, III: 2641; IV: 5084; V: 6201  
 rehabilitation, VII-X: 11698  
 selection, I: 49, 113, 139, 562, 690, 693, 702, 708, 908, 909; II: 1042, 1043, 1134, 1230, 1312, 1314, 1401, 1403, 1435, 1621, 1715, 1737, 1857, 1874, 2004, 2018, 2280; III: 2378, 2445, 2464, 2638, 2648, 3072, 3235, 3271, 3296, 3323, 3390, 3521; IV: 4167, 4474, 4863, 4936; V: 5717, 6126, 6188, 6206, 6257, 6418; VI: 7656, 7743, 7747; VII-X: 8310, 9731, 11495, 11515, 11547, 11548, 11552, 11576, 11584, 11587, 11596, 11620, 11743, 11816, 12055  
 India, III: 2400  
 Switzerland, II: 1947, 2263; III: 3018  
 training, I: 83, 117, 158, 283, 361, 550, 706, 707, 909; II: 1085, 1134, 1382, 1409, 1568, 1715, 1763, 1802, 1844, 2113, 2176, 2270; III: 2935, 3006, 3073, 3090, 3184, 3321, 3390; IV: 4167, 4678, 4883, 5075, 5090; V: 6186, 6224, 6227, 6236; VI: 7680, 7689, 7708, 7797, 8083; VII-X: 11628, 11636, 11654, 11677, 11685, 11687, 12427  
 attrition, III: 2370, 2372, 2421, 2574, 3608; IV: 3726, 3765; V: 6228  
   psychological factors, IV: 5125; V: 5732  
 cause of neuroses, III: 2638  
 effects on performance, IV: 4010  
 France, IV: 5078  
 handbooks and treatises, IV: 4110  
 prediction of success, I: 255, 328, 495; II: 1403; III: 2444, 2763, 2947, 3103; IV: 4484, 4497; V: 6218, 6219, 6225, 6258; VII-X: 9731, 11552, 11627  
 psychological factors, I: 78; V: 6213  
 relation to mental ability, VII-X: 11678  
 Switzerland, II: 2263  
 use of motion pictures, IV: 4274, 4742, 4933  
 visual requirements, III: 2979; IV: 3712, 4700; V: 5535, 5536, 5539, 6284, 6300; VI: 7721, 7723, 7726, 7727, 7744, 7748, 8109; VII-X: 11543, 11696, 11763, 12064  
 vocational interest, V: 6227  
**PINEAL GLAND**  
 effects of illumination, VII-X: 11486  
**PITCH**  
 effects on:  
   sound localization, VII-X: 9543  
   speech intelligibility, VII-X: 9363  
**PITCH DISCRIMINATION**, I: 463, 464; V: 5557; VI: 7042; VII-X: 9410  
 effects of:  
   auditory stimuli, VI: 7029  
   noise, V: 5555  
   speaking, III: 2497  
 role of cochlea, IV: 3715  
 test methods, III: 3333  
 tests, VI: 7020; VII-X: 9376  
**PITRESSIN** see Vasopressin  
**PITUITARY GLAND** see Hypophysis  
**PLANETARY ATMOSPHERES**, I: 810; II: 2146, 2147; V: 5301; VI: 6790; VII-X: 8676, 8692, 8693, 8717  
   bibliography, VII-X: 8687  
**PLANETARY EXPEDITIONS** (see also Space flight (Inter-planetary)), IV: 4851; V: 5213, 5229, 5237; VII-X: 8306, 8681  
   medical problems, VI: 6723  
**PLANETS** (see also Earth, Mars; Venus)  
   atmosphere see Planetary atmospheres  
   biological contamination, VII-X: 8699, 8700, 12440, 12441, 12442, 12443, 12444, 12446, 12447  
   life conditions, III: 2462, 2493, 2702; IV: 4432, 4851, 5027, 5060; V: 5224, 5305; VI: 6786, 6792; VII-X: 8383, 8672, 8676, 8683, 8691, 8693, 8700, 8701, 8702, 8703, 8709, 8717, 8720, 8730, 12440  
**PLANT EXTRACTS** (see also Alkaloids; Flavones)  
 effects on:

- acceleration tolerance, VII-X: 10060  
 dark adaptation, VI: 6995
- PLANT LIFE**  
 on Mars, VII-X: 8672
- PLANTS** (see also Algae, Bacteria; Edible plants; Fungi; Microorganisms; Seeds)  
 effects of space flight, VII-X: 8501  
 growth  
 effects of:  
 altitude, VII-X: 12870  
 subgravity, VII-X: 12870  
 use as food, VII-X: 12867, 12870, 12876  
 use as gas exchanger, VII-X: 12867, 12876
- PLASMA** see Blood plasma
- PLASMA VOLUME** see Blood plasma volume
- PLASMALOGEN** see Blood, plasmalogen content
- PLASTIC SURGERY**, I: 694
- PLETHYSMOGRAM**  
 use in heart examination, VII-X: 12065
- PLETHYSMOGRAPHY**, VII-X: 12664
- PNEUMONIA**  
 effects of altitude, VI: 7308
- PNEUMOTACHOCARDIOGRAM**, VII-X: 12620
- PNEUMOTACHOGRAM**  
 telemetry, VII-X: 8807
- PNEUMOTHORAX**  
 caused by airplane flight, VI: 7848; VII-X: 11943, 11979  
 effects of altitude, I: 12, 715; II: 1153; V: 6337; VII-X: 11893  
 effects on:  
 air transportability, I: 12, 715  
 explosive decompression tolerance, VI: 7279  
 flying ability, VI: 7742; VII-X: 11972  
 incidence in pilots, VII-X: 11979
- POISONING** see Beryllium poisoning; Carbon monoxide p.; Food p.; Hyperoxia (Oxygen p.); Lead p. Also see entries under Toxic effects
- POISONOUS SUBSTANCES** (see also Substances listed under Toxic effects)  
 cause of accidents, VI: 8098; VII-X: 12421  
 general physiological effects, II: 953; III: 3065, 3221  
 handbooks and treatises, II: 953  
 hazards, V: 6435; VI: 7942  
 protection, VII-X: 12104  
 research, I: 766  
 tolerance, VI: 7944; VII-X: 12107  
 toxicity, IV: 3700, 4090  
 effects of:  
 altitude, II: 953; VI: 7256  
 altitude acclimatization, VI: 7974  
 reviews, IV: 4994; VI: 7946
- POLIOMYELITIS**  
 effects on air transportability, I: 507; III: 3490; IV: 5177; V: 6381, 6403; VII-X: 12040
- POLYCYTHEMIA**  
 caused by:  
 altitude, V: 5953  
 anoxia, VI: 7364  
 effects on time reserve, IV: 4622  
 relation to:  
 altitude tolerance, IV: 4622  
 anoxia tolerance, III: 3582  
 positive acceleration tolerance, VII-X: 10182
- POSITION** see Posture; Prone position flight; Retinal image position; Supine position flight; Tilting
- POSITION ESTIMATION**  
 in visual displays, IV: 3755
- POSITIVE ACCELERATION** see Acceleration (Positive)
- POSTAFENE**  
 use in motion sickness, I: 235, 236; II: 1224, 1226, 1227, 1509
- POSTDECOMPRESSION SHOCK**, I: 727; II: 1269; VI: 7286; VII-X: 11857
- POST-MORTEM EXAMINATION** (see also Aviation casualties, identification), V: 6436; VII-X: 12386, 12390, 12406, 12409, 12423, 12431
- POST-MORTEM FINDINGS** see under Acceleration, general physiological effects; Acceleration, pathological effects; Acceleration (Negative), general physiological effects; Acceleration (Positive), general physiological effects; Anoxia; Aviation casualties; Blast; Brain, effects of anoxia; Brain, effects of hyperventilation; Carbon monoxide poisoning; Decompression sickness; Explosive decompression; Impact
- POSTURAL CHANGE** (see also Tilting)  
 effects on:  
 blood pressure, III: 3131; VII-X: 11438  
 cardiovascular system, III: 3606  
 cerebrospinal fluid pressure, III: 2725, 2726  
 circulation, IV: 3898; V: 6169; VII-X: 10214  
 pulmonary circulation, VII-X: 11455  
 retinal circulation, VII-X: 8763  
 excretory rhythm, VII-X: 11463  
 kidney function, V: 6171, 6172  
 pulse rate, III: 3131; VII-X: 11438  
 respiration, III: 3606
- POSTURAL REFLEXES**  
 effects of:  
 anoxia, VII-X: 10510  
 hypothermia, VI: 6919  
 subgravity, VI: 7234; VII-X: 10251, 10257, 10258  
 vibration, VII-X: 10979  
 role of labyrinth, VI: 7046; VII-X: 10257
- POSTURE** (see also Prone position flight; Supine position flight)  
 cause of fainting, V: 6353  
 effects of change of acceleration, VII-X: 10085  
 effects on:  
 acceleration tolerance, I: 631; IV: 4061; V: 5784; VII-X: 8762, 10051, 10172, 10175, 10274  
 aldosterone excretion, VII-X: 8609, 11449  
 blood plasma proteins, VI: 7636  
 blood pressure, IV: 4481  
 catecholamine excretion, IV: 4128; V: 6170  
 circulation, I: 392, 591; III: 3479; IV: 4128; V: 6168, 6170; VI: 7637  
 peripheral circulation, VII-X: 11452  
 retinal circulation, VII-X: 11466  
 depth perception, III: 2675  
 ejection from aircraft, III: 2330  
 electrocardiogram, VII-X: 8766, 11458, 11461, 11480  
 electroencephalogram, VII-X: 9153, 10083, 11446  
 electrolyte excretion, V: 6168; VII-X: 11449  
 electromyogram, VII-X: 11451  
 esophageal pressure, VII-X: 11448  
 explosive decompression tolerance, VII-X: 10322  
 heart function, VII-X: 11447  
 heat loss, V: 5368; VI: 7637  
 impact tolerance, VII-X: 10059, 10061, 10190  
 kidney function, V: 6168; VII-X: 11442  
 metabolism, VII-X: 11436  
 muscular strength, IV: 4387, 4829; VII-X: 11439, 11440, 11441, 11464, 12495  
 perspiration, III: 2927  
 psychomotor performance, VII-X: 9639  
 pulse rate, I: 591  
 reaction time, III: 3539  
 respiration, II: 1013; III: 3174; IV: 3855, 4624; V: 5317, 5354, 6166; VI: 7638; VII-X: 11437, 11444, 11448, 11450, 11453, 11454, 11457, 11459  
 respiratory dead space, VII-X: 11460

- spatial orientation, II: 2238; III: 2812, VI: 7080;  
VII-X: 9508, 11445, 11462
- spinal column, VII-X: 11436
- testis, V: 6165
- thrombocytes, IV: 4967
- urine composition, IV: 3935; VII-X: 11442, 11443
- urine protein content, VII-X: 11118
- urine sodium-potassium ratio, VII-X: 11463
- vectorcardiogram, VII-X: 11461, 11480
- work capacity, V: 6167
- relation to motion sickness, IV: 4420
- POTASSIUM** *see* Potassium content *under* Blood; Blood plasma. *Also see* Sodium-potassium ratio
- POTASSIUM COMPOUNDS**  
toxic effects, VII-X: 9027
- POTASSIUM METABOLISM** (*see also* Electrolyte distribution. *See also* Potassium content *under* Blood; Blood plasma. *See also* entries *under* Sodium-potassium ratio)
- effects of:  
altitude, II: 2206; V: 5843; VII-X: 10346  
altitude acclimatization, II: 2206  
anoxia, II: 1266; IV: 4601, 4602; V: 5923; VII-X: 10616  
carbon dioxide, II: 1266; IV: 3892  
hyperthermia, VII-X: 8932  
hyperventilation, V: 5338  
hypothermia, V: 5473; VII-X: 9027  
noise, VII-X: 11040  
positive acceleration, IV: 3910  
stress, VII-X: 9822
- role of:  
adrenal glands, IV: 4602, 4817  
autonomic nervous system, IV: 4602  
liver, IV: 4601
- POTENCY** *see* Sexual potency
- POTENTIALS** *see* Bioelectrical potentials; Standing potential. *Also see* entries *under* Action potentials; Electrical potentials
- PRACTICE** (*see also* Learning; Psychomotor training; Training; Yoga practice)
- effects on:  
auditory thresholds, VII-X: 9400  
psychomotor performance, I: 734, 735; II: 948, 1405, 1726, 1727, 2098, 2186; III: 2529, 2535, 3089; IV: 4156, 4158; V: 5660, 5663, 5694; VI: 7091, 7107; VII-X: 9586, 9606  
spatial orientation, V: 5652  
speech intelligibility, III: 2535; VII-X: 9415  
vigilance, III: 2537; VII-X: 9779  
relation to accident proneness, VI: 8125  
role in learning, VII-X: 11656
- PREADAPTATION** *see* Effects of preadaptation *under* Dark adaptation; Ozone tolerance; Retinal adaptation
- PREBIOCHEMISTRY**, VI: 6795, 6796, 6797; VII-X: 8680, 8706, 8729, 8730
- PRECOOLING**  
effects on heat tolerance, VII-X: 8975, 10904, 10905, 10907
- PREDICTION OF SUCCESS** *see under* Air crews, training; Aviators, training; Combat crews, training; Helicopter pilot candidates; Instructors, training; Maintenance personnel, training; Officer candidates, training; Officers, training; Personnel, training; Pilot candidates; Pilot candidates, training; Pilots, training; Psychomotor training; Radio operators, training; Teams; Traffic control operators, training
- PREDISPOSITION** *see under* Deafness; Epileptic seizures; Fainting; Motion sickness. *Also see* items *under* Proneness
- PREDNISONONE**  
effects on:  
metabolism, V: 5414  
temperature regulation, V: 5414
- PREGNANCY**  
effects of altitude acclimatization, VI: 7302  
effects on air transportability, V: 6391
- PREGNENOLONE** *see* Progesterone
- PRESERVATION** *see under* Food; Water
- PRESSONEX** *see* Mftaraminol
- PRESSURE** *see* Abdominal pressure; Barometric p.; Blood p.; Cerebrospinal p.; Esophageal p.; Explosive decompression; Explosive recompression; Gastrointestinal p.; Intraocular p.; Intrapulmonary p.; Overpressure; Peripheral p.; Thoracic p.; Tissue p.
- PRESSURE BREATHING** (*see also* Artificial respiration; Intrapulmonary pressure; Negative pressure breathing), I: 570; II: 1033; IV: 4142  
analysis, II: 1335  
cause of:  
apnea, IV: 5160  
fainting, VII-X: 11872  
hyperventilation, II: 1521; IV: 5111; VII-X: 12003
- effects on:  
altitude tolerance, VII-X: 10333  
ballistocardiogram, II: 1191  
blood, II: 1651  
blood oxygen tension, I: 452; V: 5328; VII-X: 8827  
blood pressure, I: 131, 397, 399, 406, 452; II: 1657, 1968; III: 2827, 2835, 2951; IV: 4249; V: 5351, VI: 6815, 6827; VII-X: 8837, 8850, 8897  
blood volume, VII-X: 8897  
body fluid distribution, IV: 4116  
circulation, I: 131, 397, 399, 406; II: 1140, 1141, 1142, 1651, 1964; III: 2826, 3189; IV: 4116, 4379, 4898, 4945, 5111; V: 5329, 5341; VI: 6828, 6850; VII-X: 8760, 8768, 8847, 8848, 8851, 8853, 8857, 8862, 8897, 8910  
peripheral circulation, VII-X: 8812, 8876  
pulmonary circulation, II: 1897; III: 3388; VII-X: 8856, 8863  
retinal circulation, VII-X: 8839  
electrocardiogram, I: 452, 607; V: 5359; VI: 6851  
excretory rhythm, VII-X: 8921  
heart function, II: 1657; VI: 6837; VII-X: 8787, 11872  
intraocular pressure, VII-X: 8839  
lung, II: 1656; III: 3340  
patellar reflex, V: 5328  
perspiration, VII-X: 8856  
psychomotor performance, V: 5701  
pulse rate, VII-X: 8849  
respiration, I: 397; 399, 451; II: 1521, 1651, 1968, 2165, 2252; III: 2465, 2727; IV: 3772, 5160; V: 5328; VI: 6833; VII-X: 8795, 8830, 8842, 8843, 8851, 8910, 10202  
respiratory movements, III: 2683  
sodium metabolism, IV: 4379  
tissue pressure, IV: 4117  
transversal acceleration tolerance, VII-X: 10202  
general physiological effects, II: 1651, 1655, 1656, 1657, 1658; III: 2604; V: 5333; VI: 6835, 8019  
research, VII-X: 8422  
role of abdominal pressure, II: 1105
- PRESSURE BREATHING TOLERANCE**, VII-X: 8910  
animal experiments, VII-X: 8817  
effects of Aramine, V: 5351; VI: 6815
- PRESSURE CABIN ATMOSPHERES** (*see also* Space cabin atmospheres)  
composition  
relation to decompression sickness, VII-X: 12794
- PRESSURE CABINS**, I: 297, 504, 561; II: 1942; III: 3127  
air conditioning, I: 297; IV: 4882; V: 6688  
hazards, V: 5831  
test methods, III: 3259

- human engineering, I: 297; II: 1692, 1740, 1805, 2043; III: 3180; IV: 5174; V: 6692
- PRESSURE CELLS** *see* Emergency pressure cells
- PRESSURE CHAMBERS** *see* Decompression chambers
- PRESSURE GAUGES**, IV: 3975
- PRESSURE GRADIENT** *see under* Ear
- PRESSURE HELMETS**
- effects on respiratory dead space, VII-X: 12207, 12264
  - evaluation, III: 2342; VI: 7990
- PRESSURE SUITS** (*see also* Altitude suits; Anti-g suits; Emergency pressure cells; Space suits; Ventilated suits), V: 6460, 6477; VI: 7659, 8014, 8020; VII-X: 8422, 12176, 12213, 12228, 12230
- effects on:
- circulation, VII-X: 8760, 12261
  - explosive decompression tolerance, VI: 7299; VII-X: 10334
  - heart function, VII-X: 8787
  - metabolism, VI: 8025; VII-X: 12296
  - psychomotor performance, VII-X: 12198, 12201
  - pulmonary circulation, VII-X: 8786
  - reaction time, VII-X: 12199
  - respiration, VI: 8005; VII-X: 12253, 12279
  - work capacity, VII-X: 12273
- evaluation, VI: 8013
- test methods, VII-X: 12307
- general physiological effects, VI: 8019; VII-X: 11573, 12204, 12260
- thermal properties, VII-X: 12267
  - use in high altitude flight, VI: 7714
- PRESSURE TRANSDUCERS**, VII-X: 12635
- PRETRAINING** *see* Verbal pretraining
- PREVENTIVE MEDICINE**, VI: 7788, 7791, 7795, 7800, 7805
- congresses, meetings, and symposia, VI: 7786
- PREWARMING**
- effects on cold tolerance, VII-X: 10647
- PRIMAQUINE**
- effects on altitude tolerance, III: 2583, 2584
- PRIMATES** *see* Chimpanzees; Monkeys
- PRINTED WORDS**
- recognition, III: 2952
- PRISMS**, *see* Optical prisms
- PROBABILITY DISCRIMINATION**
- in psychomotor performance, IV: 5191
- PROBANTHINE**
- use in motion sickness, I: 336
- PROBLEM SOLVING**
- tests, VII-X: 9742
- PROBLEM SOLVING (MECHANICAL)**
- tests, V: 6241
- PROCAINE AND DERIVATIVES**
- effects on:
- altitude tolerance, V: 5897; VI: 7315
  - anoxia tolerance, I: 398
  - cold tolerance, V: 6359
  - oxygen consumption, V: 6359
- PROCHLORPERAZINE**
- use in motion sickness, VII-X: 11817
- PROGESTERONE AND RELATED DRUGS**
- general psychological effects, IV: 4936; V: 6374
- PROMETHAZINE**
- use in motion sickness, I: 142, 230, 231, 233, 235, 382, 768; II: 1224, 1226, 1227
- PRONE POSITION FLIGHT**, I: 764; V: 6581
- effects on acceleration tolerance, I: 92, 478
  - field of vision, I: 23, 326
- PRONENESS** *see* Accident proneness; Anxiety proneness; Motion sickness, predisposition
- PROPAPHENIN** *see* Chlorpromazine
- PROPELLANTS** *see* Rocket propellants
- PROPRIOCEPTION** (*see also* Motion perception (passive))
- effects of:
- rotation, II: 1670; III: 2931; V: 5609
  - subgravity, IV: 4964; VI: 7241; VII-X: 10265, 10271
- effects on blood pressure, VII-X: 9456
- relation to eye movements, VII-X: 9226
- role in:
- equilibrium, VII-X: 9453
  - neuromuscular performance, VII-X: 9453
  - psychomotor performance, II: 1448; IV: 3764, 4152, 5147; V: 5604
  - spatial orientation, I: 180, 617, 618, 619, 829, 872; III: 2594, 2595, 2596; IV: 5185; V: 5629; VII-X: 9453, 9471, 9541, 9542, 10268
- test methods, III: 3536
- tests, I: 498
- thresholds, III: 2840; V: 5609
- PROSERINE** *see* Physostigmine
- PROSTHESES** *see* Dental prostheses
- PROSTIGMINE** *see* Physostigmine
- PROTECTION** *see under* Acceleration; Acceleration (Negative); Airplane noise; Anoxia; Carbon monoxide; Cold; Cosmic rays; Dazzle; Explosive decompression; Heat; Hot climates; Impact; Ionizing radiations; Meteoroids; Microwave radiation; Nuclear radiations; Poisonous substances; Radiation belts; Rocket propellants; Solar flares; Solar radiation; Thermal radiation; Windblast. *Also see* Eye protection; Fire protection; Protective equipment
- PROTECTIVE CLOTHING** *see* Clothing
- PROTECTIVE EQUIPMENT** (*see also* Blankets; Clothing; Emergency pressure cells; Goggles and glasses; Harnesses; Life preservers; Life rafts; Medical kits; Oxygen equipment; Parachutes; Safety belts; Warning devices. *See also* Equipment under Survival; Survival on land; Survival on water), I: 174, 274, 522, 622; II: 1806, 2016; III: 3483, 3583; IV: 4074; V: 6451, 6480; VII-X: 8422, 12203, 12249
- evaluation, II: 1814; VII-X: 12386
- research, VII-X: 8471
- PROTEIN CONTENT** *see under* Algae; Urine
- PROTEIN METABOLISM** (*see also* Nitrogen metabolism)
- effects of:
- altitude, II: 1794; VII-X: 10471
  - anoxia, V: 5948; VII-X: 10569, 10620
  - cold, III: 2888
  - cold acclimatization, VII-X: 10879
  - heat, VII-X: 8919
  - physical work, VII-X: 8919
  - starvation, IV: 4381
  - stress, III: 2586
- relation to diurnal cycle, V: 5267
- PROTEINS** (*see also* Amino acids; Blood plasma proteins)
- effects on stress tolerance, VII-X: 9876
- PSEUDOMONAS**
- in otitis externa, II: 1535, 2103, 2288
- PSYCHIATRIC DISEASES** *see* Mental diseases
- PSYCHIATRIC EXAMINATION** *see* Neuropsychiatric examination
- PSYCHIATRISTS**
- duties, I: 177; III: 3157; IV: 4630, 4783
- PSYCHIATRY** *see* Military psychiatry
- PSYCHO GALVANIC RESPONSE** *see* Galvanic skin response
- PSYCHOLOGICAL DISTURBANCES**
- relation to brain activity, VII-X: 9692
- PSYCHOLOGICAL EFFECTS** *see* General psychological effects under Acceleration; Acceleration (positive); Accidents; Age; Airplane flight; Airplane noise; Alcohol; Altitude; Amphetamine; Anoxia; Atropine;

Balloon flight; Blast; Cold climates, Combat stress; Confinement; Dimenhydrinate; Epilepsy; Explosive decompression; Fatigue, Flight duty, Free fall; High altitude flight; Hot climates; Immersion (continuous); Instrument flight; Ionized atmosphere; Jet engine noise; Jet plane flight; Jet plane noise; Lysergic acid derivatives; Mental stress; Meprobamate; Motion sickness drugs; Noise; Noise (high intensity); Pilot candidates, training; Progesterone; Restraint; Scopolamine; Sensory deprivation; Sleep deprivation; Social isolation; Space flight, general psychological effects; Space flight (Simulated); Space flight (Suborbital); Starvation; Stress; Subgravity; Supersonic flight; Training, Vibration; Wind; X-rays

PSYCHOLOGICAL EXAMINATION *see* Psychological testing

PSYCHOLOGICAL FACTORS *see under* Acceleration tolerance; Accident proneness; Air crews, performance; Alertness; Anoxia tolerance; Anxiety; Astronauts, performance; Auditory perception; Blackout; Catecholamine excretion; Circulation; Cold acclimatization; Depth perception; Ejection from aircraft; Fainting; Fatigue; Hypothermia; Learning; Mental performance; Messages, retention; Morale; Motion sickness; Motion sickness, predisposition; Neuroses; Night vision; Originality; Personnel, training, attrition; Physical fitness; Pilot error; Pilots, performance; Pilots, training; Pilots, training, attrition; Psychomotor performance; Reaction time; Reasoning; Restraint adaptation; Space flight; Spatial orientation; Stress sensitivity; Suggestibility; Survival; Tactile perception; Time estimation; Vigilance; Visual perception

PSYCHOLOGICAL INTERVIEWS, IV: 5178

PSYCHOLOGICAL TESTING (*see also* Achievement tests; Aptitude tests; Personality tests; Psychological interviews), IV: 4355, 4983; V: 6205, 6206; VI: 7157, 7223, 7657, 7661, 7666; VII-X: 9675, 9685, 9702, 9729, 9735, 9736, 9739, 9741, 11501, 11504, 11532, 11579, 11580, 11583, 11587, 11588, 11595, 11597, 11631, 11640, 11645, 12066, 12069

relation to personality, VII-X: 9758

PSYCHOLOGY (*see also* Aviation psychology; Military p.; Space p.; Team p.)

research

bibliography, VII-X: 8367

PSYCHOMOTOR PERFORMANCE (*see also* Mirror vision performance; Motor performance; Neuromuscular performance; Psychomotor stress; Reaction time; Target tracking), I: 78; II: 1568; V: 5659

analysis, II: 1405, 1543, 1567, 1833, 1880, 1958;

III: 2375, 2468, 2492, 2737, 2738; V: 5680, 5681, 5683, 5693, 6603; VI: 7095, 7096, 7108, 7113, 7128; VII-X: 9561, 9588, 9600, 9603, 9611, 9612, 9638, 9641, 9642, 12477, 12494, 12506, 12513, 12516

animal experiments, VII-X: 9634

bibliography, II: 985

effects of:

acceleration, IV: 4822; VI: 7227, 7229, 7236; VII-X: 9569, 10027, 10028, 10037, 10038, 10056, 10064, 10100, 10127, 10145, 10195

animal experiments, VII-X: 10094

negative acceleration, VI: 7206

positive acceleration, VII-X: 10002, 10056, 10065, 10091

transversal acceleration, VII-X: 10052, 10110

advance information, II: 1720; III: 2758, 3077, 3336; IV: 4323

alertness, IV: 4591; V: 5715

altitude, VII-X: 10315

altitude acclimatization, III: 2794

anoxia, II: 1186, 1835; IV: 4239, 5024; V: 5959, 5960, 6365; VII-X: 9809, 10507, 10559, 10609

anti-g suits, VII-X: 12288

anxiety, I: 718; III: 2642, 3159; IV: 4276, 4603;

VI: 7094; VII-X: 11177

auditory signals, IV: 4844

auditory stimuli, IV: 4375

carbon dioxide, I: 881; II: 2243

climate, II: 1918, 1919, 1920

clothing, IV: 4901

gloves, V: 6455

cold, III: 3537; IV: 5048; VII-X: 10843

continuous immersion, VII-X: 10224

continuous rotation, VII-X: 10042

dazzle, VII-X: 9628

drowsiness, VII-X: 9177

drugs, III: 2843, 2900, 3295; VII-X: 9630, 12004

alcohol, IV: 3938

amphetamine, I: 353, 804; II: 1549, 1915;

VI: 7116

benadryl, II: 1549, 1914, 1915, 1916; VI: 7873

bromides, VI: 7875

caffeine, II: 1549; VI: 7875; VII-X: 9629, 9631

dimenhydrinate, VI: 7873

morphine, V: 6356, 6370

motion sickness drugs, IV: 4761

Nalorphine, V: 6370

scopolamine, II: 1914, 1915, 1916; IV: 3716

environmental temperature, II: 1918, 1919, 1920,

III: 3540; VI: 7454; VII-X: 9628

fatigue, VI: 7588, 7602

handedness, III: 3474; IV: 4251; VII-X: 9592, 9645

heat, VII-X: 9627, 10845

heat acclimatization, VII-X: 10846

helicopter flight, VI: 7494

hyperventilation, IV: 4540; V: 5315, 5320, 5363, 6546; VI: 6810

illumination, II: 1732, 1770; IV: 3795; VI: 7117

information feedback, IV: 4270, 4757, 4919;

V: 5663, 5666, 5667, 5694, 5703, 5704;

VI: 8182; VII-X: 9572, 9573

intermittent light, IV: 3795, 4445, 4446; V: 5700

ionizing radiations, VII-X: 11293, 11371

mental stress, I: 884; III: 2642, 3472, 3663; VII-X: 9591

motion, VII-X: 9582

motion sickness, IV: 3718

motivation, III: 3295; VI: 7092

noise, II: 2273; III: 2532, 2534; V: 6066; VI: 7483,

7488, 7526; VII-X: 9628, 10943, 10975

nuclear radiations, VII-X: 11357

oxygen breathing, VI: 7116; VII-X: 9593

pain, V: 6173

physical work, II: 1131; VII-X: 11132

posture, VII-X: 9639

practice, I: 734, 735; II: 948, 1405, 1726, 1727,

2098, 2186; III: 2529, 2535, 3089; IV: 4156,

4158; V: 5660, 5663, 5668, 5694; VI: 7091,

7107; VII-X: 9586, 9606

pressure breathing, V: 5701

pressure suits, VII-X: 12198, 12201

rest, II: 947, 983, 1305, 1886; III: 2334, 2335, 2438, 3623

rhythmic ability, II: 1361

sensory illusions, III: 3363

simulated space flight, VII-X: 9923

simulated subgravity, VII-X: 10256

sleep deprivation, II: 1131; IV: 3954; V: 5669;

VII-X: 9627, 9650, 11163, 11170

starvation, II: 1663

stress, I: 284; III: 2550; V: 5669; VI: 7183; VII-X: 12525

- subgravity, II: 992; V: 5798; VI: 7236, 7238;  
VII-X: 10127, 10228, 10248, 10250, 10252,  
10255, 10269, 10277
- suborbital space flight, VII-X: 9872
- task complexity, V: 5664, 5691; VI: 7096; VII-X:  
9590; 9594, 9595, 9596, 9627
- training, IV: 4603; V: 5682; VI: 7100; VII-X:  
9559, 9566, 9590
- verbal pretraining, II: 1764; V: 5664
- vestibular stimulation, VI: 7097
- vibration, VI: 7524; VII-X: 10969, 11039
- vigilance, III: 2853
- visual cues, III: 2778; IV: 4223, 4342, 4475
- visual noise, V: 6599
- visual signals, IV: 4844; VII-X: 9615, 9651
- visual stimuli, III: 2842
- work load, VII-X: 9566, 12503
- work-rest cycle, VI: 7122; VII-X: 9650, 11690
- effects on:
- electromyogram, VI: 7112, 7120; VII-X: 9583,  
9648
  - galvanic skin response, VII-X: 9609, 9610
  - scale reading, IV: 4512
- fatigue, II: 1048, 1129, 2105; III: 2532, 2899, 2900,  
3456; IV: 4323, 4757, 4758, 4760, 4953;  
VI: 7595
- general physiological effects, IV: 4026; VII-X: 9790
- general physiological factors, II: 1129
- test methods, VII-X: 9595
- in piloting, VII-X: 9604
- machine analogs, V: 5683; VI: 7108
- of chimpanzees, VII-X: 12703
- of monkeys, VII-X: 9634
- probability discrimination, IV: 5191
- psychological factors, I: 78, 284, 718; II: 1090, 1091,  
1129, 1257, 1397, 1667, 1999; III: 2374,  
2900; IV: 4760; V: 5661
- test methods, VII-X: 9595
- relation to:
- age, III: 3476
  - diurnal cycle, VII-X: 8631
  - electromyogram, V: 5670, 5674, 5675, 5679, 5728,  
6066; VI: 7099, 7121; VII-X: 9608
  - flying ability, VII-X: 11664
  - listening performance, IV: 4076
  - muscular tonus, III: 2333; V: 5674; 5675; VI: 7092;  
VII-X: 9584
  - reaction time, VI: 7129
  - visual perception, VII-X: 9641, 9642
- research
- Austria, II: 1015
  - Germany, II: 1015
  - Switzerland, II: 1015
- research methods, V: 6605
- retention of training, I: 317, 414, 734; II: 1631
- reviews, VII-X: 9624
- role of proprioception, II: 1448; IV: 3764, 4152,  
5147; V: 5604
- test methods, II: 951, 1058, 1401, 1406, 1624, 1995,  
2018; III: 2735, 2899, 3491, 3493; IV: 4210,  
4611, 4946; V: 6186, 6196, 6677; VII-X:  
9563, 9637, 11548, 11722
- tests, I: 158, 160, 161, 735; II: 946, 948, 1093, 1095,  
1256, 1258, 1288, 1289, 1356, 1396, 1403,  
1407, 1475, 1488, 1543, 1622, 1623, 1641,  
1672, 1676, 1725, 1726, 1727, 1747, 1849,  
1879, 1885, 1887, 1957, 1995, 1998, 2000,  
2024, 2080, 2098, 2109; III: 2484, 2635,  
3118, 3262, 3362, 3394, 3456; IV: 3694,  
3796, 3839, 3948, 3991, 4251, 4318, 4445,  
4672, 4686, 4714, 4726, 4894, 4937; V: 5665,  
5672, 5685, 5696, 5699, 5702, 5705; VI: 7088,  
7093, 7095, 7098, 7103, 7110, 7114, 7115,  
7118, 7123, 7124, 7125, 7127; VII-X: 9562,  
9587, 9598, 9605, 9620, 9621, 9622, 9625,  
11506
- time factors, II: 1724; III: 2376, 2491, 2643, 3082,  
3089, 3533; IV: 4006, 4234, 4591, 5147,  
5148; V: 5673, 5715; VI: 7105, 7109;  
VII-X: 9596, 9599, 9626, 9630, 9651
- training devices, VII-X: 12703
- transfer of training, I: 163, 317, 414, 520; II: 984,  
986, 987, 1037, 1342, 1343, 1346, 1485,  
1487, 1547, 1548, 1639, 1733, 1802, 1891,  
2113, 2186; III: 2336, 2376, 2381, 2382,  
2456, 2758, 2772, 2803, 2900, 3082, 3222;  
IV: 3735, 4209, 4269, 4271, 4866; V: 5662,  
5666, 5671, 5676, 5677, 5686, 5689, 5690,  
5697, 5698; VI: 7091, 7130; VII-X: 9560,  
9571, 9574, 9616, 9623, 9649, 11672
- PSYCHOMOTOR STRESS
- effects on catecholamine excretion, V: 5481
- PSYCHOMOTOR TRAINING (see also Practice)
- prediction of success, VII-X: 9587
- PSYCHONEUROSIS see Neuroses
- PSYCHOSES
- caused by drugs, VII-X: 12007
  - incidence in aviators, V: 5744
- PSYCHOSOMATIC DISORDERS
- incidence in pilot candidates, VI: 7156
- PSYCHOSOMATIC MEDICINE
- relation to aviation medicine, IV: 4991
- PSYCHOTHERAPY see Anxiety, treatment; Neuroses,  
prevention and treatment
- PTOSIS see Eye diseases
- PUBLIC HEALTH ASPECTS see under Jet plane flight;  
Passenger transportation. Also see entries under Sani-  
tary aspects
- PULMONARY BLOOD VESSELS
- effects of explosive decompression, VII-X: 10469
- PULMONARY CIRCULATION, I: 305; II: 1323
- effects of:
    - altitude acclimatization, VI: 7301; VII-X: 10281,  
10402
    - anoxia, I: 106, 107, 128, 129, 304, 568, 569;  
II: 1045, 1339, 1340, 1471, 1526, 1979,  
2053, 2144, 2145; III: 2413, 2621, 2904,  
3240, 3466, 3511, 3647; IV: 4001, 4150,  
4328, 4528, 4954; V: 7327; VII-X: 9854,  
10521, 10571, 10598, 10601
    - carbon dioxide, II: 2145
    - carbon monoxide, II: 1339
    - composition of respiratory gases, IV: 4086
    - hypercapnia, VII-X: 12139
    - hyperoxia, II: 1045, 2145; VII-X: 8877
    - hypothermia, VII-X: 9057
    - negative pressure breathing, VII-X: 8899
    - nitrogen breathing, II: 1930
    - physical work, III: 2430, 3466; VII-X: 9854
    - postural change, VII-X: 11455
    - pressure breathing, II: 1897; III: 3388; VII-X:  
8856, 8863
    - pressure suits, VII-X: 8786
    - tilting, VII-X: 11456
    - transversal acceleration, VII-X: 10178
  - measurement, III: 2621
  - relation to:
    - blood pressure, II: 2048
    - nitrogen elimination, III: 2430
    - obesity, VII-X: 10402
  - reviews, VII-X: 8755
- PULMONARY DISEASES (see also Asthma; Lung,  
pathology; Pneumonia; Lung, pathology; Pulmonary  
edema; Respiratory diseases)
- incidence in aviators, VII-X: 11963
- PULMONARY EDEMA

- caused by altitude, VII-X: 11875, 11906, 11907  
**PULMONARY TUBERCULOSIS** *see* Tuberculosis  
**PULMONARY VENTILATION** *see* Respiration  
**PULSE** *see* Arterial pulse  
**PULSE RATE** (*see also* Oculocardiac reflex)  
 effects of:  
 altitude, I: 591; VII-X: 10293, 10374  
 altitude acclimatization, III: 3131; VII-X: 10293  
 anoxia, II: 1945, 1644; III: 2819, 2936; IV: 4059; VII-X: 9880, 10519, 10609  
 anxiety, VII-X: 9684  
 apnea, V: 5352  
 carbon dioxide, III: 3430  
 electrical stimuli, IV: 5142  
 environmental temperature, VII-X: 10739  
 epinephrine, III: 2591; V: 5446  
 fatigue, III: 3515  
 heat, II: 1520; III: 3675; VII-X: 9880, 10668  
 hypothermia, III: 2591; V: 5446; VII-X: 8965  
 mental stress, VII-X: 11183  
 noise, IV: 4864  
 physical work, I: 878; II: 1644; VI: 7565, 7575, 7576; VII-X: 10293, 11101, 11108, 12706  
 positive acceleration, VII-X: 10030  
 postural change, III: 3131; VII-X: 11438  
 posture, I: 591  
 pressure breathing, VII-X: 8849  
 sound, IV: 5201; V: 6092  
 suborbital space flight, VII-X: 12367  
 transversal acceleration, VII-X: 10142, 10176  
 vestibular stimulation, VII-X: 8791  
 vitamin E, III: 2819  
 voluntary apnea, I: 705; II: 1943; III: 3515  
 follow-up studies, VII-X: 11776  
 measurement, VI: 6802  
 relation to:  
 altitude tolerance, II: 2286; III: 3680; IV: 5194  
 electroencephalogram, II: 1591  
 fainting, VII-X: 8734  
 oxygen consumption, VII-X: 8920  
 sleep, VII-X: 8590  
 telemetry, VII-X: 8772, 12706  
**PULSE RATE RHYTHM**  
 effects of:  
 heat, VII-X: 8607  
 physical work, VII-X: 8607, 8625  
 relation to:  
 activity rhythm, III: 3013  
 diurnal cycle, IV: 4353; VII-X: 8751, 8607  
**PULSED SOUND** *see* Intermittent sound  
**PUPIL SIZE**  
 effects of:  
 anoxia, I: 312; VII-X: 10588  
 illumination, VI: 7008  
 positive acceleration, VII-X: 10014  
 effects on flicker fusion frequency, VII-X: 9252  
 relation to visual acuity, III: 2340; VII-X: 9211  
**PUPILLARY REACTIONS**, II: 1426  
 caused by light stimuli, V: 5538; VI: 6952  
 effects of fatigue, III: 3121  
 relation to age, V: 6297, 6298, 6299  
 role in visual perception, V: 5488  
**PURINE AND DERIVATIVES**  
 effects on anoxia tolerance, III: 2647  
**PURSUIT TRACKING** (*see also* Rotary pursuit tracking), I: 159, 161, 163, 574, 718; II: 986, 987, 1037, 1090, 1091, 1129, 1131, 1163, 1356, 1396, 1472, 1473, 1487, 1624, 1725, 1880, 1885, 1887; III: 2381, 2382, 2386, 2772, 3522; IV: 4234, 4250, 4269, 4445, 4446, 4603, 4714, 4808, 4894, 4937; V: 5669, 5685, 5686, 5690, 5703, 5704, 5705; VI: 7095  
 7111, 7113, 7114, 7115, 7123, 7124; VII-X: 9562, 9576, 9582, 9584, 9586, 9617, 9628, 9644, 10843, 12504  
 equipment, IV: 3730, 3731  
 training devices, I: 873, 874, 951; V: 5701  
 training methods, VII-X: 9581  
**PYRAMIDON** *see* Aminopyrine  
**PYRIBENZAMINE**  
 use in motion sickness, II: 1509  
**PYRIDINE AND DERIVATIVES**  
 effects on anoxia tolerance, III: 2647  
**PYRIDOXINE**  
 effects on cold tolerance, VII-X: 10902  
 use in motion sickness, II: 2219; V: 6367  
**PYROGENIC AGENTS**  
 effects on body temperature, IV: 3949  
**PYRROLAZOTE**  
 use in motion sickness, I: 235, 236; II: 1226  
**PYRUVATE CONTENT** *see under* Blood  
**QUARANTINE** *see under* Communicable diseases  
**QUESTIONNAIRES** (*see also* Written tests)  
 reliability, VII-X: 9687, 9738, 11780  
**QUINHYDRONE**  
 effects on anoxia tolerance, VII-X: 10595  
**QUININE AND DERIVATIVES** (Chloroquine)  
 contraindication for aviators, IV: 4289  
 effects on:  
 auditory adaptation, VII-X: 12011  
 circulation, II: 1245  
 visual accommodation, II: 1245  
**RACE** *see* Race factors *under* Blood, nucleotide content; Cold, effects on blood; Cold, effects on circulation; Cold, effects on metabolism; Cold, general physiological effects; Cold tolerance; Dark adaptation; Electrocardiogram, abnormalities; Metabolism; Metabolism, effects of cold; Perspiration; Sicklemia; Temperature regulation; Work capacity. *Also see* Personnel (Negro)  
**RADAR EQUIPMENT**  
 human engineering, II: 1247, 1486; VII-X: 12687  
**RADAR OPERATION**, I: 183, 199, 239, 480, 658, 775; II: 1291, 2140; III: 3177  
 effects of illumination, VI: 8193  
 effects on:  
 reproductive system, VII-X: 12558  
 visual accommodation, VII-X: 12558  
 eye movements, I: 370; VII-X: 9357  
 fatigue, I: 370; II: 2005; III: 2466; VII-X: 11143  
 general physiological effects, VII-X: 12558  
 hazards, VI: 7618; VII-X: 11341  
 physical factors, IV: 4931  
 relation to brightness discrimination, IV: 4212; VII-X: 12570  
 retinal adaptation, I: 480; VII-X: 9332  
 test methods, II: 1049, 1158, 1187  
 tests, IV: 4213; V: 5621, 6599; VI: 8177; VII-X: 12603  
 training devices, IV: 3988  
 visual fatigue, V: 6597, 6598; VII-X: 12556  
 visual perception, I: 183  
**RADAR OPERATORS**  
 occupational diseases, IV: 4765  
 performance  
 tests, II: 1442  
 selection, II: 1087; VII-X: 11506  
 training, III: 2352; VII-X: 11655  
 visual requirements, VII-X: 11508  
**RADAR SIGNALS**  
 intelligibility, I: 184; II: 1025, 1049, 1128; III: 2759, 2760; V: 6606  
 effects of retinal adaptation, I: 199; II: 1159  
**RADIATION BELTS**, VII-X: 11403  
 biological effects, VII-X: 11323  
 hazards, VII-X: 11292, 11301, 11307, 11367, 11392, 11393, 11396, 11417, 11421, 11422, 12451

- protection, VII-X: 11317, 11393
- RADIATION TOLERANCE** (see also Microwave radiation tolerance; Nuclear radiation t.; X-ray t.)  
effects of hypothermia, VII-X: 11345
- RADIATIONS** (see also Ionizing radiations; Microwave r.; Nuclear r.; Solar r.; Thermal r. See also items under Rays)  
effects on eye, VII-X: 11289, 11299
- RADIO EQUIPMENT**  
for emergencies, III: 3318
- RADIO OPERATION**  
fatigue, VII-X: 11156
- RADIO OPERATORS**  
occupational deafness, III: 3215; IV: 3719  
selection, II: 1197, 1336, 1716, 2294; IV: 4189; V: 6271  
training, IV: 3704, 4189  
prediction of success, IV: 4157; V: 6271
- RADIO TRANSMISSION (PHYSIOLOGICAL)** see Physiological telemetry
- RADIOACTIVE SUBSTANCES** (see also Radioisotopes)  
air transportation  
hazards, VII-X: 11309  
hazards, VII-X: 11354
- RADIOGRAPHY** see Roentgenography
- RADIOISOTOPES**  
hazards, VI: 7627  
use in acceleration stress studies, III: 3477
- RAFTS** see Life rafts
- RANGE FINDING** see Depth perception
- RATING** see under the various personnel categories, e.g., Instructors, rating
- RATIO** see Sex ratio; Sodium-potassium ratio
- RATIONS** see Emergency rations
- RAYS** see Cosmic rays; Ultraviolet rays; X-rays.  
Also see items under Radiations
- REACTION TIME**, I: 357; II: 1257, 1567; IV: 4070; VII-X: 9640  
effects of:  
acceleration, III: 3539  
acetylsalicylic acid, VII-X: 11981  
alertness, V: 5714  
altitude, III: 3539; VI: 7291  
anxiety, IV: 4276; VI: 7609  
auditory signals, II: 2123  
auditory stimulus intensity, III: 2994  
cold, VII-X: 9647  
drugs, VII-X: 9585  
fatigue, II: 1645; III: 3163; VI: 7588; VII-X: 11162  
heat, IV: 4179  
hyperventilation, VI: 8099; VII-X: 9636  
ionized atmosphere, VII-X: 11476, 11483  
light stimuli, II: 2002  
misinformation feedback, VII-X: 9797  
motion sickness drugs, III: 3062  
muscular tonus, VI: 7121  
noise, VI: 8099  
positive acceleration, VI: 7196; VII-X: 10029, 10065  
posture, III: 3539  
pressure suits, VII-X: 12199  
sensory deprivation, VII-X: 11202  
sleep deprivation, IV: 3954  
task complexity, II: 1290; VI: 7089, 7119; VII-X: 9594  
training, III: 3163  
vibration, VI: 7494  
vigilance, III: 3539  
visual signals, I: 793; II: 1613, 1862, 2123; III: 2446  
visual stimuli, II: 1058; III: 2842  
voluntary apnea, V: 5678  
weather, VII-X: 9935  
wind, VII-X: 9647
- in piloting, VII-X: 9613  
in supersonic flight, IV: 4070  
in vigilance, VII-X: 9794  
measurement, II: 1058, 1869; III: 3491; VI: 7126; VII-X: 9577, 9614  
physical factors, IV: 4470  
psychological factors, II: 1641; III: 3627  
relation to:  
age, III: 3136, 3476; IV: 3844, 3869; V: 6283; VI: 7770; VII-X: 11755, 11757  
diurnal cycle, VII-X: 9923  
electroencephalogram, VI: 6945; VII-X: 9570  
neuromuscular performance, VII-X: 9643  
neuropsychiatric fitness, VII-X: 11717  
psychomotor performance, VI: 7129  
visual thresholds, VI: 7011  
reviews, II: 1645  
tests, II: 1958; III: 3165; V: 5692; VI: 7087, 7126; VII-X: 9423, 9597, 9601, 9607, 9632  
to auditory signals, VII-X: 9564
- REACTIONS** see Donaggio reaction; Neuromuscular reactions; Pupillary reactions
- READING** see Scale reading. Also see entries under Legibility
- READING INTEREST**, II: 1671
- READING TRAINING**  
effectiveness, VI: 7707
- READJUSTMENT**  
after altitude acclimatization, V: 5871
- REASONING** (see also Decision making performance)  
effects of:  
anoxia, III: 3133, 3134  
anxiety, II: 1761; VII-X: 9725  
fatigue, II: 1760  
mental stress, II: 1761  
starvation, II: 1663  
psychological factors, III: 3384, 3659; IV: 4456; VI: 7160  
relation to confidence, VII-X: 9716  
test methods, I: 429; II: 1229  
tests, III: 3660; IV: 4840
- RECEPTORS** see items under Sense organs
- RECIRCULATION** see under Oxygen supply
- RECOGNITION** see under Printed words. Also see subdivision Intelligibility; Interpretation; Legibility
- RECOMPRESSION** (see also Explosive recompression)  
effects on ear pressure gradient, VII-X: 10449
- RE-ENTRY**  
animal experiments, VII-X: 8326  
medical problems, VII-X: 8294, 8339, 8681, 10028, 10052, 12555
- REFLEXES** (see also Carotid sinus reflexes; Conditioned r.; Oculocardiac r.; Patellar r.; Postural r.; Respiratory r.; Tympanic muscle r.; Vestibular r.)  
effects of:  
altitude, V: 5821  
altitude acclimatization, II: 1782  
anoxia, II: 1782, 2300; III: 2962; IV: 4814; V: 5751; VII-X: 10603  
hyperthermia, VI: 6863  
hypothermia, III: 2556; IV: 5038, 5039; V: 5378, 5751; VI: 6886, 6891, 6892, 6899, 6906; VII-X: 9086  
positive acceleration, V: 5810  
vibration, VII-X: 11050  
role of chemoreceptors, VII-X: 10603
- REFRACTOMETRY**, I: 895
- REGENERATION** see under Animal container atmospheres; Rhodopsin; Sealed cabin atmospheres; Space cabin atmospheres
- REGIONAL FACTORS** see under Heat tolerance; Passenger transportation; Personnel
- REGULATORS** see Oxygen regulators



- REHABILITATION *see under* Patients; Pilots
- RELATIVITY THEORY *see* Time dilatation in space flight
- RELIGIOUS ATTITUDES *see under* Pilot candidates
- RELIGIOUS FACTORS *see under* Stress, effects on circulation
- REMOTE HANDLING  
tests, VII-X: 12615
- REMOTE HANDLING EQUIPMENT, VII-X: 10231, 12501, 12614, 12616, 12617  
bibliography, VII-X: 12637  
human engineering, VII-X: 12637  
congresses, meetings, and symposia, VII-X: 12501
- REMOVAL *see under* Carbon dioxide; Odors. *Also see* subdivision Disposal
- RENAL CIRCULATION  
effects of:  
anoxia, II: 1101, 1102; VII-X: 10483, 10541  
hypothermia, IV: 4650  
positive acceleration, VII-X: 10132  
relation to anoxia tolerance, II: 1102
- RENAL FUNCTION *see* Kidney function
- REPRODUCTION (*see also* Fertility; Pregnancy; Sex ratio; Sexual potency)  
effects of piloting, VII-X: 9970
- REPRODUCTIVE RHYTHM  
animal experiments, VII-X: 8568, 8575, 8605  
effects of:  
altitude acclimatization, VII-X: 8568  
cold, VII-X: 8575  
relation to diurnal cycle, VII-X: 8605
- REPRODUCTIVE SYSTEM (*see also* Menstruation; Testis, Uterus)  
effects of:  
altitude, VI: 7303  
anoxia, II: 1679  
microwave radiation, VII-X: 11376  
radar operation, VII-X: 12558
- REQUIREMENTS *see* Personnel requirements; Rest r.; Vitamin r.; Water r. *Also see* items *under* Dental requirements; Hearing r.; Nutritional r.; Oxygen r.; Visual r.
- RESCUE (*see also* Air evacuation; Disaster rescue; Fire r.)  
in space, VII-X: 12523  
in the Arctic, IV: 4589  
in the Tropics, V: 6529  
on land, III: 3081; IV: 4581; VI: 8058  
on water, II: 1785, 2257; III: 3318, 3578; IV: 4062, 4545, 4904, 5073; V: 6531; VI: 8058  
equipment, VII-X: 12359
- RESCUE MEDICAL TEAMS (*see also* Parachute medical teams)  
Canada, IV: 5192
- RESEARCH *see under* various areas of research, e.g., Aviation medicine, research
- RESEARCH CENTERS *see under* Altitude; Auditory perception; Aviation medicine; Human engineering
- RESEARCH METHODS *see under* Acceleration, effects on psychomotor performance; Acceleration, general physiological effects; Acceleration tolerance; Aerospace medicine; Aviation medicine; Bailout; Behavior, animal experiments; Biochemistry; Bioelectrical potentials; Biological orientation; Blast; Blast, general physiological effects; Circulation; Closed ecological systems; Cold climates; Confinement, general physiological effects; Cosmic rays, biological effects; Extraterrestrial life; High altitude flight; Hot climates; Impact, general physiological effects; Impact tolerance; Kidney; Labyrinth, effects of acceleration; Labyrinth, physiology; Man-machine systems; Microorganisms (Airborne) in upper atmosphere; Microwave radiation, general physiological effects; Motion sickness; Noise, general physiological effects; Nystagmus; Oscillation, general physiological effects; Peripheral circulation, effects of acceleration; Psychomotor performance; Respiration; Respiratory gases, composition; Rotation, general physiological effects; Sensory deprivation; Space environment; Space flight; Space flight, biological effects; Space flight, effects on behavior; Space flight (Simulated), general physiological effects; Space medicine; Stress, general physiological effects; Subgravity, general physiological effects; Terrestrial life, effects of space environment; Tympanic muscle reflexes; Upper atmosphere; Vibration, general physiological effects; Visual perception; Visual perception, time factors
- RESERPINE  
effects on:  
ascorbic acid content of adrenal glands, VII-X: 10810  
temperature regulation, VI: 6884
- RESERVE *see* Alkali reserve
- RESISTANCE *see* Electrical resistance; Mechanical r.
- RESPIRATION (*see also* Alveolar carbon dioxide tension; Alveolar oxygen tension; Apnea; Artificial respiration; Carbon dioxide breathing; Cutaneous respiration; Diffusion respiration; Flack test; Hyperventilation; Negative pressure breathing; Nitrogen breathing; Oxygen breathing; Pneumotachocardiogram; Pneumotachogram; Pressure breathing; Respiratory dead space; Respiratory gases; Respiratory maneuvers; Respiratory movements; Valsalva maneuver; Vital capacity), II: 1978, 2029; IV: 3700, 4837; V: 5360; VI: 6816, 6825, 6826; VII-X: 8799, 8816,  
analysis, II: 1143, 1576, 1808; III: 2538, 2652, 2704, 2727, 3041; VII-X: 8800, 8801, 8802  
effects of:  
abdominal pressure, II: 1064; VII-X: 8796  
acceleration, VII-X: 10179  
acrobatic flight, VII-X: 10128  
airplane flight, II: 1743; IV: 4553  
altitude, I: 451, 726; II: 1523; III: 2618, 2652, 2727, 2872, 2873, 3370, 3523, 3543, IV: 3943; V: 5830, 5835, 5888; VI: 7252, 7288, 7295; VII-X: 10326, 10373, 10418, 10435, 10436  
altitude acclimatization, II: 1055, 1057, 1416, 1980, 1981, 2165; III: 2380, 2405, 2554, 2580, 3179; IV: 4790; V: 5835, 5903, 6441; VI: 7254, 7276, 7277; VII-X: 10316, 10317, 10363, 10461, 11119  
alveolar carbon dioxide tension, II: 1035; III: 2626; VI: 6818; VII-X: 8821, 8864, 8865  
alveolar oxygen tension, VII-X: 8864, 8865  
anoxia, I: 101, 128, 165, 166, 304, 321, 401, 404, 451, 456, 469, 470, 568, 608, 630, 672, 726, 803; II: 988; 1055, 1056, 1057, 1098, 1147, 1476, 1839, 1979, 2091, 2129, 2283; III: 2388, 2488, 2587, 2753, 2820, 2962, 3127, 3289, 3371, 3395, 3597; IV: 3997, 4059, 4560, 4574, 5111, 5116; V: 5346, 5908, 5916, 5926, 5927, 5945, 5954; VI: 6808, 6818, 6843, 7168, 7347, 7355; 7367; VII-X: 8861, 8885, 8886, 9861, 10522, 10551, 10579  
anti-g suits, IV: 5049  
blast, II: 1242, 1243; VI: 7486  
blood loss, II: 1056  
body temperature, V: 5407; VI: 6819; VII-X: 8820  
brain temperature, VII-X: 8732, 8963  
carbon dioxide, I: 101, 757, 822, 881; II: 1208, 1259, 1368, 1522, 1523, 1697, 2143, 2243; III: 2436, 2617, 3084, 3129, 3430, 3633; IV: 3997, 4947, 4949, 5026; V: 5346, 6441; VI: 6808, 6819, 6843, 7277, 7370; VII-X: 8885, 8900

- carbon monoxide, VI: 6843; VII-X: 12137, 12138, 12156
- cold air breathing, IV: 4517
- cold water immersion, VII-X: 10711
- conditioned reflexes, III: 3290, 3597
- continuous immersion, VII-X: 10224
- decompression sickness, VII-X: 10407
- drugs, II: 1202; VII-X: 10294
- aminophylline, IV: 5026
  - anesthetics, II: 1276
  - antihistaminics, I: 165; II: 993, 1098, 1099
  - Dibenamine, I: 321
  - epinephrine, II: 2239; III: 3084
  - glucose, II: 1433
  - meperidine, IV: 5026
  - norepinephrine, II: 2239; VII-X: 8821
  - succinates, II: 1281
- environmental temperature, VII-X: 10739
- explosive decompression, II: 1477; VI: 7316
- heat, IV: 4148; VI: 7384; VII-X: 10865
- hypercapnia, I: 166, 456; II: 1839; III: 2692; VII-X: 8813, 8884, 8891, 9011, 12151
- hyperoxia, II: 1696, 1697, 1739; III: 2418, 3530
- hyperthermia, VII-X: 9090
- hypothermia, III: 3273; V: 5396; 5435, 5436, 5440, 5456, 5457, 5467, 5926; VI: 6885, 6886, 6907, 6908; VII-X: 8891, 8956, 8965, 8974, 9011, 9045, 9092, 9106
- immersion, VII-X: 8844, 10226
- intrapulmonary pressure, II: 1013
- mental work, III: 3290
- nasal stimulation, II: 2285
- negative acceleration, I: 307, 309
- negative pressure breathing, VII-X: 8830, 8903
- oxygen breathing, II: 1034, 1697, 2165; III: 2437, 2615, 3129; IV: 3786, 4949; VI: 6809, 6822, 6823, 6841, 6842, 7259, 7571; VII-X: 8829, 8831, 8840, 8898, 8900, 10373
- passive body movements, VI: 6936; VII-X: 8825, 8826
- peripheral pressure, II: 1064
- physical training, VII-X: 11100, 11117
- physical work, I: 115, 878; II: 1208, 1416, 1686, 1812; III: 2436, 2615, 2617, 3084, 3109, 3288, 3371, 3395, 3575, 3587; IV: 3786, 4555, 5163; V: 5903, 6094, 6096, 6100, 6101, 6104, 6112, 6293; VI: 6808, 6846, 7545, 7563, 7565, 7566, 7571, 7572, 7566; VII-X: 8825, 9861, 10418, 11064, 11079, 11101, 11108, 11119, 11126, 11559, 11582
- reviews, 7544
  - step test, VII-X: 11092, 11093
- piloting, VI: 7191
- positive acceleration, VII-X: 9868, 10004, 10008, 10010, 10022, 10156
- postural change, III: 3606
- posture, II: 1013; III: 3174; IV: 3855, 4624; V: 5317; 5354, 6166; VI: 7638; VII-X: 11437, 11444, 11448, 11450, 11453, 11454, 11457, 11459
- pressure breathing, I: 397, 399, 451; II: 1651, 1968, 2165, 2252; II: 2465, 2727; IV: 3772, 5160, V: 5328; VI: 6833; VII-X: 8795, 8830, 8842, 8843, 8851, 8856, 8910, 10202
- pressure suits, VI: 8005; VII-X: 12253, 12279
- respiratory dead space, VI: 6813, 7288; VII-X: 8804
- respiratory impedance, VI: 6831
- rotation, III: 3060
- safety harnesses, V: 6470
- speaking, I: 171, 455; VII-X: 8832
- suborbital space flight, VII-X: 12367, 12694
- tobacco, VII-X: 12165
- transversal acceleration, VII-X: 10018, 10022, 10039, 10040, 10052, 10096, 10104, 10154, 10156, 10203, 10221
- vestibular stimulation, VI: 7047
- vibration, VI: 7508; VII-X: 10968
- warm air breathing, VI: 6812
- warm water immersion, VII-X: 10711
- effects on:
- alkalosis, VII-X: 8887
  - altitude tolerance, IV: 4377
  - blood, II: 990
  - blood pressure, III: 3443
  - electrocardiogram, VII-X: 8766
  - electromyogram, II: 1193, 1194
  - oxygen stored in body, III: 2723
  - thoracic pressure, VII-X: 8790
- general physiological factors, II: 1082, 1433; III: 2588, 3172, 3366; IV: 5179; V: 5927; VI: 7259
- handbooks and treatises, VII-X: 8797
- machine analogs, VII-X: 12746
- measurement, II: 1234, 1545, 1743, 1777, 2122, 2242, 2284; III: 2465, 2515, 2541, 2745, 3171, 3287, 3344, 3418; IV: 4553, 4948, 5092, 5093, 5094; V: 5321; VII-X: 8819, 8875, 11581, 12674
- physical factors, V: 5347, 5349, 5365, 5366
- relation to:
- age, II: 2091; III: 3288; V: 6293, 6303; VI: 7572
  - blood carbon dioxide tension, III: 2872, 2873
  - blood oxygen tension, VII-X: 8859
  - blood pressure, VII-X: 8905
  - circulation, II: 1139, 1140, 1141, 1840; III: 3023; V: 5324; VII-X: 8802
  - kidney function, VII-X: 8822
  - metabolism, IV: 4091; V: 6112
  - oxygen consumption, V: 5435; VI: 6811
  - physical fitness, IV: 4187
  - sleep, VII-X: 8590, 8811, 8884, 8885, 8886
  - work capacity, III: 3286
- research methods, IV: 3989; VI: 6820; VII-X: 8810, 8866, 8882
- reviews, III: 2681, 3401; V: 5356
- role in:
- heat exchange, VII-X: 8906
  - water exchange, VII-X: 8906
- role of:
- abdominal pressure, II: 1193, 1194; IV: 3921; VI: 6844
  - brain activity, II: 1799; VII-X: 8834, 8861
  - carotid sinus reflexes, VII-X: 10551
  - chemoreceptors, VII-X: 8813
  - muscular function, II: 1193, 1194
  - telemetry, VII-X: 12694
- RESPIRATORS, II: 1977; IV: 3911; VI: 7996
- effects on speech intelligibility, VII-X: 12223
- RESPIRATORS (MECHANICAL), II: 932, 1575, 1845, 2051, 2074, 2252; III: 3658, 3686; IV: 4349
- test methods, V: 6494
- use in air transportation of patients, II: 2265; VII-X: 12038
- RESPIRATORY ADAPTATION, III: 3315
- RESPIRATORY CENTER
- physiology, IV: 5106
- RESPIRATORY DEAD SPACE
- effects of:
- carbon dioxide, V: 5325
  - posture, VII-X: 11460
  - pressure helmets, VII-X: 12207, 12264
  - effects on respiration, VI: 6813, 7288; VII-X: 8804
  - measurement, III: 2743; VII-X: 8895, 12264
- RESPIRATORY DISEASES (see also Asthma; Cold (disease); Lung, pathology; Pneumonia; Pulmonary

- diseases; Pulmonary edema; Tuberculosis; Whooping cough)  
 effects on:  
 air transportability, I: 303, 387, 785; II: 1153, 2160; III: 3508; IV: 4888, 5043; V: 5889, 6388, 6392; VII-X: 12016, 12021, 12037, 12038  
 altitude tolerance, VII-X: 10302  
 immunity  
 effects of ozone, VII-X: 12163  
 incidence in:  
 aviators, VII-X: 11995  
 personnel, VI: 7829, 7861; VII-X: 11994
- RESPIRATORY GASES**  
 carbon dioxide see Carbon dioxide, in respiratory gases  
 composition, II: 1112, 1576; IV: 4573; VII-X: 8867  
 effects on pulmonary circulation, IV: 4086  
 research methods, VII-X: 8908  
 diffusion, II: 2036; III: 2745  
 relation to age, II: 2602  
 effects of apnea, II: 1100
- RESPIRATORY IMPEDANCE**  
 effects on respiration, VI: 6831
- RESPIRATORY MANEUVERS** (see also Apnea (Voluntary); Flack test; Valsalva maneuver)  
 effects on heart function, VII-X: 8860
- RESPIRATORY MOVEMENTS**  
 effects of:  
 mechanical resistance, V: 5347  
 pressure breathing, III: 2683  
 effects on oxygen consumption, VII-X: 8869  
 telemetry, VII-X: 12621
- RESPIRATORY REFLEXES:** VII-X: 8909  
 effects of hypothermia, VI: 6872
- RESPIRATORY RHYTHM**  
 relation to diurnal cycle, IV: 4353
- RESPIRATORY SYSTEM** see Adenoids; Lung; Nasal passages; Paranasal sinuses; Respiration
- REST** (see also Work-rest cycle)  
 effects on:  
 anxiety, II: 1097  
 neuromuscular performance, III: 3570  
 psychomotor performance, II: 947, 983, 1305, 1886; III: 2334, 2335, 2438, 3623  
 work capacity, II: 1092, 1094, 1096; III: 2485, 3220, 3231
- REST REQUIREMENTS**  
 effects of work load, IV: 3840
- RESTRAINING DEVICES** (see also entries under Harnesses)  
 effects on impact tolerance, VII-X: 10061  
 for chimpanzees, VII-X: 12658
- RESTRAINING METHODS** see under Cats
- RESTRAINT** (see also Confinment; Immobilization; Social isolation)  
 adaptation see Restraint adaptation  
 animal experiments, VII-X: 11472  
 cause of hypothermia, V: 5748; VI: 7617  
 effects on:  
 altitude tolerance, VII-X: 10300, 10301, 10414, 11268  
 behavior, VII-X: 8425, 11186, 11190, 11472  
 blood cells, V: 5767  
 body temperature, III: 2448; IV: 3788; V: 6136, 6137, 6138; VII-X: 9069, 11269, 11271, 11272, 11282  
 body temperature gradient, VII-X: 10648  
 brain sodium-potassium ratio, III: 2786; IV: 4204  
 cold tolerance, III: 2448  
 distribution of body fluids, III: 2786  
 gastric secretion, VII-X: 11277  
 heat tolerance, VII-X: 10722, 11272  
 oxygen consumption, IV: 3788; VII-X: 11269  
 performance, VII-X: 11275  
 sensory perception, VII-X: 11190  
 sulfhydryl metabolism, III: 2452, 3361  
 temperature regulation, III: 2450, 2451, 2920; V: 6135; VII-X: 11270  
 thyroid gland metabolism, VI: 7617  
 general physiological effects, IV: 4037; V: 5753; VII-X: 9831, 9885, 11279  
 general psychological effects, IV: 4037; V: 5753; VII-X: 11229, 11234, 11281
- RESTRAINT ADAPTATION**, III: 2449  
 effects on altitude tolerance, VII-X: 10301  
 psychological factors, V: 5748
- RESTRAINT SUITS**, VII-X: 12291
- RESTRAINT TOLERANCE**  
 effects of electroshock, VII-X: 11280
- RESUSCITATION** (see also Artificial respiration), II: 2149, 2155, 2252; III: 3423  
 from anoxia, III: 2830, 2956; IV: 3841, 5031  
 from apnea, VII-X: 8890  
 from carbon monoxide poisoning, VI: 7967; VII-X: 12133  
 from hypothermia, IV: 4815; V: 6369; VI: 6880, 6909, 6912, 6915; VII-X: 8929, 8933, 8935, 8959, 8985, 8986, 9009, 9010, 9071, 9072  
 general physiological effects, VI: 6874
- RESUSCITATORS** see Respirators (Mechanical)
- RETENTION** see under Messages
- RETENTION OF TRAINING** see under Psychomotor performance
- RETICULOCTES** see Blood cells
- RETICULO-ENDOTHELIAL SYSTEM** (see also Hematopoiesis)  
 effects of:  
 altitude, IV: 5107  
 hypothermia, VI: 6897  
 orbital space flight, VII-X: 9811  
 relation to acceleration tolerance, VII-X: 10181
- RETINA** (see also Photoreceptors; Retinal adaptation; Retinal blood vessels; Retinal circulation; Retinal image position; Rhodopsin)  
 action potentials see Electroretinogram  
 effects of:  
 light stimuli, II: 2112  
 solar radiation, VII-X: 11380, 11408  
 electrical potentials see Electroretinogram  
 glycogen content  
 relation to visual perception, VI: 6994  
 histology, II: 1894  
 metabolism, II: 1882, 1948, 1949  
 pathology  
 incidence in aviators, VII-X: 11945
- RETINAL ADAPTATION** (see also Color adaptation; Dark adaptation; Night vision), III: 2808; IV: 3768, 4952; VI: 7009  
 disorders, V: 5535  
 effects of:  
 anoxia, I: 243, 247  
 color stimuli, VII-X: 9239  
 dazzle, V: 5495; VII-X: 9215, 9239, 9304  
 illumination, V: 6610  
 light stimuli, I: 198, 294, 480, 864; II: 1135, 1426; V: 5521  
 preadaptation, IV: 3695, 4658; VI: 6955, 6991, 7004  
 xanthophyll, III: 3518
- effects on:  
 electroencephalogram, VII-X: 9283  
 electro-oculogram, IV: 4065; V: 5500, 5501; VI: 6964; VII-X: 9292  
 intelligibility of radar signals, I: 199; II: 1159  
 vitreous humor, IV: 4952

- in high altitude flight, I: 245  
 in night flying, I: 243, 247; VII-X: 12583  
 in radar operation, I: 480; VII-X: 9332  
 relation to:  
   binocular vision, V: 5508  
   blackout, VII-X: 10215  
   brightness discrimination, III: 3227; IV: 3877;  
     VII-X: 9198  
   color vision, I: 200; II: 991, 1146, 1184, 1604,  
     1607, 1620; IV: 3757, 3877, 4639  
   conditioned reflexes, VI: 6970  
   depth perception, I: 434; II: 2187; III: 3409  
   electroretinogram, II: 1135; V: 5486, VII-X: 9236,  
     9283  
   eye movements, IV: 3748  
   form perception, VI: 6971  
   monocular vision, V: 5508; VII-X: 9191, 9212  
   visual acuity, III: 2340, 2546; VI: 6956  
   visual perception, I: 197; II: 1030, 1126, 1136;  
     III: 2895; IV: 4998; V: 5544  
   visual thresholds, VII-X: 9195  
   role of rhodopsin, III: 3601  
   test methods, I: 741; II: 1067; III: 3143; IV: 4830  
   tests, VI: 6979, 7001  
   time factors, I: 199; III: 3440
- RETINAL BLOOD VESSELS** (see also Retinal circulation)  
 effects of:  
   altitude acclimatization, I: 680  
   anoxia, I: 680  
   high altitude flight, VII-X: 10413
- RETINAL CIRCULATION**  
 effects of:  
   airplane flight, VII-X: 10212, 10213  
   altitude, VII-X: 10314  
   anoxia, I: 502; II: 1693; VII-X: 8763  
   carbon dioxide, VII-X: 12134  
   hypercapnia, II: 1693; VII-X: 12134  
   hyperoxia, II: 1693  
   oxygen breathing, II: 2096; VII-X: 8763  
   peripheral pressure, V: 5795  
   positive acceleration, II: 1331, 1693  
   postural change, VII-X: 8763  
   posture, VII-X: 11466  
   pressure breathing, VII-X: 8839
- relation to:  
   age, II: 2096  
   blackout, II: 1693; III: 2682  
   cerebral circulation, II: 1570  
   visual perception, VI: 6994
- RETINAL IMAGE POSITION** (see also Foveal vision; Peripheral vision)  
 effects on:  
   brightness discrimination, IV: 4358  
   visual perception, III: 3602
- RETINAL RIVALRY** (see also Ocular dominance), VII-X: 9307
- RETINOGRAM** see Electroretinogram
- REVIEWS** see under Acceleration, general physiological effects; Acceleration tolerance; Aerospace medicine; Algae, culturing; Altitude sickness; Anoxia, effects on circulation; Anoxia, general physiological effects; Bioelectric potentials; Blast, general physiological effects; Blast, general psychological effects; Carbon monoxide, general physiological effects; Carbon monoxide poisoning; Circulation; Climate, effects on metabolism; Cold, effects on metabolism; Cold, pathological effects; Cold acclimatization; Cosmic rays, biological effects; Decompression sickness; Depth perception; Diurnal cycle, relation to biological rhythms; Drugs, effects on temperature regulation; Environmental temperature, general physiological effects; Eye, effects of radiations; Eye, physiology; Fatigue; Flicker fusion frequency; Flight duty, lack of adaptation; Hibernation; Human engineering; Hyperthermia; Hypothermia; Hypothermia, effects on circulation; Hypothermia, effects on metabolism; Hypothermia, effects on nervous system; Hypothermia, general physiological effects; Job analysis; Mental fatigue; Metabolism, effects of climate; Microwave radiation, general physiological effects; Motion sickness; Motion sickness drugs; Night vision; Noise; Ocular dominance; Optokinetic nystagmus; Pattern discrimination; Perception; Personnel, visual requirements; Physical work, effects on circulation; Poisonous substances, toxicity; Psychomotor performance, retention of training; Pulmonary circulation; Reaction time; Respiration; Respiration, effects of physical work; Sensory deprivation; Sensory deprivation, general psychological effects; Sensory perception; Space environment; Stress, effects on performance; Stress, general physiological effects; Subgravity, general physiological effects; Subgravity, general psychological effects; Temperature regulation; Thermal comfort; Thermoreception; Ultraviolet rays, general physiological effects; Vibration, general physiological effects; Visual perception. Also see entries under Handbooks and treatises
- REVOLVING CHAIRS**, II: 1527
- RH FACTORS** see Blood types
- RHINALGAN** see Ephedrine
- RHODOPSIN**, II: 1385; IV: 4769  
 regeneration, VI: 7000  
 role in retinal adaptation, III: 3601
- RHYTHMIC ABILITY**  
 effects on psychomotor performance, II: 1361
- RHYTHMS** see Biological rhythms. Also see entries under Cycles
- RIBOFLAVIN EXCRETION**  
 effects of altitude, VI: 7314
- RIBOFLAVIN METABOLISM**  
 effects of anoxia, V: 5964
- RIGHTHANDEDNESS** see Handedness
- RIGHTING REFLEX** see Postural reflexes
- RIVALRY** see Retinal rivalry
- ROCKET FLIGHT** see Space flight
- ROCKET NOISE**  
 analysis, VII-X: 12561
- ROCKET PROPELLANTS** (see also Boranes; Hydrazine)  
 detection, VII-X: 12113, 12114, 12122  
 hazards, I: 465; III: 3037; VII-X: 11799, 12111, 12112, 12113, 12276  
 protection, VII-X: 11796, 12276  
 toxic effects, I: 682; III: 3037; VI: 7945
- ROCKETS** see Space vehicles
- ROENTGENOGRAM** (see also Roentgenography)  
 use in lung examination, VII-X: 10406, 12076
- ROENTGENOGRAPHY**, III: 2765; VII-X: 12085
- RORSCHACH TEST**, V: 5721
- ROTARY PURSUIT TRACKING**, I: 117, 284, 414;  
 II: 1305, 1999, 2000; III: 2334, 2376; V: 5660, 5662, 5668; VI: 7094, 7130; VII-X: 9567, 9583, 9609  
 training devices, III: 3492
- ROTATION** (see also Coriolis effect; Spinning; Tilting; Tumbling)  
 adaptation see Rotation adaptation  
 cause of:  
   motion sickness, VII-X: 11830  
   nystagmus, IV: 3864, 4588; V: 5603, 5614; VI: 7202, 7204; VII-X: 9482, 9487, 9511, 9519, 9521, 9526, 9545, 10089, 10144  
   visual illusions, I: 99, 253, 407, 424, 425, 616, 620;  
     II: 1500, 1501, 1502, 1529, 1877; III: 2840, 2851, 2931; V: 5802; VII-X: 9506, 9557, 10079  
 effects on:

- auditory perception, II: 1837; V: 5793  
autonomic nervous system, II: 1666  
biological orientation, VII-X: 8660  
blood pressure, II: 1348  
circulation, II: 1347; III: 2699, 3624  
conditioned reflexes, II: 1670, 1898  
electrical potentials of labyrinth, III: 2698;  
IV: 4666  
electrocardiogram, III: 3060  
electroencephalogram, III: 3060; VII-X: 8660, 9167  
galvanic skin response, V: 5788  
heart function, II: 1347  
labyrinth, I: 99, 253, 407, 424, 425, 616, 620, 750;  
II: 996, 1447, 1500, 1501, 1502, 1528, 1529,  
1550, 1669, 1819, 1877, 1878, 1898, 2299;  
III: 3058, 3060, 3433, 3445, 3446; V: 5610,  
5796; VII-X: 10036, 10080  
test methods, III: 3434  
proprioception, II: 1670; III: 2931; V: 5609  
respiration, III: 3060  
spatial orientation, VI: 7077; VII-X: 9513, 10140,  
12397  
test methods, VII-X: 12723  
velocity discrimination, VII-X: 10084  
general physiological effects, II: 1666; III: 3097;  
VII-X: 10080  
research methods, II: 1527; V: 5792; VII-X: 12735
- ROTATION (CONTINUOUS)**  
cause of:  
nystagmus, VII-X: 9510  
visual illusions, VII-X: 9507  
effects on:  
neuromuscular performance, VII-X: 10042  
performance, VII-X: 10114, 12455  
psychomotor performance, VII-X: 10042  
spatial orientation, VII-X: 10043, 12554
- ROTATION ADAPTATION** (see also Vestibular habitua-  
tion), III: 2948; VI: 7203; VII-X: 9507, 9510, 11848
- ROTATION TOLERANCE**, III: 3624, 3625
- ROYAL CANADIAN AIR FORCE INSTITUTE OF AVI-  
ATION MEDICINE**, V: 5241
- ROYAL FLYING DOCTOR SERVICE**, Australia, VII-X:  
11810
- RUNNING** see Locomotion
- RUSSIA** see under Aerospace medicine; Flight surgeons,  
duties; Military medicine
- RUTIN**  
effects on cold tolerance, IV: 3727
- SAFETY** see under Air transportation of patients; Air-  
plane flight; Helicopter flight; High altitude flight; High  
speed flight; Jet plane flight; Passenger transportation;  
Space flight. Also see Accidents, prevention; Crash  
injuries, prevention; Protective equipment
- SAFETY BELTS**, I: 56, 67, 310; II: 1296; V: 6511, 6553;  
VI: 8038  
effects on acceleration tolerance; VI: 7217; VII-X:  
12254  
hazards, II: 1551
- SAFETY HARNESSSES**, I: 287; II: 935, 1388, 2052, 2276;  
IV: 4279, 4969, 5199; VI: 8023; VII-X: 12218  
effects on:  
acceleration tolerance, VI: 7207, 7212; VII-X:  
10120, 12274  
pilot performance, VII-X: 12292  
respiration, V: 6470  
evaluation, VII-X: 12240, 12292
- SALIVA**  
composition; VII-X: 9129  
effects of altitude, V: 5877  
relation to:  
age, VII-X: 12059  
dental caries, VII-X: 11961  
diurnal cycle, VII-X: 8617
- electrolyte content  
effects of physical work, V: 6113
- pH**  
relation to anxiety, VII-X: 9747  
relation to cardiovascular diseases, VI: 7838  
sodium-potassium ratio  
effects of:  
altitude, VII-X: 10472  
positive acceleration, VII-X: 10006
- SALIVARY GLAND FUNCTION**  
effects of:  
heat acclimatization, VI: 7458; VII-X: 10882  
hot climates, VI: 7458; VII-X: 10882
- SALIVARY GLANDS** (see also Saliva)  
effects of:  
acceleration, VII-X: 10188  
atropine, II: 1612  
hibernation, VII-X: 8652
- metabolism**  
effects of heat acclimatization, IV: 3986; VI: 7407
- SALMONELLA**, I: 149, 150; IV: 3830; V: 5829; VI: 7283
- SALT** see Sea water intake; Sodium chloride
- SALYRGAN**  
effects on kidney function, I: 108
- SANITARY ASPECTS** see under Airplane flight; Air-  
planes; Airports; Cabins; Jet plane flight; Passenger  
transportation; Sealed cabins; Space cabin atmos-  
pheres; Space cabins; Space flight; Workshops; Also  
see Air purification; Communicable diseases, quaran-  
tine; Oxygen masks, sterilization
- SANITARY FACILITIES** see under Airplanes
- SATELLITE FLIGHT** see Space flight (Orbital)
- SATELLITES** see Man-made satellites; Space stations
- SCALE READING** (see also Vernier acuity)  
effects of:  
illumination, V: 5812  
light stimuli, VI: 8225  
positive acceleration, V: 5812  
psychomotor performance, IV: 4512  
physical factors, III: 2425, 3453; IV: 5095; VII-X:  
12688  
tests, IV: 3992, 4939  
time factors, IV: 4940, 5095; V: 6634
- SCANNING** see Visual searching
- SCARLET FEVER**, I: 773
- SCHOOL OF AVIATION MEDICINE (U.S. AIR FORCE)**,  
II: 2142; III: 3155, 3531; IV: 4732, 5097;  
V: 5251; VI: 6753; VII-X: 8299, 8308, 8431
- SCHOOL OF AVIATION MEDICINE (U.S. NAVY)**,  
II: 949
- SCHOOLS** see under Aviation medicine
- SCOPEDEX**  
use in motion sickness, I: 231
- SCOPOLAMINE AND DERIVATIVES (Hyoscine)**  
administration, II: 1611, 2180; IV: 3956, 3959  
effects on:  
fatigue, IV: 4757  
mental performance, I: 689; II: 1917; IV: 3716  
psychomotor performance, II: 1914, 1915, 1916;  
IV: 3716  
general psychological effects, II: 1890  
use in motion sickness, I: 4, 234, 235, 382, 689;  
II: 1223, 1224, 1225, 1226, 1227, 1228, 2180;  
IV: 3956, 3959, 4450, 4715; V: 6352
- SCOTOPIC VISION** see Night vision
- SEA RESCUE** see Rescue on water
- SEA SICKNESS** see Motion sickness
- SEA WATER INTAKE**  
effects on:  
electrolyte metabolism, VII-X: 12361  
water exchange, VI: 6932  
general physiological effects, IV: 3758; V: 6540;  
VI: 8057, 8062

- SEALED ANIMAL CONTAINERS** see Animal containers (Sealed)
- SELAED CABIN ATMOSPHERES**, VII-X: 12671, 12805  
 carbon monoxide content, VII-X: 12784  
 composition, VII-X: 12827  
 contamination, VII-X: 12822  
 general physiological effects, VII-X: 8540, 9958, 12822  
 regeneration, VII-X: 12300, 12827
- SEALED CABINS** (see also Space cabins)  
 air conditioning, I: 250, 792  
 human engineering, I: 250; III: 2728; V: 6695; VII-X: 12561  
 medical problems, VII-X: 12793  
 sanitary aspects, V: 6695
- SEARCHING** see Aerial searching; Visual searching
- SEASONAL CYCLE** see Annual cycle
- SEAT BELTS** see Safety belts
- SEATS** (see also Ejection seats; Pilot seats; Space cabin seats)  
 evaluation, VII-X: 12226, 12799  
 human engineering, I: 286, 426, 603, 627; II: 1297, 1440, 1551, 2087; III: 2848, 3322, 3503; IV: 3692, 3922, 4135, 4321, 4748; V: 6511, 6553, 6686, 6687, 6691; VI: 8249, 8251, 8255, 8256, 8257, 8258, 8259; VII-X: 12218, 12387, 12775, 12779, 12785, 12800, 12816, 12828, 12829, 12837
- SECRETIONS** see Gastric secretion; Intestinal secretion; Milk; Pancreatic secretion; Saliva; Sweat
- SEDATIVE EFFECTS** see under Antihistaminics
- SEEDS**  
 effects of:  
 cosmic rays, VII-X: 11318, 11319  
 space flight, VII-X: 8503
- SEIZURES** see Epileptic seizures
- SELECTION** see under the various personnel categories, e.g., Pilots, selection. Also see Prediction of success
- SELF-HYPNOSIS** see Autohypnosis
- SELYE SYNDROME** see General adaptation syndrome
- SEMICIRCULAR CANALS** see Labyrinth
- SENSE ORGANS** see Chemoreceptors; Ear; Eye; Interceptors; Tactile receptors; Thermoreceptors
- SENSITIVITY** see Pain sensitivity; Stress sensitivity
- SENSORIMOTOR PERFORMANCE** see Psychomotor performance
- SENSORY AREAS** see under Cerebral cortex
- SENSORY DEPRIVATION** (see also Visual deprivation)  
 animal experiments, VI: 7613; VII-X: 11220, 11262  
 cause of:  
 anxiety, VII-X: 11199  
 sensory illusions, VII-X: 11194, 11256, 11266  
 visual illusions, VI: 7611; VII-X: 11260  
 congresses, meetings, and symposia, VII-X: 11247  
 effects on:  
 anoxia tolerance, V: 5932  
 behavior, VI: 7613; VII-X: 11191, 11220  
 blood pressure, VII-X: 11235  
 body temperature rhythm, VII-X: 8569  
 brain metabolism, VII-X: 11262  
 conditioned reflexes, VI: 7614; VII-X: 11226  
 electroencephalogram, VII-X: 11235  
 galvanic skin response, VII-X: 9173  
 learning, V: 6134; VI: 7616  
 lipid metabolism, VII-X: 11262  
 mental performance, VII-X: 11210, 11267  
 neuromuscular performance, VII-X: 11200  
 pain sensitivity, VII-X: 11257  
 reaction time, VII-X: 11202  
 sensory perception, VII-X: 11212, 11267  
 time estimation, VII-X: 11260  
 urine composition, IV: 4690  
 velocity discrimination, VII-X: 11202  
 visual perception, V: 6132; VII-X: 11236  
 general physiological effects, VI: 7612; VII-X: 9847, 11203, 11214, 11215, 11222, 11225, 11250, 11255  
 bibliography, VII-X: 11264  
 general psychological effects, V: 6133; VII-X: 9755, 9847, 9985, 11187, 11191, 11192, 11193, 11194, 11199, 11200, 11203, 11206, 11207, 11208, 11210, 11212, 11214, 11215, 11216, 11217, 11218, 11222, 11228, 11229, 11231, 11237, 11238, 11240, 11241, 11242, 11245, 11248, 11249, 11250, 11251, 11252, 11255, 11259, 11263, 11266  
 bibliography, VII-X: 11222  
 reviews, VI: 7615  
 in space flight, VII-X: 11496  
 relation to social isolation, VII-X: 11195, 11196, 11261  
 research methods, VII-X: 11224, 11248  
 reviews, VII-X: 11253
- SENSORY DEPRIVATION TOLERANCE**, VII-X: 11258  
 effects of visual stimuli, VII-X: 11258  
 relation to personality, VII-X: 11216, 11217, 11240, 11263
- SENSORY ILLUSIONS** (see also Motion perception (Illusory); Visual illusions), VII-X: 9476  
 cause of accidents, II: 1250  
 caused by:  
 high speed flight, VII-X: 9265  
 sensory deprivation, VII-X: 11194, 11256, 11266  
 effects on psychomotor performance, III: 3363  
 in piloting, VI: 7084  
 relation to spatial orientation, I: 36; III: 3339
- SENSORY PERCEPTION** (see also Auditory perception; Cutaneous p.; Gustatory p.; Olfactory p.; Pain; Proprioception; Tactile p.; Thermoreception; Vibration p.; Visual p.), II: 1439; VII-X: 9172, 12489  
 analysis, VII-X: 9178, 9553, 11225  
 effects of:  
 pain, IV: 3821  
 piloting, VII-X: 9980  
 restraint, VII-X: 11190  
 sensory deprivation, VII-X: 11212, 11267  
 sleep deprivation, VII-X: 11140  
 social isolation, VII-X: 11232  
 subgravity, II: 992; III: 2863; VII-X: 10233, 10261  
 in space flight, VII-X: 9965  
 machine analogs, VII-X: 8504, 12626, 12743, 12765  
 relation to age, VII-X: 11767  
 research, II: 1449  
 bibliography, VII-X: 8367  
 reviews, VII-X: 9703  
 role in spatial orientation, IV: 4472  
 thresholds, VII-X: 9174, 9179
- SENSORY STIMULATION** (see also Eye stimulation; Nasal s.; Vestibular s.)  
 cause of sleep, VII-X: 9169
- SENTENCE COMPLETION TEST**, IV: 5085
- SERUM** see Blood plasma
- SERUM PROTEINS** see Blood plasma proteins
- SEX FACTORS** see under Altitude tolerance; Cold tolerance; Dynamic visual acuity; Hearing; Impact tolerance; Oxygen consumption; Physical work, effects on circulation; Spatial orientation; Urine, composition; Vibration tolerance
- SEX HORMONES** (see also Androsterone; Progesterone)  
 effects on cold tolerance, V: 6058
- SEX RATIO**, VII-X: 9970
- SEXUAL POTENCY** (see also Fertility)  
 effects of hypothermia, VI: 6920; VII-X: 9102
- SHAPE CONFIGURATION**  
 relation to form perception, III: 2399

- SHAPE PERCEPTION** *see* Form perception
- SHELDON TYPES** *see* Somatotype
- SHELTERS** *see* Winter shelters
- SHIELDING** *see* protection under Cosmic rays; Radiation belts; Solar flares. *Also see* Gravitation shield
- SHIVERING**
- effects of:
    - anoxia, V: 5934; VII-X: 10509
    - carbon dioxide, VII-X: 12135
    - cold, VII-X: 10509
    - cold acclimatization, VII-X: 10695
    - drugs, VII-X: 8991
  - effects on oxygen consumption, V: 5934; VII-X: 10509
  - general physiological effects, VII-X: 9044, 9063, 9136
  - general physiological effects, VII-X: 9044, 9063, 9136
  - relation to:
    - body temperature gradient, VII-X: 8987
    - obesity, VII-X: 10691
  - role in temperature regulation, IV: 4028; V: 5382, 5429; VI: 7404, 7417; VII-X: 8988
  - role of brain activity, VI: 6941, 6942; VII-X: 9000, 9001, 9035, 9101
- SHOCK** *see* Anaphylactic shock; Electroshock; Post-decompression shock; Traumatic shock
- SHOCK WAVES** *see* Blast
- SHOES** *see* Boots; Magnetic shoes
- SHOPS** *see* Workshops
- SHOULDER HARNESES** *see* Safety harnesses
- SHOULDER INJURIES**, II: 1388
- SHOUTING** *see* Speaking
- SICK AND WOUNDED** *see* Patients
- SICK CALLS**
- incidence in pilot candidates, VII-X: 11814
  - personality factors, VII-X: 11814
  - relation to personality of pilot candidates, VII-X: 11814
- SICKLEMIA**
- effects on air transportability, II: 2607, 2611, 2670, 2890, 3228; IV: 3798, 4308, 4557, 4974; VII-X: 11932
  - race factors, III: 2607, 2611, 2670, 2890; VII-X: 11932
  - relation to hemoglobin composition, IV: 4308
- SICKNESSES** *see* Altitude sickness; Decompression s.; Motion s.; Space s. *Also see* Disturbances; Diseases; and subdivision Pathology
- SIDE EFFECTS** *see under* Motion sickness drugs
- SIDE-TONE** (*see also* Speech feedback)
- effects on:
    - auditory perception, III: 3648
    - speech intelligibility, II: 1001; III: 2409, 2411; IV: 4773, 4923, 4925, 5064; V: 5594; VI: 6946
- SIGNAL LIGHTS** (*see also* Color signals; Warning devices (Optical)), V: 6629; VI: 8079, 8108
- effectiveness, III: 2791; IV: 4686; VI: 8224, 8230
  - visibility, I: 371; II: 1445, 1866, 1966; III: 2632
  - test methods, III: 2479
- SIGNAL LIGHTS (FLASHING)**
- visibility, II: 1445; VI: 8162
- SIGNALS** *see* Auditory signals; Color s.; Cutaneous s.; Radar s.; Tactile s.; Visual s.; Warning devices
- SIMULATED AIRPLANE FLIGHT** *see* Airplane flight (Simulated)
- SIMULATED BALLOON FLIGHT** *see* Balloon flight (Simulated)
- SIMULATED GRAVITY** *see* Artificial gravity
- SIMULATED HELICOPTER FLIGHT** *see* Helicopter flight (Simulated)
- SIMULATED SPACE ENVIRONMENT** *see* Space environment (Simulated)
- SIMULATED SPACE FLIGHT** *see* Space flight (Simulated)
- SIMULATED SUBGRAVITY** *see* Subgravity (Simulated)
- SIMULATION** *see* Gravity simulation; Space flight s.; Subgravity s.
- SIMULATORS** *see* Flight simulators; Space cabin s.; Space environment s.; Space flight s.; Subgravity s.
- SINUS BAROTRAUMA**, III: 2666; IV: 3925, 4162; VI: 7839; VII-X: 11878, 11929
- treatment, IV: 4057; V: 6343, 6350; VII-X: 11923
- SINUSES** *see* Paranasal sinuses
- SIZE** *see* Body measurements; Pupil size
- SIZE PERCEPTION**, II: 979, 1046, 1162, 1614, 2116; III: 2813; V: 5624
- effects of:
    - acceleration, VII-X: 10208
    - colors, II: 1086; VII-X: 9217
    - illumination, II: 2009
    - visual stimuli, III: 2712; IV: 4113
  - general physiological factors, III: 2958
  - relation to:
    - binocular vision, II: 1211; IV: 4870
    - depth perception, II: 1464, 1465; III: 2849, 3100; IV: 4227, 4228; V: 5628; VI: 7063, 7069; VII-X: 9333, 9488, 9555
    - distance estimation, V: 5623, 5650; VI: 7064
    - form perception, VII-X: 9344
    - monocular vision, II: 1211, 2115; IV: 4870
    - motion perception, VII-X: 9465
    - ocular convergence, VII-X: 9502
    - visual afterimages, VII-X: 9551
    - weight discrimination, VI: 7085
  - role of eye movements, III: 2957
  - tests, VII-X: 9492
  - time factors, II: 1642
- SKELETAL SYSTEM** *see* Bone; Pelvis; Skull; Spinal column
- SKIN** (*see also* Animal skin; Complexion; Cutaneous circulation; Cutaneous perception; Cutaneous respiration; Cutaneous signals; Cutaneous stimuli; Hair; Nails; Sweat glands)
- chapping, I: 365
  - effects of:
    - barometric pressure, I: 365
    - cold acclimatization, VI: 7408; VII-X: 10796
    - cosmic rays, III: 2581; IV: 3944, 4124; V: 6156; VI: 7622
    - heat, I: 613
    - humidity, I: 365
    - sound, V: 6060
    - thermal radiation, III: 2883, 3096; V: 6147, 6148, 6160; VII-X: 11404, 11406
    - ultrasonic vibrations, VI: 7480; VII-X: 10931, 11045
    - ultraviolet rays, III: 3095; VI: 7619; VII-X: 11404
    - vibration, II: 1649, 2089, 2090
    - X-rays, VII-X: 11407
  - electrical potentials *see* Galvanic skin response
  - electrical resistance *see* Galvanic skin response
  - gas exchange, VII-X: 8881
  - metabolism
    - effects of cold, IV: 4050
  - role in heat exchange, VII-X: 9099
  - temperature
    - effects of:
      - atomic explosions, VII-X: 11339
      - body fat, IV: 3769
      - chlorpromazine, IV: 3979
      - circulation, IV: 3822
      - cold, IV: 3769; VI: 7435; VII-X: 10650, 10773
      - environmental temperature, VII-X: 8954, 10877
      - humidity, VII-X: 11469
      - microwave radiation, VI: 7631; VII-X: 11325, 11336, 11377
      - perspiration, IV: 3822; VII-X: 8947
      - physical work, VI: 7558
      - thermal radiation, VI: 7624; VII-X: 9664, 11336, 11339

- vestibular stimulation, VII-X: 9461  
wind, VII-X: 11475
- effects on:  
neuromuscular performance, VII-X: 10682  
thermoreception, VI: 7138  
thresholds of cutaneous stimuli, VII-X: 9661  
urine composition, VII-X: 9119
- measurement, V: 5426
- relation to:  
cutaneous circulation, VII-X: 10767  
tactile perception, VII-X: 10833, 10853  
thermoreception thresholds, VII-X: 9662
- temperature gradient  
effects of environmental temperature, V: 6046
- thermal properties, VI: 7620
- water exchange (see also Perspiration), I: 691;  
II: 2161
- SKIN EXCRETIONS** (see also Sweat), VI: 8252; VII-X: 8517
- SKULL**  
effects of vibration, III: 2754
- SLEEP** (see also Autohypnosis; Drowsiness; Waking)  
caused by sensory stimulation, VII-X: 9169
- effects of:  
cold, VII-X: 10873  
environmental temperature, VI: 7424  
subgravity, VII-X: 10262
- effects on:  
metabolism, V: 5988; VII-X: 8915  
oxygen consumption, VII-X: 8597
- general physiological factors, V: 5306
- relation to:  
anoxia, II: 1325  
blood oxygen tension, III: 3598  
body temperature, VII-X: 8590, 8597, 10790  
cerebral circulation, IV: 4606  
diurnal cycle, III: 3012; VI: 6772; VII-X: 8593, 8612, 8616, 8630  
electroencephalogram, III: 2855; VI: 6943, 6944; VII-X: 8628, 9165, 9177, 10262  
galvanic skin response, VII-X: 9793  
pulse rate, VII-X: 8590  
respiration, VII-X: 8590, 8811, 8884, 8885, 8886  
water exchange, VI: 6930
- SLEEP DEPRIVATION**  
effects on:  
alertness, IV: 3954  
arm tremor, VII-X: 11160  
auditory perception, VII-X: 9366  
autonomic nervous system, VII-X: 11139  
behavior, VII-X: 9695, 11167  
blood glutathione content, VII-X: 11171  
blood lipid content, VII-X: 11171  
blood plasma, VII-X: 11166  
brain activity, VII-X: 11142  
catecholamine excretion, VII-X: 9889  
cerebral circulation, IV: 4606  
conditioned reflexes, VII-X: 10286, 11172  
electroencephalogram, VI: 7600; VII-X: 11138, 11142  
flicker fusion frequency, VII-X: 11151  
gustatory perception, V: 6123  
learning, VI: 7593  
mental performance, IV: 3953, 3954; VI: 7603  
neuromuscular performance, VII-X: 11151  
performance, V: 6129; VII-X: 11175  
psychomotor performance, II: 1131; IV: 3954; V: 5669; VII-X: 9627, 9650, 11163  
reaction time, IV: 3954  
sensory perception, VII-X: 11140  
steroid metabolism, VII-X: 11166  
vigilance, VII-X: 11174  
visual perception, VII-X: 11174
- general physiological effects, III: 3012; VII-X: 11139, 11140, 11161, 11163, 11168  
general psychological effects, VII-X: 11161, 11163, 11164, 11165
- relation to:  
decompression sickness, VI: 8900  
fatigue, II: 1165, 1760
- SLEEP DEPRIVATION TOLERANCE**  
relation to personality, VII-X: 11140
- SLEEPING BAGS**, VII-X: 12181
- SMALLPOX VACCINATION**  
effects on electroencephalogram, VI: 7940
- SMELL** see Olfactory perception
- SMOKING** see Tobacco
- SOCIAL FACTORS** see under Air crews, performance; Learning; Man-machine systems; Mental diseases; Morale; Performance; Stress tolerance; Teams; Teams, behavior; Work capacity
- SOCIAL ISOLATION** (see also Adaptability to isolation; Adjustment to social isolation; Confinement; Restraint)  
animal experiments, VII-X: 11211  
cause of:  
anxiety, VII-X: 11199  
visual illusions, VII-X: 11209, 11260  
congresses, meetings, and symposia, VII-X: 11247
- effects on:  
catecholamine excretion, VII-X: 11228  
mental performance, VII-X: 11232, 11244  
neuromuscular performance, VII-X: 11200  
sensory perception, VII-X: 11232  
stress tolerance, VII-X: 11211  
suggestibility, VII-X: 11219, 11244  
team attitudes, VII-X: 11227  
bibliography, VII-X: 11246  
team behavior, VII-X: 9768, 11230  
work capacity, VII-X: 11211
- general physiological effects, III: 2478; VII-X: 11188, 11196, 11198, 11203, 11215, 11233, 11243, 11215, 11233, 11243  
bibliography, VII-X: 11264
- general psychological effects, III: 2503; V: 5726, 6133; VII-X: 9768, 9985, 11187, 11188, 11189, 11190, 11192, 11193, 11196, 11198, 11199, 11200, 11203, 11205, 11207, 11215, 11223, 11228, 11229, 11230, 11231, 11233, 11234, 11241, 11242, 11243, 11265, 11702
- relation to sensory deprivation, VII-X: 11195, 11196, 11261
- SOCIAL ISOLATION TOLERANCE**  
relation to personality, VI: 7650; VII-X: 11243
- SOCIAL PSYCHOLOGY** see Team psychology
- SOCIETIES** see under Aviation medicine
- SODIUM AZIDE**  
effects on electrical potentials of cochlea, I: 839
- SODIUM CHLORIDE** (see also Chloride metabolism)  
effects on:  
heat tolerance, IV: 4487  
steroid excretion, VI: 6933  
sweat glands, VII-X: 9137
- SODIUM CHLORIDE INTAKE**  
effects of:  
hot climates, VII-X: 10101, 10885  
humidity, VII-X: 10801  
physical work, VII-X: 10885
- SODIUM CHLORIDE METABOLISM**  
effects of:  
hot climates, VII-X: 10884  
physical work, VII-X: 10884
- SODIUM COMPOUNDS**  
effects on cold tolerance, VII-X: 10679
- SODIUM CONTENT** see under Blood; Blood plasma
- SODIUM METABOLISM** (see also Electrolyte distribution; see also entries under Sodium-potassium ratio)



- effects of:  
 altitude, II: 2206  
 altitude acclimatization, II: 2206  
 anoxia, III: 2742  
 hot climates, VII-X: 10896  
 hyperthermia, VII-X: 8932  
 negative pressure breathing, VII-X: 8845  
 noise, VII-X: 11040  
 positive acceleration, IV: 3910  
 pressure breathing, IV: 4379
- SODIUM-POTASSIUM RATIO** *see under* Brain; Muscular system; Saliva; Urine
- SODIUM THIOPIENTAL** *see* Barbituric acid derivatives
- SOLAR FLARES**  
 hazards, VI: 7632; VII-X: 11284, 11396, 11430  
 protection, VII-X: 11400
- SOLAR RADIATION** (*see also* Ultraviolet rays), VII-X: 12202
- effects on:  
 blood, VII-X: 11340  
 blood plasma, V: 5752  
 circulation, II: 1546  
 digestive system function, I: 267; II: 1265; VII-X: 10789  
 eye, VII-X: 10412  
 retina, VII-X: 11380, 11408  
 hazards, IV: 5169; V: 5225, 6575; 11283, 11367, 11382  
 in interplanetary space, VII-X: 11410  
 pathological effects, VII-X: 11408  
 protection, VII-X: 11408
- SOLVENTS** *see* Organic solvents
- SOMATOTYPE** (*see also* Body measurements), III: 3072; VII-X: 11760
- relation to:  
 flying ability, VI: 7777  
 physical fitness, IV: 4075  
 temperature regulation, V: 5459
- SOMATROPIN**  
 effects on:  
 altitude tolerance, VII-X: 9879  
 body weight, II: 3397  
 cold tolerance, IV: 4084; VII-X: 9879  
 heart metabolism, V: 5399  
 heat tolerance, VII-X: 9879
- SOUND** (*see also* After-sound; Auditory signals; Auditory stimuli; Intermittent noise; Noise; Pitch)  
 cause of:  
 ear pain, II: 1453; VII-X: 10926, 10927  
 nystagmus, VI: 7050  
 tympanic muscle reflexes, IV: 5159; VI: 7031, 7032; VII-X: 9401, 9402, 9416, 9446, 9448
- effects on:  
 action potentials of auditory nerve, VII-X: 9425  
 auditory perception, II: 1540, 1541; III: 2886; IV: 4415; VI: 7017  
 auditory thresholds, VI: 7027  
 blood, VII-X: 10978  
 blood cells, V: 6061, 6062  
 blood cholinesterase content, VII-X: 10997  
 brain, IV: 4734; VII-X: 11022  
 cell division, VII-X: 11018  
 cerebral circulation, VI: 7506; VII-X: 11002  
 cochlea, II: 1284, 1287; IV: 3714; VII-X: 9405, 9441  
 cochlear circulation, VII-X: 11030  
 color vision, II: 1949  
 ear, II: 1453  
 electrical potentials of auditory cortex, VI: 7021  
 electrical potentials of cochlea, I: 839; II: 1284, 1287; IV: 5070, 5157; V: 5583; VI: 7016, 7038; VII-X: 9404, 9418, 9425, 10960  
 electroencephalogram, VII-X: 9362  
 endocrine system, V: 6086  
 enzyme activity, VI: 7041; VII-X: 9442  
 hearing, III: 2364, 3404; IV: 3714  
 labyrinth, VII-X: 11052  
 metabolism of cochlea, VI: 7041; VII-X: 9442  
 oxygen tension of cochlea, VII-X: 9906  
 oxygen tension of labyrinth, VII-X: 9407  
 pulse rate, IV: 5201; V: 6092  
 skin, V: 6060  
 speech intelligibility, VI: 7035  
 testis, V: 6060  
 thiamine metabolism, VI: 7505  
 tissues, III: 2762; IV: 5150  
 general physiological effects, II: 944  
 test methods, III: 3260  
 localization, II: 1114; III: 2536; V: 5617  
 effects of:  
 anoxia, VII-X: 10572  
 auditory stimuli, II: 995  
 loudness, VII-X: 9449  
 pitch, VII-X: 9543  
 tilting, V: 5655  
 visual stimuli, II: 995  
 physical factors, VII-X: 9431  
 relation to binocular hearing, VII-X: 9558  
 tests, II: 1151, 2173  
 time factors, VII-X: 9449  
 loudness  
 effects on sound localization, VII-X: 9449  
 pathological effects, VI: 7506; VII-X: 11002
- SOUNDPROOFING** *see* Reduction *under* Airplane noise (Interior); Jet plane noise (Interior); Noise
- SOVENTOL**  
 use in motion sickness, II: 1509
- SPACE** *see* Interplanetary space; Survival in space; Work space
- SPACE AGRICULTURE**, V: 5303; VII-X: 8500, 8522, 12867, 12869
- SPACE CABIN ATMOSPHERES**, III: 3236; V: 6689; VII-X: 8449, 8527, 9841, 9933, 9941, 12487, 12660, 12697, 12749, 12772, 12780, 12786, 12792, 12805, 12809, 12823, 12832, 12840  
 bibliography, VII-X: 12779  
 composition, VII-X: 12781, 12791  
 contamination, VI: 8252; VII-X: 8517, 12777, 12789, 12807, 12833  
 effects on:  
 blood, VII-X: 12781  
 metabolism of bacteria, VI: 8253  
 purification, VII-X: 8535, 8538, 12777, 12797, 12810, 12815  
 regeneration (*see also* entries *under* Gas exchangers), II: 1132; VI: 8250, 8254, 8266; VII-X: 8513, 8414, 8517, 8521, 8538, 8539, 8541, 8771, 12459, 12468, 12535, 12776, 12788, 12795, 12802, 12803, 12810, 12814, 12820, 12835, 12836, 12842, 12862, 12889, 12890  
 sanitary aspects, IV: 3875, 4296, 4297; VI: 8252, 8254; VII-X: 8517, 12789, 12803, 12806, 12814, 12833
- SPACE CABIN SEATS**, VII-X: 12818
- SPACE CABIN SIMULATORS**, VII-X: 9916, 11273, 12741, 12749
- SPACE CABINS**  
 air conditioning, VII-X: 12788, 12815, 12834  
 atmosphere *see* Space cabin atmospheres  
 equipment, III: 3252; VII-X: 8404, 9826, 9862, 9953, 12486, 12507, 12692, 12804, 12832, 12839, 12840  
 human engineering, VII-X: 9858, 10228, 12465, 12468, 12507, 12520, 12534, 12739, 12792, 12807, 12817, 12839  
 humidity control, VII-X: 12813  
 sanitary aspects, VII-X: 12881

- temperature control, V: 6693; VII-X: 12593, 12790, 12813
- SPACE CAPSULES, VII-X: 8690, 9947
- SPACE CREWS (see also Astronauts)
  - behavior
    - effects of simulated space flight, VII-X: 9875
    - selection, VI: 7143; VII-X: 11561, 11591, 11667, 11702
    - training, VII-X: 11638, 11667, 11670
- SPACE DOGS, VII-X: 8339
- SPACE ENVIRONMENT, VII-X: 8715
  - congresses, meetings, and symposia, VII-X: 8391
  - effects on:
    - hand, VII-X: 10383
    - terrestrial life, VII-X: 8675
    - general physiological effects, III: 2779
    - research, IV: 4740; VI: 6782; VII-X: 8306, 8342, 8343, 8459
    - research methods, VI: 6781; VII-X: 8428, 8467, 8473, 8486, 8494
    - reviews, VII-X: 12737
- SPACE ENVIRONMENT (SIMULATED)
  - effects on:
    - bacteria, VII-X: 8679, 8682
    - microorganisms, VII-X: 8716
- SPACE ENVIRONMENT SIMULATORS, VII-X: 12740, 12767, 12774
- SPACE FEEDING, VII-X: 12869
- SPACE FLIGHT (see also High altitude flight; Re-entry. See also entries under Expeditions), V: 5213, 5228, 5230, 5233, 5237
  - aftereffects, VII-X: 9867
  - analogy to fetal physiology, VII-X: 10266
  - analysis, VII-X: 10200
  - animal experiments, I: 14, 70; II: 1712; V: 6575; VII-X: 8316, 8351, 8419, 8434, 8439, 8456, 8477, 8481, 8492, 9841, 9862, 9867, 9937, 9993, 12218, 12334
  - bibliography, V: 5238, 5239; VII-X: 8361, 8362
  - biological effects, VII-X: 8501, 8503
    - research methods, VII-X: 8434, 8476
    - test methods, VII-X: 8506
  - cause of:
    - motion sickness, VII-X: 11834
    - peptic ulcer, VII-X: 11944
  - congresses, meetings, and symposia, VI: 6740; VII-X: 8399, 8409, 8410
  - effects on:
    - bacteria, VII-X: 8476
    - behavior
      - research methods, VII-X: 9707
    - circulation, VII-X: 9910
    - fungi, VII-X: 8501
    - metabolism, VII-X: 9867
    - plants, VII-X: 8501
    - seeds, VII-X: 8503
  - general physiological effects, I: 120, 579, 813; V: 6575; VI: 7143; VII-X: 8468, 9852, 9862, 9917, 9944, 9977, 12619
    - bibliography, VII-X: 9835
    - research, VII-X: 8492
  - general psychological effects, VII-X: 9678, 9844, 9852, 9917, 9945, 9954, 9977, 12619
    - bibliography, VII-X: 9689, 9835
  - hazards (see also Meteoroids), I: 880; VII-X: 8276, 9937, 9988, 11231, 12175, 12807
  - history, VI: 6706, 6708; VII-X: 8285, 8300, 8306, 8316, 8324, 8325, 8340, 8342
  - human factors (see also Social isolation), VII-X: 9892
  - legal aspects, VII-X: 8277, 8278, 8279, 8282
  - medical problems, I: 118, 138, 221, 435, 438, 439, 440, 441, 442, 447, 830; II: 1190, 1515, 2022; III: 2359, 2728, 2779, 2780, 3071, 3263, 3513; IV: 3886, 3899, 4118, 4327, 4427, 4428, 4441, 4508, 4554, 4558, 4740, 4878, 5014, 5028, 5151; V: 5209, 5216, 5225, 5226, 5229, 5231, 5757, 5770, 5891, 6314, 6588, 6594; VI: 6703, 6708, 6710, 6715, 6716, 6717, 6718, 6722, 7198, 7787, 7803, 8149; VII-X: 8273, 8276, 8282, 8283, 8287, 8292, 8293, 8325, 8340, 8350, 8352, 8383, 8390, 8404, 8436, 8438, 8446, 8447, 8463, 8520, 8542, 9759, 9807, 9816, 9821, 9826, 9828, 9836, 9837, 9838, 9840, 9842, 9849, 9856, 9857, 9858, 9863, 9864, 9866, 9870, 9871, 9874, 9882, 9888, 9891, 9892, 9895, 9896, 9899, 9903, 9905, 9908, 9911, 9918, 9921, 9922, 9925, 9934, 9938, 9940, 9941, 9942, 9946, 9951, 9953, 9954, 9960, 9964, 9968, 9969, 9971, 9974, 9975, 9981, 9985, 9988, 9991, 9995, 10028, 10097, 11586, 11702, 11710, 11800, 11802, 12174, 12463, 12467, 12470, 12486, 12535, 12541, 12545, 12597, 12605, 12606, 12738
  - bibliography, VII-X: 8364
  - navigational equipment, VII-X: 12641
  - nutritional requirements, VII-X: 8514, 12880
  - psychological factors, VII-X: 9755
  - research, VI: 6757, 6760, 6761, 6762; VII-X: 8285, 8290, 8412, 8425, 8435, 8437, 8439, 8442, 8451, 8454, 8456, 8457, 8459, 8463, 8465, 8478, 8479, 8481, 8484, 8488, 8489, 8493, 8496, 9940, 9943, 12809
    - use of hypnosis, VII-X: 8441
  - research methods, VII-X: 8449, 8455, 9078, 9866, 12516, 12597
  - safety, VII-X: 12169
  - sanitary aspects, VII-X: 11803, 12097
  - sensory deprivation, VII-X: 11496
  - sensory perception, VII-X: 9965
  - terminology, V: 5220
  - time dilatation, V: 5262, 5263, 5270, 5273; VI: 6777; VII-X: 8574, 8595
    - use of hypothermia, VII-X: 12578
  - visual problems, VII-X: 9240, 9965, 11409, 12598
  - water requirements, VII-X: 12549, 12887
- SPACE FLIGHT (by country)
  - France, VII-X: 8329
  - Russia, VI: 6712, 7174; VII-X: 8274, 8276, 8298, 8300, 8305, 8308, 8311, 8316, 8319, 8321, 8326, 8331, 8339, 8344, 8351, 8464, 8481, 8502, 8505, 8704, 9860, 9862, 9867, 9914, 9946, 9967, 12529
    - United States, VII-X: 8285, 8298, 8305, 8312, 8313, 8314, 8317, 8322, 8324, 8328, 8332, 8335, 8351, 8432, 8457, 9946, 11692, 12471, 12651
- SPACE FLIGHT (INTERPLANETARY) (see also Planetary expeditions)
  - medical problems, VII-X: 9982
- SPACE FLIGHT (ORBITAL)
  - animal experiments, V: 6575; VI: 6712, 7174; VII-X: 8326, 8448, 8502, 9811, 9967
  - biological effects, VII-X: 8502, 8505
  - effects on reticulo-endothelial system, VII-X: 9811
  - general physiological effects, VII-X: 8316, 8321, 8331, 8344, 9914, 9967
  - history, VII-X: 8305, 8308, 8311, 8319, 8321, 8327, 8331, 8344, 9914
  - medical problems, IV: 4499; VI: 8143; VII-X: 9865, 9893, 9913, 9920, 9947, 11214, 12531
  - navigational equipment, VII-X: 12673
  - oxygen requirements, VII-X: 12487
- SPACE FLIGHT (SIMULATED), VII-X: 12739, 12880
  - effects on:
    - catecholamine excretion, VII-X: 11254
    - mental performance, VII-X: 11204
    - psychomotor performance, VII-X: 9923
    - space crew behavior, VII-X: 9875

- general physiological effects, VII-X: 9816, 9885, 9886, 9933, 9966, 9972, 9973, 9975, 9976  
     research methods, VII-X: 11276  
 general psychological effects, VII-X: 9859, 9886, 9966, 9972, 9973, 9976, 11274  
 nutritional requirements, VII-X: 12772  
 oxygen requirements, VII-X: 12772  
**SPACE FLIGHT (SUBORBITAL)**  
     aftereffects, VII-X: 9860  
     animal experiments, VI: 7186, 7233; VII-X: 8298, 8312, 8317, 8321, 8326, 8329, 8339, 8432, 9833, 9860, 9872, 9884, 12544, 12651, 12694  
     congresses, meetings, and symposia, VII-X: 8330, 8380  
     effects on:  
         psychomotor performance, VII-X: 9872  
         pulse rate, VII-X: 12367  
         respiration, VII-X: 12367, 12694  
     general physiological effects, VI: 7186; VII-X: 8312, 8313, 8316, 8321, 8432, 9814, 9815, 9833, 9848, 9860, 9900, 9901, 9912, 9931, 12651  
     general psychological effects, VII-X: 9901  
     history, VII-X: 8305, 8314, 8322, 8328, 8332, 8335, 11692, 11889  
     spatial orientation, VII-X: 12557  
**SPACE FLIGHT FEEDING** (*see also* Flight feeding; Space feeding), II: 1133; V: 5225; VI: 8266; VII-X: 8522, 8536, 8537, 12843, 12846, 12847, 12848, 12849, 12850, 12851, 12852, 12853, 12854, 12856, 12857, 12858, 12859, 12861, 12862, 12866, 12867, 12868, 12869, 12870, 12871, 12874, 12875, 12876, 12877, 12878  
     of chimpanzees, VII-X: 12860  
**SPACE FLIGHT NURSES**  
     duties, VII-X: 11674, 11736  
     training, VII-X: 11674  
**SPACE FLIGHT SIMULATION**, VII-X: 10237, 12728  
     use of balloons, VII-X: 12770  
**SPACE FLIGHT SIMULATORS**, IV: 3729; VI: 8240; VII-X: 8487, 9874, 9973, 9991, 11188, 11276, 11333, 11633, 11637, 11649, 11653, 12467, 12724, 12725, 12727, 12732, 12737, 12738, 12742, 12747, 12751, 12757, 12759, 12764, 12767, 12770, 12772, 12809  
     human engineering, VII-X: 12739  
**SPACE FLIGHT SURGEONS**  
     duties, VII-X: 11735  
**SPACE LAW** *see* Space flight, legal aspects  
**SPACE MEDICINE**, I: 811; V: 5218, 5232; VII-X: 8295, 8296  
     administrative and organizational aspects, VII-X: 8412  
     congresses, meetings, and symposia, III: 3410; VII-X: 8378, 8384, 8387, 8388, 8389, 8390, 8397, 8404, 12444  
     history, I: 811, 882; IV: 4600; VII-X: 8297, 8304  
     research, I: 439, 445, 725; III: 2929; V: 5231, 5247, 5248; VI: 6758; VII-X: 8273, 8418, 8419, 8421, 8424, 8426, 8431, 8436, 8444, 8447, 8450, 8461, 8466, 8468, 8474, 8490, 8491, 8497, 8498, 9993, 11525, 12738  
     research methods, VII-X: 8333, 8338, 8487, 9858, 12774  
**SPACE MEDICINE (by country)**  
     Canada, VII-X: 8423  
     Russia, VII-X: 9988, 12529  
     United States, VII-X: 8304, 8431, 8489  
**SPACE MYOPIA**  
     prevention, VII-X: 9260  
**SPACE PHYSIOLOGY**  
     relation to space psychology, VII-X: 9690  
**SPACE PILOTS** *see* Astronauts  
**SPACE PSYCHOLOGY**  
     relation to space physiology, VII-X: 9690  
**SPACE RESCUE** *see* Rescue in space  
**SPACE SICKNESS** (*see also* Altitude sickness; Motion s.), VII-X: 12533  
     caused by change of acceleration, VII-X: 10233  
**SPACE STATIONS** (*see also* Lunar stations), V: 5224, 5229; VII-X: 8272, 8488, 8704, 12475, 12488, 12531  
     congresses, meetings, and symposia, VII-X: 8396  
     equipment, VII-X: 8294, 8523, 12493, 12824  
     human engineering, I: 571; V: 5225; VI: 8153; VII-X: 11889, 12524, 12529, 12554  
**SPACE SUITS**, I: 264; III: 3264; IV: 4727, 4756; V: 5224, 5225, 5231; VII-X: 8294, 8449, 8489, 12177, 12239, 12309, 12740  
     thermal properties, VII-X: 12209, 12243  
**SPACE VEHICLE ATTITUDE**  
     effects of circulation, VII-X: 12609  
**SPACE VEHICLE CONTROL SYSTEMS**  
     use of electroencephalogram, VII-X: 12686  
**SPACE VEHICLE CONTROLS**  
     human engineering, VII-X: 12473, 12641, 12668, 12690, 12700  
**SPACE VEHICLE NOISE (INTERIOR)**, VII-X: 10970, 10992  
**SPACE VEHICLES** (*see also* Man-made satellites; Nuclear propelled space vehicles; Space stations), VI: 6706; VII-X: 8690  
     bailout, VI: 7186, 8147; VII-X: 12310, 12313, 12320, 12334, 12351, 12456  
     equipment, VII-X: 8689, 9947, 12801, 12812  
     human engineering, V: 5224, 6575; VI: 8147, 8214; VII-X: 8442, 10013, 12456, 12463, 12474, 12496, 12514, 12526, 12537, 12543, 12544, 12596, 12755, 12786, 12801, 12838  
     kitchen facilities, VII-X: 12843, 12844, 12848  
     landing on water, VII-X: 10088  
     sterilization, VII-X: 12441, 12442, 12443, 12444, 12446, 12447  
     vibration, VII-X: 10970, 10992  
**SPACECRAFT** *see* Space vehicles  
**SPAIN** *see under* Ambulance planes  
**SPASMOPHILIA**, V: 6421  
**SPATIAL ORIENTATION** (*see also* Biological orientation; Topographical orientation)  
     bibliography, IV: 4608; VII-X: 9522  
     congresses, meetings, and symposia, VII-X: 8395, 9531  
     disturbances, VII-X: 9476  
         cause of accidents, VI: 8082, 8093, 8119, 8124; VII-X: 12389, 12399, 12417, 12594  
         general physiological factors, VII-X: 12594  
         in airplane flight, VII-X: 9468  
         in helicopter piloting, VII-X: 9490, 9827, 12389  
         in piloting (*see also* Break-off effect; Fascination), II: 1238; III: 2592; IV: 3884, 3973; V: 5615, 5618; VI: 7070, 8080, 8082, 8093, 8175; VII-X: 11636, 12397, 12399, 12417, 12562, 12594  
     effects of:  
         abnormalities of labyrinth, VII-X: 9475  
         acceleration, I: 251, 408, 409, 900; VI: 7193, 7230; VII-X: 9472, 9508, 9665, 10130  
         advance information, II: 1789  
         anoxia, II: 2821; IV: 4831; VII-X: 9472  
         auditory stimuli, VII-X: 9477  
         continuous rotation, VII-X: 10043, 12553  
         illumination, I: 424, 425  
         immersion, VI: 7074; VII-X: 9473, 10268  
         intermittent light, II: 2415  
         light stimuli, I: 424; VII-X: 12594  
         menstruation, II: 2038  
         motion, V: 5636

- motion sickness drugs, VI: 7874  
 noise, II: 952  
 optical prisms, V: 5645  
 posture, II: 2238; III: 2821; VI: 7080; VII-X: 9508, 11445, 11462  
 practice, V: 5652  
 rotation, VI: 7077; VII-X: 9513, 10140, 12397  
   test methods, VII-X: 12723  
 spinning, IV: 4915  
 subgravity, I: 14, 116, 369, 475, 830; II: 931, 1742; III: 2319, 2460, 2790; IV: 3806, 4211, 4960; V: 5816; VII-X: 10130, 10229, 10241, 10261, 10268  
 tilting, II: 1402, 1404; III: 2594, 2595, 2596; V: 5635, 5801; VII-X: 9541, 9542  
 training, IV: 5144  
 vestibular stimulation, III: 2975; VII-X: 9556  
 visual cues, VII-X: 9496  
 visual deprivation, VII-X: 11201  
 visual displays, III: 2905  
 visual illusions, VII-X: 9479  
 in high altitude flight, I: 220  
 in immersion, VI: 7074  
 in instrument flight, I: 36; VII-X: 12399  
 in piloting, IV: 3973; VII-X: 9604, 11709  
 in suborbital space flight, VII-X: 12557  
 psychological factors, I: 619; V: 5656  
 relation to:  
   form perception, IV: 3801  
   head movements, II: 1404; IV: 4501; VII-X: 9513  
   labyrinth pathology, VII-X: 9469  
   sensory illusions, I: 36; III: 3339  
 research, V: 5637  
 role of:  
   labyrinth, I: 410, 411, 556, 903; II: 1079, 1482, 2166; III: 3035; IV: 3827, 5185; VI: 7052; VII-X: 9470, 9480, 9674, 10140, 10268  
   proprioception, I: 180, 617, 618, 619, 829, 872; III: 2594, 2595, 2596; IV: 5185; V: 5629; VII-X: 9453, 9470, 9541, 9542, 10268  
   sensory perception, IV: 4472  
   visual perception, I: 180, 375, 376, 617, 618, 619, 716, 829; II: 2224, 2237; III: 2633; IV: 3827, 3905, 4222; V: 5629; VII-X: 9520, 9541, 10268, 12399  
   sex factors, II: 2038; III: 2595  
   test methods, II: 982, 1235; V: 5642; VII-X: 11709  
   analysis, III: 3689, 3690  
   tests, VI: 7055  
**SPEAKING** (see also Jaw movements in speaking; Speech; Voice)  
   analysis, II: 2134; VII-X: 9135  
   effects of:  
     hyperventilation, VII-X: 8889  
     microphones, III: 3557  
     noise, V: 5549  
     speech feedback, III: 2408, 2410, 3357; IV: 3850; VI: 6946, 7023; VII-X: 9148, 9435, 9668  
     vibration, VII-X: 9668, 10935  
   effects on:  
     alveolar carbon dioxide tension, I: 455; VI: 6830  
     auditory perception, IV: 3754  
     blood oxygen tension, VI: 6830  
     pitch discrimination, III: 2497  
     respiration, I: 171, 455; VII-X: 8832  
     general physiological effects, IV: 4924; V: 5575  
     general physiological factors, I: 103, 171; II: 1002; III: 2408, 2495  
**SPECTACLES** (Eyeglasses) (see also Optical prisms; Sunglasses), I: 433; II: 1369; IV: 3800  
**SPEECH** (see also Speaking; Voice)  
   analysis, VI: 7022  
   disorders see Speech disorders
- distortion  
   effects on intelligibility, V: 5576  
 intelligibility (see also Listening performance), I: 104, 459, 552, 837; II: 1111, 1408, 1662, 1952; III: 2496, 2498, 3554; IV: 3852, 3853, 4924, 5066  
   effects of:  
     advance information, IV: 3851  
     airplane flight, IV: 4359  
     airplane noise (interior), VII-X: 10962  
     alertness, III: 2533  
     altitude, I: 104; III: 3248  
     auditory cues, IV: 4561  
     binaural hearing, IV: 3918  
     communication systems, IV: 4130  
     dental prostheses, II: 977  
     distortion, V: 5576  
     ear plugs, II: 1872  
     fatigue, II: 2232  
     loudness, V: 5586  
     noise, I: 551, 837; II: 1108, 1573, 1731, 1872, 2027, 2102, 2232, 2273; III: 2482, 2932, 3205, 3270; 3305, 3307, 3308, 3332, 3555, IV: 3838, 4100, 4483, 4776, 4777, 4797, 4810; V: 5559, 5587, 6083; VI: 7014, 7036 7040, 7491, 7496, 7513, 7518; VII-X: 9412, 10937, 10945, 10946, 10971, 11027, 11029  
     pitch, VII-X: 9363  
     practice, III: 2535; VII-X: 9415  
     respirators, VII-X: 12223  
     side-tone, II: 1001; III: 2409, 2411; IV: 4773, 4923, 4925, 5064; V: 5594  
     sound, VI: 7035  
     speech feedback, VI: 6946  
     visual cues, IV: 4561; V: 5529  
     voice, IV: 4676  
   relation to:  
     deafness, III: 3305; V: 5563  
     hearing, VII-X: 9390  
   test methods, II: 1109, 1436, 1610, 1688, 1703, 2134; III: 3556; IV: 3847, 4739; VI: 7037  
   tests, II: 1220; IV: 4771, 4772, 4774, 4778, 5063, 5065; VI: 7039; VII-X: 9383, 9432, 9433, 9436  
   time factors, II: 1436; V: 5561; VII-X: 9433  
   loudness, I: 710; III: 3557; IV: 3848  
   effects on intelligibility, V: 5586  
**SPEECH COMMUNICATION**  
   analysis, IV: 5062; VII-X: 12527  
**SPEECH DISORDERS**, II: 1610  
**SPEECH FEEDBACK** (see also Side-tone)  
   effects on speaking, III: 2408, 2410, 3357; IV: 3850; VI: 6946, 7023; VII-X: 9148, 9435, 9668  
   general physiological effects, V: 5558  
**SPINAL COLUMN** (see also Spine injuries)  
   anomalies, V: 6518  
   effects of:  
     acceleration, VII-X: 10157  
     posture, VII-X: 11436  
   examination, II: 1844  
**SPINAL CORD** (see also Cerebrospinal fluid)  
   action potentials  
     effects of anoxia, IV: 4202  
   effects of anoxia, III: 3099  
**SPINE INJURIES**, I: 75, 671; II: 1215  
   caused by:  
     acceleration, VII-X: 11891  
     accidents, VII-X: 12380  
     bailout, VII-X: 12415  
     ejection from aircraft, VI: 7833; VII-X: 11955, 11991, 12325, 12411  
     impact, VII-X: 12415  
     positive acceleration, V: 6340  
     statistics, III: 2684; VII-X: 12415

- SPINNING (see also Tumbling)  
 effects on:  
 pilot performance, VII-X: 11677  
 spatial orientation, IV: 4915  
 general physiological effects, VI: 7221
- SPLEEN  
 displacement  
 caused by flight duty, VII-X: 9961  
 effects of:  
 altitude, VI: 7250  
 anoxia, IV: 4418  
 heat, III: 2561  
 high altitude flight, III: 2611, 2670, 3228  
 hypothermia, VI: 6903  
 examination, III: 3396  
 metabolism  
 effects of anoxia, II: 1984, 1985  
 role in:  
 altitude acclimatization, V: 5924  
 altitude tolerance, IV: 4034; VII-X: 10310  
 anoxia tolerance, IV: 4344  
 heart function, VII-X: 10198  
 transversal acceleration tolerance, VII-X: 10197, 10198
- SPORT ACTIVITIES (see also Physical training)  
 effects on:  
 ballistocardiogram, VI: 7535  
 cardiovascular system, VI: 7587  
 electrocardiogram, V: 6111; VI: 7533, 7578  
 heart, VI: 7532, 7568  
 metabolism, VI: 6855  
 nutritional requirements, VI: 6928, 7551  
 relation to physical fitness, I: 361; II: 1800, 1908, 2263; III: 2824, 2935, 3190, 3310; V: 6235; VI: 6940, 7728; VII-X: 11998
- SPUTNIKS see Man-made satellites
- STANDING POTENTIAL  
 effects of:  
 anoxia, I: 217  
 hypercapnia, I: 217
- STAPHYLOCOCCUS, VII-X: 10812
- STARTLE see Arousal
- STARVATION (see also Adjustment to starvation)  
 aftereffects, VII-X: 11482, 11485  
 animal experiments, VII-X: 11472  
 effects on:  
 activity rhythm, VII-X: 11490  
 altitude tolerance, V: 5870  
 anoxia tolerance, II: 1873; III: 3251  
 auditory perception, II: 1663; IV: 3903  
 behavior, VII-X: 8425, 11360, 11472  
 blood, VII-X: 10744  
 blood cells, III: 3030  
 blood glucose content, VI: 7640  
 blood plasma, VII-X: 9887  
 body weight, VII-X: 9897  
 carotene metabolism, VI: 7293  
 circulation, III: 3030; VII-X: 11487, 11488  
 cold tolerance, VII-X: 10679  
 enzyme activity, V: 5936  
 food intake, VII-X: 8620, 11481  
 lipid metabolism, IV: 3812; VII-X: 10819, 10821, 11484  
 liver, V: 5936  
 liver metabolism, IV: 4617; VII-X: 9128, 10819, 10821  
 memory, II: 1663  
 metabolism, III: 3499, 3535; VII-X: 8916, 8922  
 muscular strength, IV: 3903  
 performance, VII-X: 9943  
 protein metabolism, IV: 4381  
 psychomotor performance, II: 1663  
 reasoning, II: 1663  
 visual perception, II: 1663; IV: 3903  
 water exchange, V: 5369  
 work capacity, II: 1663; III: 2915; IV: 3915; VII-X: 11492  
 general physiological effects, II: 1663; VII-X: 9831, 11485  
 general psychological effects, II: 1663  
 role in induction of hibernation, VII-X: 8646
- STARVATION TOLERANCE  
 animal experiments, VII-X: 11470  
 relation to age, VII-X: 11470
- STASIS see Circulation
- STATIC EXERCISE see Physical exercise (Static)
- STATIC PHYSICAL WORK see Physical work (Static)
- STEP TEST, IV: 4555; VI: 7903, 7907; VII-X: 11523, 11598, 12054  
 effects on:  
 oxygen consumption, VII-X: 11092, 11093  
 respiration, VII-X: 11092, 11093
- STEREOSCOPIC VISION see Binocular vision; Depth perception
- STERILITY see Fertility
- STERILIZATION see under Oxygen masks; Space vehicles
- STEROID EXCRETION  
 effects of:  
 airplane flight, VII-X: 9927  
 altitude, V: 5874; VI: 7313  
 altitude acclimatization, V: 5886; VI: 7313; VII-X: 10399, 10455  
 cold acclimatization, IV: 4019  
 diet, VI: 6933  
 fatigue, VII-X: 11155  
 heat, IV: 3985; VII-X: 10891, 11116  
 physical work, VII-X: 11116  
 sodium chloride, VI: 6933  
 stress, IV: 4008; VII-X: 9926, 9927  
 vibration, VII-X: 11014  
 relation to:  
 activity cycle, VII-X: 8618  
 diurnal cycle, VII-X: 8612
- STEROID METABOLISM  
 effects of:  
 cold, IV: 4106; VII-X: 10870  
 fatigue, VII-X: 9809  
 flight duty, VII-X: 9813  
 hypothermia, V: 5387  
 sleep deprivation, VII-X: 11166  
 relation to diurnal cycle, V: 5271; VII-X: 8610
- STEROIDS (see also Androsterone; Progesterone; Sex hormones. See also Steroid content under Blood), III: 2569, 3415  
 chromatographic analysis, II: 1690
- STIMULATION see Cerebral stimulation; Eye s.; Nasal s.; Sensory s.; Vestibular s. Also see Arousal
- STIMULI see Auditory stimuli; Caloric s.; Color s.; Cutaneous s.; Electrical s.; Light s.; Olfactory s.; Visual s.
- STIPPLE TEST, III: 3667, 3670; IV: 5190; VI: 7161; VII-X: 9763
- STOMACH see Gastric secretion
- STRABISMUS see Heterophoria
- STRAINING see Anti-g procedures
- STRENGTH see Muscular strength
- STREPTOMYCIN  
 effects on anoxia tolerance, V: 6368; VI: 7870
- STRESS (see also Acceleration; Altitude; Anoxia; Cold; Combat stress; Explosive decompression; Fatigue; Heat; Mental stress; Noise; Physical work; Psychomotor stress; Radiations; Restraint; Ultrasonic vibrations; Vibration)  
 cause of:  
 anxiety, IV: 3791

- fatigue, II: 1691; VI: 7175  
 caused by:  
 airplane flight, III: 3043; VI: 8148; VII-X: 9919, 9949  
 piloting, V: 6174  
 effects on:  
 adrenal glands, II: 1462, 1691; III: 2417  
 autonomic nervous activity rhythm, IV: 4242  
 binocular vision, VII-X: 9270  
 blood cells, II: 1318, 1319, 1320, 1462, 1691; V: 5771; VI: 7192  
 blood coagulation, VII-X: 8752  
 blood glucose content, III: 2787, IV: 4572  
 catecholamine excretion, VII-X: 9915, 9928  
 circulation, III: 3029; IV: 4463; VI: 7182  
   religious factors, VI: 7182  
 electroencephalogram, VII-X: 9924  
 endocrine system, V: 5771  
 epinephrine content of blood plasma, VII-X: 9929  
 flicker fusion frequency, II: 1167; III: 2396, 2397  
 galvanic skin response, VII-X: 9694  
 metabolism, VII-X: 9878  
   enzyme activity, VI: 7173; VII-X: 9843  
 metabolism of organs:  
   brain, VII-X: 9822  
 metabolism of substances:  
   ascorbic acid, IV: 4664  
   lipids, IV: 3813; V: 5749  
   potassium, VII-X: 9822  
   proteins, III: 2586  
 neuromuscular performance, V: 5745  
 norepinephrine content of blood plasma, VII-X: 9929  
 performance, V: 5747, 5755; VI: 7176, 7177; VII-X: 9855  
   of aviators, I: 33; II: 1113; IV: 5011  
   reviews, V: 5756  
 psychomotor performance, I: 284; III: 2550; V: 5669; VI: 7183; VII-X: 12525  
 steroid excretion, IV: 4008; VII-X: 9926, 9927  
 urine composition, VI: 7184; VII-X: 9824, 9825  
 general physiological effects (see also General adaptation syndrome), II: 1200, 1828; IV: 3791; VII-X: 9808  
   bibliography, VI: 7170  
   research, II: 1903; VII-X: 8487  
   research methods, VII-X: 8427, 9919  
   reviews, VII-X: 9909  
 general psychological effects, IV: 3791  
   bibliography, VI: 7170  
 relation to neuroses, II: 1145  
 role of hypothalamus, VII-X: 9830  
 tolerance see Stress tolerance
- STRESS ADAPTATION**  
 factor analysis, V: 5758
- STRESS SENSITIVITY** (see also Stress tolerance)  
 bibliography, II: 1828  
 effects of cold, III: 3001  
 psychological factors, VI: 7167  
 test methods, II: 1827, 1828; V: 5717
- STRESS TOLERANCE** (see also Stress sensitivity), VI: 7653  
 effects of:  
 Dibazol, VII-X: 9956  
 diet, VII-X: 12857  
 drugs, VII-X: 11731, 12003  
 heat, VI: 7475  
 physical training, VII-X: 9956, 11694  
 proteins, VII-X: 9876  
 social isolation, VII-X: 11211  
 general physiological factors, VI: 7179  
 relation to:  
 age, II: 1145; III: 3026; VII-X: 11784  
 airplane flight, V: 5750  
 electroencephalogram, VII-X: 9963  
 galvanic skin response, VII-X: 9761  
 neuroses, II: 1145  
 role of adrenal glands, V: 5769; VII-X: 9832  
 social factors, VI: 7188; VII-X: 9830  
 test methods, VII-X: 9915, 11557
- STRETCHERS**, I: 467; V: 6382; VII-X: 12022  
 evaluation, IV: 5016
- SUBCUTANEOUS FAT** see Body fat
- SUBGRAVITY** (see also Free fall)  
 analysis, VII-X: 10199  
 biological effects, VII-X: 8725  
 cause of:  
   motion sickness, VII-X: 11879  
   visual illusions, I: 369; VII-X: 9497  
 effects on:  
 acceleration tolerance, VII-X: 10011, 10223, 10274  
 cardiovascular system, VII-X: 10229  
 circulation, I: 475; II: 931, 1742; III: 2319; VII-X: 10272  
 digestive system function, VII-X: 10229  
 electrocardiogram, VII-X: 10032  
 food intake, VII-X: 12878  
 galvanic skin response, VII-X: 9711  
 labyrinth, I: 475; II: 931; III: 2319; IV: 4964; VI: 7241; VII-X: 10261  
 locomotion, VII-X: 10227, 10254, 10270  
 mental performance, III: 2601  
 micturition, VII-X: 10275  
 muscular tonus, VII-X: 10105  
 neuromuscular performance, I: 116; III: 2601; IV: 4960; VII-X: 10229, 10252, 10277  
 oxygen consumption, II: 992  
 performance, VI: 7233; VII-X: 9943, 10269, 12596  
 physical work, VII-X: 10235, 10250, 10253, 12473  
 plant growth, VII-X: 12870  
 positive acceleration tolerance, VII-X: 10012  
 postural reflexes, VI: 7234; VII-X: 10251, 10257, 10258  
 proprioception, IV: 4964; VI: 7241; VII-X: 10265, 10271  
 psychomotor performance, II: 992; V: 5798; VI: 7236, 7238; VII-X: 10127, 10228, 10248, 10250, 10252, 10255, 10269, 10277  
 sensory perception, II: 992; III: 2863; VII-X: 10233, 10261  
 sleep, VII-X: 10262  
 spatial orientation, I: 14, 116, 369, 475, 830; II: 931, 1742; III: 2319, 2460, 2790; IV: 3806, 4211, 4960; V: 5816; VII-X: 10130, 10229, 10241, 10261, 10268  
 visual acuity, VII-X: 10264  
 weight discrimination, VII-X: 10231, 10265  
 work capacity, VII-X: 12495
- general physiological effects, I: 92, 475, 830, II: 931, 1446, 1515, 1638, 1742; V: 5817, 5818; VI: 7198, 7235, 7237, 7238, 7240; VII-X: 8327, 8423, 8513, 9814, 9918, 10086, 10223, 10232, 10234, 10236, 10238, 10239, 10240, 10244, 10254, 10258, 10261, 10263, 10273, 10274, 11889, 12738  
 research, I: 14, 70, 364, 437, 443; II: 1071; V: 5819; VII-X: 10241, 10247  
 research methods, II: 1798; VI: 7239, 7243; VII-X: 8438, 8448, 8499, 10222, 10237, 10249, 10253, 11224, 12732, 12750  
 reviews, VII-X: 10222, 10260  
 test methods, II: 1798; VI: 7242; VII-X: 10276  
 general psychological effects, III: 2601; IV: 4705; VI: 7237; VII-X: 10233, 10238, 10239, 10240  
 reviews, VII-X: 10260  
 induction, VII-X: 10233, 10237, 10238, 10249

- SUBGRAVITY (SIMULATED)** (see also Immersion)  
effects on psychomotor performance, VII-X: 10256
- SUBGRAVITY EQUIPMENT** (see also Magnetic shoes),  
VII-X: 10269
- SUBGRAVITY SIMULATION**, VII-X: 10174, 10245, 10259
- SUBGRAVITY SIMULATORS**, VI: 7242; VII-X: 8437,  
12732, 12750
- SUBGRAVITY TRAINING**, VII-X: 10258
- SUBMERSION** see Immersion
- SUBORBITAL SPACE FLIGHT** see Space flight (Sub-orbital)
- SUCCESS** (see also items listed under Prediction of success)  
relation to personality, IV: 4860
- SUCCINATES**  
effects on:  
circulation, II: 1281  
respiration, II: 1281
- SUCCINIC ACID METABOLISM**  
effects of cold, IV: 4050
- SUGGESTIBILITY** (see also Hypnosis)  
effects of social isolation, VII-X: 11219  
effects on pilot performance, VII-X: 9736  
psychological factors, VII-X: 11219  
tests, VII-X: 11219
- SUITS** see Altitude suits; Anti-g s.; Exposure s.; Flying s.; Heated s.; Pressure s.; Restraint s.; Space s.; Ventilated s.
- SULFHYDRYL METABOLISM**  
effects of:  
hypothermia, III: 2452, 3361  
restraint, III: 2452, 3361  
tumbling, III: 2458; IV: 3802
- SULFONAMIDE COMPOUNDS** (see also Diamox)  
effects on altitude tolerance, IV: 4683  
toxic effects in anoxia, I: 275; III: 2628  
use in otitis externa, II: 1535
- SUN** see Solar flares; Solar radiation
- SUNGLASSES**, I: 219, 667; V: 6473; VII-X: 11316,  
12216  
optical properties, II: 1572, 1586
- SUNSHINE** see Solar radiation
- SUPERSONIC FLIGHT**  
effects on:  
circulation, V: 5809  
visual perception, I: 138, 770; IV: 4959  
general psychological effects, I: 37  
history, IV: 4087  
medical problems, I: 37, 138, 173, 357, 770; III: 2570;  
IV: 4087; VII-X: 9994  
reaction time, IV: 4070  
visual problems, VI: 8186; VII-X: 12591
- SUPERSONIC VIBRATIONS** see Ultrasonic vibrations
- SUPINE POSITION FLIGHT**  
effects on acceleration tolerance, I: 116; III: 2785;  
V: 5785  
tests, II: 1440
- SUPPLIES** see Oxygen supply
- SURFACE** see Body surface
- SURGEONS** see Flight surgeons; Space flight surgeons
- SURGERY** (see also Oral surgery; Parabiosis; Plastic surgery; Thoracic surgery. See also under Middle ear)  
at altitude, VI: 7845  
relation to altitude acclimatization, VII-X: 10353,  
11811
- SURVIVAL**, II: 1052, 1674; IV: 4208; V: 6449; VI: 8036,  
8067; VII-X: 8269, 12167  
effects of:  
cold, IV: 4471  
diet, III: 3016; IV: 4471  
water deprivation, II: 1040; III: 3015, 3016  
equipment, I: 47; V: 6448  
handbooks and treatises, IV: 3952, 5102; V: 6538  
in cold climates, VII-X: 12356, 12366  
in space, II: 1133, 1712; VII-X: 8542, 9858, 9905,  
12319, 12360, 12363, 12367, 12786  
equipment, VII-X: 12597  
in the air (see also Bailout), I: 47; II: 1755, 2043;  
VII-X: 12166, 12212  
in the Arctic, I: 24, 47, 81; II: 1260, 1597; IV: 4589,  
4867, 5054; V: 6535; VI: 8065, 8068; VII-X:  
12314, 12364, 12365  
equipment, VI: 7391, 8059  
in the desert, II: 1596; V: 6119, 6530; VI: 8063, 8069;  
VII-X: 12318  
in the Tropics, II: 1804; V: 6529  
on land, I: 81, 739, 890; II: 1144, 2017, 2258; IV: 4133,  
4307; V: 6530, 6539; VI: 8061  
equipment, IV: 3721; VII-X: 12181  
on water, I: 47, 81, 454, 739; II: 1040, 1366; III: 2879,  
2910, 3578, 3644, 3682; IV: 3758, 4041, 4062,  
4306, 4545, 5073; V: 6532, 6539, 6540; VI:  
8057, 8067; VII-X: 10675, 12316, 12317,  
12361, 12362, 12364  
equipment (see also Life preservers; Life rafts),  
II: 925, 1181, 2016; IV: 4976; V: 6464; VII-X:  
12315  
psychological factors, II: 1722, 2183, 2184; III: 3559,  
3560; IV: 5071, 5072; VII-X: 12314  
training methods see Survival training
- SURVIVAL KITS**, VI: 8068
- SURVIVAL RATIONS** see Emergency rations
- SURVIVAL TRAINING**, IV: 4326, 4530; V: 6448, 6529;  
VI: 8061; VII-X: 12314, 12368  
handbooks and treatises, V: 6533, 6539
- SUSPENSION** see under Life
- SWEAT**  
composition  
effects of:  
heat, III: 2343, 2892, 2911; IV: 4468  
heat acclimatization, III: 2343  
humidity, III: 2911  
physical work, III: 2343, 2892
- SWEAT GLANDS** (see also Perspiration; Sweat)  
effects of:  
perspiration, VII-X: 9137  
sodium chloride, VII-X: 9137  
fatigue, IV: 5052
- SWEATING** see Perspiration
- SWEDEN** see under Aviation medicine
- SWINE**  
effects of airplane noise, VII-X: 11056
- SWITCHES**  
human engineering, I: 815; VII-X: 12460, 12628
- SWITZERLAND** see under Aviation medicine; Pilots,  
selection; Pilots training; Psychomotor performance,  
research
- SYMBOLS** see Codes; Letters and numerals
- SYMPATHETIC NERVOUS SYSTEM** see Automatic  
nervous system
- SYMPOSIA** see Congresses, meetings, and symposia
- SYNCOPE** see Fainting
- SYPHILIS**, VII-X: 10813
- TACTILE DISCRIMINATION**, IV: 4094; V: 6638; VII-X:  
12709  
tests, VII-X: 9658
- TACTILE PERCEPTION**, I: 154  
effects of:  
cold, I: 119; II: 1765; III: 3142; IV: 4592; V: 6027;  
VI: 7446; VII-X: 10659, 10833, 10853  
cold acclimatization, IV: 4592; VII-X: 10659  
environmental temperature, VI: 7454  
noise, II: 1532  
psychological factors, VII-X: 9674  
relation to:  
cutaneous circulation, VII-X: 9660

- eye movements, VII-X: 9618  
galvanic skin response, VII-X: 9660  
skin temperature, VII-X: 10833, 10853  
test methods, III: 3536  
use for communication, IV: 4201; VII-X: 12550, 12599
- TACTILE RECEPTORS**  
physiology, VII-X: 9666
- TACTILE SIGNALS** (see also Warning devices (Tactile)), VII-X: 12579  
use in piloting, IV: 4348
- TAKE-OFF** see Aircraft take-off
- TALUS INJURIES** see Leg injuries
- TARGET IDENTIFICATION** (see also Aerial photo-interpretation; Visual searching), I: 193, 372; II: 1025, 1158, 1864; III: 2713; IV: 4114, 4213; VI: 8190  
bibliography, VII-X: 9294  
effects of:  
dazzle, VII-X: 9358  
visual cues, V: 5511  
tests, II: 1364; III: 2384, 2385; IV: 4212; VI: 8177; VII-X: 9187, 9326, 9344  
time factors, VII-X: 9306
- TARGET MOTION**  
effects on:  
depth perception, VII-X: 9530  
eye movements, VI: 6951  
relation to dynamic visual acuity, VII-X: 9297, 9311
- TARGET PRACTICE** (see also Aerial gunnery)  
tests, III: 2644; IV: 4111
- TARGET TRACKING** (see also Compensatory tracking; Pursuit tracking; Rotary pursuit tracking), I: 775, 780; II: 984, 1448, 1485, 1548, 1631, 1726, 1727, 1733, 2080, 2109, 2156; III: 2468, 2484, 3336; IV: 3796, 4210, 4268, 4318, 4446, 4763; V: 5667, 5672, 5680, 5699, 6676; VI: 7093, 7103, 8182; VII-X: 9561, 9569, 9574, 9591, 12698  
bibliography, V: 6584; VI: 8168  
effects of visual noise, VII-X: 9602  
eye movements, V: 5524, 5790; VI: 6968  
of chimpanzees, VII-X: 9633  
physical factors, IV: 5128; VI: 7104  
training devices, II: 1911; V: 5687; VI: 7102; VII-X: 9589  
human engineering, II: 1732  
training methods, VI: 7687; VII-X: 9633
- TARGETS**  
identification see Target identification  
visibility, I: 346; II: 1442, 1552, 1751
- TASK COMPLEXITY**  
effects on:  
intelligibility of messages, VII-X: 9149, 9693  
performance, VII-X: 11714, 12577  
psychomotor performance, V: 5664, 5691; VI: 7096; VII-X: 9590, 9594, 9595, 9596, 9627  
reaction time, II: 1290; VI: 7087, 7119; VII-X: 9594  
vigilance, VI: 7166; VII-X: 9774, 9785
- TASTE** see Gustatory perception
- TEACHING MACHINES**, VII-X: 9681
- TEAM PSYCHOLOGY** (see also entries under Social factors), VI: 7162
- TEAMS** (see also Air crews; Ground crews; Medical teams; Parachute medical teams; Rescue medical teams; Space crews)  
attitudes, VI: 7761  
effects of social isolation, VII-X: 11227, 11246  
behavior, VI: 7757, 7758; VII-X: 9770  
effects of:  
drugs, V: 5741  
social isolation, VII-X: 9768, 11230  
relation to personality, VII-X: 9723  
social factors, IV: 4385  
morale
- effects of leadership, IV: 4943  
performance, VII-X: 11719  
effects of:  
confinement, VII-X: 11273  
leadership, IV: 4943; V: 6244  
prediction of success, IV: 4548  
social factors, VII-X: 9769  
training, VII-X: 11719
- TECHNICIANS** see Electronics technicians
- TEETH** (see also Dental anomalies; Dental care; Dental caries; Dental disturbances; Dental examination; Dental prostheses; Tooth fillings)  
effects of:  
airplane flight, IV: 4429; VII-X: 11898  
altitude, VII-X: 10478, 10751  
anoxia, VII-X: 9998  
cold, VII-X: 9998, 10889  
environmental temperature, VII-X: 10751  
heat, VII-X: 9998  
hibernation, VII-X: 8651  
ultrasonic vibrations, VII-X: 11001  
vitamin E, VII-X: 9998
- TELEGRAPH OPERATION**, II: 1920
- TELEMETRY** see Physiological telemetry. Also see under Arterial pulse; Biological rhythms; Blood pressure; Electrocardiogram; Electroencephalogram; Electromyogram; Electro-oculogram; Galvanic skin response; Gastrointestinal pressure; Nerves, action potentials; Pneumotachogram; Pulse rate; Respiration; Respiratory movements
- TELEPHONE** see Earphones
- TELESCOPES** see Instrumental magnification
- TEMPERATURE** see Body temperature; Environmental temperature. Also see Temperature under Blood; Brain; Cabins; Hand; Lung; Muscular system; Skin. Also see Caloric stimuli; Thermal radiation
- TEMPERATURE CHANGES** see under Adaptability
- TEMPERATURE CONTROL** see under Cabins; Space cabins. Also see entries under Cooling
- TEMPERATURE GRADIENT** see under Skin. Also see Body temperature gradients
- TEMPERATURE RECEPTORS** see Thermoreceptors
- TEMPERATURE REGULATION** (see also Heat exchange; Heat loss; Shivering), II: 1565; IV: 3940, 5045, 5051; V: 5423, 6016; VI: 6769, 6873, 7460; VII-X: 8950, 9036, 9101, 9107, 10858  
analysis, III: 2882; IV: 4314; VII-X: 9026  
animal experiments, III: 2882; IV: 4314  
congresses, meetings, and symposia, VII-X: 8392, 9110  
effects of:  
altitude, I: 345  
altitude acclimatization, II: 1411; III: 3179  
anoxia, I: 194, 195, 468; VII-X: 8967, 10624  
carbon dioxide, V: 5994; VI: 7970; VII-X: 8967, 9085  
clothing, IV: 4079; V: 6471; VII-X: 12773  
cold, IV: 4027; VI: 7419; VII-X: 9031, 9105, 10641  
cold acclimatization, III: 2439, 2440, 2920; IV: 3779, 3930, 4482; V: 5403, 5999, 6003; VI: 7417; VII-X: 10661, 10694, 10695, 10759, 10859  
cold climates, VI: 7406  
dehydration, VII-X: 10766  
drugs, III: 2434; IV: 3887; V: 5994; VII-X: 8991, 8992, 10664  
atropine, VI: 7878  
barbituric acid derivatives, IV: 5044  
chlorpromazine, IV: 4029, 5044  
glycine, V: 5379; VI: 7869  
Prednisone, V: 5414  
reserpine, VI: 6884  
environmental temperature, II: 1204; III: 2669



- heat, VII-X: 10664, 10714  
 heat acclimatization, III: 2457  
 humidity, VII-X: 9031  
 hypothermia, III: 2897; IV: 4448; V: 5381, 5476;  
 VI: 6921  
 physical work, VI: 7419; VII-X: 9105  
 restraint, III: 2450, 2451, 2920; V: 6135; VII-X:  
 11270  
 wind, VII-X: 9031  
 general physiological factors, III: 2882, 2897, 3481;  
 IV: 4314  
 in hibernators, IV: 4400; V: 5285  
 machine analogs, VII-X: 12638, 12773  
 race factors, IV: 4635; VII-X: 9070  
 relation to:  
 age, VI: 6879  
 body temperature, IV: 4219  
 metabolism, V: 5987, 5999, 6003; VII-X: 8969,  
 8973  
 motor activity, V: 6137  
 muscular function, IV: 4871; V: 5999, 6003  
 oxygen consumption, III: 2679; IV: 3788  
 perspiration, IV: 4454  
 somatotype, V: 5459  
 thermoreception, III: 2916; IV: 4036; VII-X: 9076  
 research, VII-X: 9022  
 reviews, IV: 4449, 4819; VII-X: 8926, 8992, 9020  
 role of:  
 adrenal glands, IV: 3946, 4564; V: 5432, 5759;  
 VII-X: 9029  
 autonomic nervous system, VI: 6878; VII-X: 8969,  
 9029  
 body fat, IV: 3769; V: 5376, 5459  
 brain activity, V: 5949; VII-X: 8973, 8976, 8999  
 brain temperature, VII-X: 8948, 8962, 9005  
 circulation, VII-X: 8954  
 endocrine system, I: 345; VII-X: 8969, 9003  
 glucose metabolism, VII-X: 10697  
 hypothalamus, V: 5438; VI: 7426; VII-X: 8949, 9015  
 nervous system activity, IV: 3946, 4036  
 peripheral circulation, VII-X: 8785, 9014  
 shivering, IV: 4028; V: 5382, 5429; VI: 7404, 7417;  
 VII-X: 8988  
 thyroid gland, IV: 4170; V: 5432, 6048; VI: 7389;  
 VII-X: 9002
- TENSION** see entries under Alveolar carbon dioxide  
 tension; Alveolar oxygen t.; Carbon dioxide t.; Oxygen t.
- TERRAMYCIN**  
 use in otitis externa, II: 1535
- TERRESTRIAL LIFE**  
 effects of space environment  
 research methods, VII-X: 8675
- TEST PILOTS**  
 attitudes, VI: 7759
- TESTIS** (see also Sex hormones)  
 effects of:  
 heat, VII-X: 10890  
 mental stress, IV: 4407  
 microwave radiation, VII-X: 11326, 11327  
 posture, V: 6165  
 sound, V: 6060  
 metabolism  
 effects of ultrasonic vibrations, VII-X: 10998,  
 10999
- TESTOSTERONE** see Sex hormones
- TESTS** see Achievement tests; Apnea test; Aptitude  
 tests; Cold pressor test; Flack test; Personality tests;  
 Psychological testing; Step test; Stipple test; Written  
 tests. Also see Tests and Test methods under objects  
 and conditions tested, e.g., Color vision, tests; Hear-  
 ing, test methods
- TETRAETHYL AMMONIUM AND DERIVATIVES**  
 effects on:  
 digestive system function, II: 1386  
 hyperoxia tolerance, IV: 4282
- TETRAETHYL PYROPHOSPHATE**  
 effects on altitude tolerance, I: 122  
 toxic effects, I: 817
- THAILAND** see under Aviation medicine
- THEPHORINE**  
 use in motion sickness, I: 156
- THERMAL COMFORT**, VII-X: 10653, 12783, 12805  
 animal experiments, VII-X: 10849  
 effects of:  
 cold acclimatization, VII-X: 10737  
 ventilated suits, VI: 7998; VII-X: 12211, 12281  
 relation to:  
 clothing, VI: 8026  
 environmental temperature, III: 2313; VII-X: 10715  
 heat acclimatization, VII-X: 10732  
 humidity, VII-X: 10715  
 wind, VII-X: 10715  
 reviews, VII-X: 10651
- THERMAL PROPERTIES** see under Anti-g suits; Body  
 fat; Body fluids; Clothing; Heated suits; Pressure suits;  
 Skin; Space suits; Tissues; Ventilated suits
- THERMAL RADIATION** (see also Caloric stimuli)  
 cause of pain, V: 6160; VII-X: 11404, 11406  
 effects on:  
 body temperature, VI: 7628  
 circulation, VII-X: 10787  
 skin, III: 2883, 3096; V: 6147, 6148, 6160; VII-X:  
 11404, 11406  
 skin temperature, VI: 7624; VII-X: 9664, 11336,  
 11339  
 measurement, VII-X: 9098  
 pathological effects, VII-X: 11405  
 protection, III: 3151; VI: 7628; VII-X: 11328, 11405,  
 12294
- THERMORECEPTION**  
 effects of:  
 cold, VII-X: 9076  
 skin temperature, VI: 7138  
 relation to:  
 perspiration, VII-X: 9670  
 temperature regulation, III: 2916; IV: 4036; VII-X:  
 9076  
 reviews, III: 2916  
 role of brain activity, VII-X: 9667  
 thresholds  
 relation to skin temperature, VII-X: 9662
- THERMORECEPTORS**  
 bibliography, V: 5708  
 physiology, II: 1565; III: 2916; IV: 5203; VII-X: 9663,  
 9666, 9667
- THIAMINE** (see also Cocarboxylase)  
 effects on:  
 altitude tolerance, I: 349  
 food intake, VI: 7467; VII-X: 9130
- THIAMINE EXCRETION**  
 effects of altitude, VII: 7314
- THIAMINE METABOLISM**  
 effects of:  
 anoxia, VII-X: 10560  
 sound, VII: 7505
- THIOCTIC ACID** see Lipoic acid
- THIOPENTAL SODIUM** see Barbituric acid derivatives
- THIRST** see Water deprivation
- THORACIC PRESSURE** (see also Intrapulmonary pres-  
 sure)  
 effects of respiration, VII-X: 8796
- THORACIC SURGERY**  
 effects on flying ability, VII-X: 11698
- THROMBOCYTES** (see also Blood coagulation)  
 effects of:  
 anoxia, IV: 4465

- physical work, IV: 4967  
posture, IV: 4967
- THYMUS**  
effects of:  
diurnal cycle, VII-X: 8589  
illumination, VII-X: 8589  
role in anoxia, I: 491; III: 2936
- THYROID GLAND**  
effects of:  
cold, III: 2645, 2646; IV: 4038, 4049, 4197, 4443, 5007; V: 5974, 5975, 5980, 6041, 6056; VI: 7422; VII-X: 10788, 11078  
environmental temperature, VI: 7416, 7440; VII-X: 10886  
food intake, VII-X: 11078  
illumination, VII-X: 10886  
physical work, VII-X: 11078, 11130  
thyrotropin, IV: 4197  
function tests, VII-X: 11974  
metabolism  
effects of:  
heat acclimatization, IV: 3986; VI: 7407  
restraint, VI: 7617  
role in:  
altitude acclimatization, I: 866  
ascorbic acid metabolism, III: 3193  
cold acclimatization, IV: 4048; V: 6044; VI: 7450; VII-X: 10687, 10757, 10793  
cold tolerance, VII-X: 10658, 10723  
heat tolerance, III: 2435  
hibernation, III: 2646  
hyperoxia tolerance, VII-X: 8896  
temperature regulation, IV: 4170; V: 5432, 6048; VI: 7389; VII-X: 9002
- THYROTROPIN**  
effects on thyroid gland, IV: 4197
- THYROXIN EXCRETION**  
effects of cold, VI: 7414
- TILTING** (see also Postural change)  
cause of eye movements, II: 1768, 1769; VII-X: 11465  
effects on:  
acceleration tolerance, III: 2785  
blood pressure, VII-X: 11435  
catecholamine excretion, VII-X: 10185  
cerebrospinal fluid pressure, VII-X: 11435  
circulation, III: 2716, 2784  
pulmonary circulation, VII-X: 11456  
heart function, VII-X: 10119  
sound localization, V: 5655  
spatial orientation, II: 1402, 1404; III: 2594, 2595, 2596; V: 5635, 5801; VII-X: 9541, 9542
- TIME DILATATION**  
in space flight, V: 5262, 5263, 5270, 5273; VI: 6777; VII-X: 8574, 8595
- TIME ESTIMATION**  
effect of:  
acceleration, V: 5787  
anxiety, VII-X: 11179  
drugs, VII-X: 9161  
illumination, V: 5706  
mental stress, VII-X: 11182  
noise, IV: 4417, 4970; V: 5706; VI: 7501; VII-X: 10993, 10994  
positive acceleration, VII-X: 10066  
sensory deprivation, VII-X: 11260  
effects on biological rhythms, IV: 4105  
psychological factors, VII-X: 11182  
relation to:  
age, VI: 7778  
interest, VII-X: 8600  
role of autonomic nervous system, VII-X: 9161  
test methods, VII-X: 9696
- TIME RESERVE**, I: 436, 450, 587; II: 2043, 2137; III: 3127, 3500; V: 5942; VII-X: 10312, 10327  
effects of:  
altitude, VI: 7281  
polycythemia, VI: 4622
- TISSUE EMBOLISM**  
caused by accidents, VII-X: 12395
- TISSUE EMPHYSEMA**  
caused by altitude, VII-X: 10332, 11831, 11839  
gas composition, VII-X: 11839
- TISSUE FLUIDS**  
distribution  
effects of anoxia, II: 1718
- TISSUE PRESSURE**  
effects of:  
explosive decompression, I: 530; II: 1654  
pressure breathing, IV: 4117
- TISSUE TRAUMA**  
effects on lipid metabolism, II: 1992, 1993; III: 3201, 3202, 3203, 3359  
relation to pain, III: 3095
- TISSUES** (see also Bone; Bone marrow; Muscle tissue; Myocardial tissue)  
carbon dioxide tension  
effects of:  
carbon dioxide, VI: 7972  
hyperoxia, II: 1698  
composition  
effects of altitude, I: 278  
effects of:  
altitude, V: 5828  
altitude acclimatization, VII-X: 10311  
auditory stimuli, VII-X: 11034  
cosmic rays, VII-X: 11320, 11349, 11373  
sound, III: 2762; IV: 5150  
vibration, I: 377  
gas bubble formation, IV: 4362, 5112; V: 5828  
metabolism  
effects of:  
altitude, III: 2467  
altitude acclimatization, II: 1241; III: 2593; V: 5898; VII-X: 10377  
anoxia, V: 5910; VII-X: 8914  
cold, IV: 4410; V: 6050; VII-X: 10777  
cold acclimatization, II: 1241; III: 2593  
heat, IV: 4410; VII-X: 10777  
hypercapnia, VII-X: 8914  
hypocapnia, VII-X: 8914  
hypothermia, V: 5453; VII-X: 9004  
nitrogen content  
measurement, VII-X: 8739  
oxygen tension, VI: 4906  
effects of:  
hypothermia, VII-X: 8968  
oxygen breathing, V: 5342  
measurement, IV: 4906; V: 5357  
physical properties, II: 1649  
thermal properties, III: 3096  
trauma see Tissue trauma
- TOBACCO** (Smoking) (see also Nicotine)  
effects on:  
ballistocardiogram, V: 6446  
blood lipid content, VII-X: 8773  
blood pressure, VI: 7979  
carbon monoxide content of blood, VI: 7978  
electrocardiogram, III: 2344  
heart function, VI: 7977  
physical fitness, I: 322; VII-X: 12162  
respiration, VII-X: 12165  
visual perception, I: 339  
general physiological effects, VII-X: 12162  
role in carbon monoxide poisoning, III: 2740
- TOCOPHEROL** see Vitamin E
- TOILETS** see entries under Sanitary facilities

- TOLERANCE** *see under* Acceleration (Negative); Acceleration (Positive); Acceleration (Transversal); Cold water immersion; Cosmic rays; Ejection from aircraft; Jet plane noise; Poisonous substances. *Also see* Acceleration tolerance; Alcohol t.; Altitude t.; Anaphylactic t.; Anoxia t.; Arsenite t.; Blast t.; Carbon dioxide t.; Carbon monoxide t.; Cold t.; Explosive decompression t.; Explosive recompression t.; Glucose t.; Heat t.; Hypercapnia t.; Hyperoxia t.; Hyperthermia t.; Hypocapnia t.; Hypothermia t.; Impact t.; Microwave radiation t.; Noise t.; Nuclear radiation t.; Oscillation t.; Oxygen breathing t.; Ozone t.; Pressure breathing t.; Radiation t.; Restraint t.; Rotation t.; Sensory deprivation t.; Sleep deprivation t.; Social isolation t.; Starvation t.; Stress t.; Tumbling t.; Vibration t.; Wind blast t.; X-ray t.
- TONUS** *see* Muscular tonus; Vascular tonus
- TOOTH FILLINGS**, I: 481
- TOOTHACHE** *see* Dental disturbances
- TOPOGRAPHICAL ORIENTATION**, I: 252, 254; IV: 3972  
physical factors, IV: 4944
- TORSO**  
mechanical properties, V: 5794
- TOUCH** *see* Tactile perception
- TOURNIQUETS**  
effects on vascular tonus, VII-X: 10242
- TOXIC EFFECTS** *see under* Aircraft brighteners; Boranes; Carbon tetrachloride; Clothing; Deodorants; Dichloroethane; Engine oils; Fire extinguishing agents; Fuels; Furfural; Gasoline; Hydraulic fluid; Hydrazine; Hydrogen fluoride; Hydrogen peroxide; Jet fuels; Kerosene; Lubricants; Methyl bromide; Morphine; Organic solvents; Ozone; Potassium compounds; Rocket propellants; Sulfonamide compounds; Tetraethyl pyrophosphate; Tricresylphosphate. *Also see* Poisonous substances
- TOXICITY** *see under* Materials; Poisonous substances
- TRACKING** *see* Compensatory tracking; Pursuit t.; Rotary pursuit t.; Target t.
- TRAFFIC CONTROL OPERATION**  
effectiveness, III: 3177; VII-X: 12586  
effects on vision, VI: 8170  
fatigue, III: 3460; VI: 8170  
role of communication, VI: 8176  
tests, V: 6618; VI: 8184; VII-X: 11705, 12580  
training devices, V: 6681
- TRAFFIC CONTROL OPERATORS**  
attitudes, II: 1823; III: 3304  
duties, VII-X: 11635  
occupational hazards, VII-X: 11936  
performance, III: 3304, 3460; IV: 3983; V: 6617, VII-X: 11705, 11707  
effects of work load, VII-X: 11706  
physical factors, VII-X: 11706  
selection, I: 74; III: 2816; VII-X: 11605  
training, III: 2346, 2347; IV: 4354, 4619; V: 6681; VII-X: 11635, 11650  
prediction of success, VII-X: 11605
- TRAFFIC CONTROL SYSTEMS**, IV: 4045; VI: 8164, 8183; VII-X: 12571  
human engineering, II: 1248, 2152; IV: 4423; V: 6610, 6612, 6616, 6617, 6624; VII-X: 11707
- TRAINEES** *see* Pilot candidates
- TRAINING** (*see also* Adjustment to training; Bailout; Instrument flight t.; Learning; Parachute t.; Physical t.; Practice; Psychomotor t.; Reading t.; Subgravity t.; Survival t.; Verbal pretraining; Vestibular t. *See also* Training *under* the various personnel categories, e.g., Pilots, training. *See also* items *under* Retention of training; Training methods; and Transfer of training)  
effects on:  
arm movements, VII-X: 9146  
depth perception, IV: 4221  
dynamic visual acuity, III: 3126; IV: 3833, 4565  
equilibrium, VII-X: 9452  
form perception, V: 5613  
hypocapnia tolerance, VI: 6810; VII-X: 10534  
peripheral vision, IV: 3963  
psychomotor performance, IV: 4603; V: 5682; VI: 7100; VII-X: 9559, 9566, 9590  
reaction time, III: 3163  
spatial orientation, IV: 5144  
visual field, V: 5496  
visual perception, VII-X: 9335  
work capacity, VII-X: 11095  
general psychological effects, III: 3568  
handbooks and treatises, II: 1832  
relation to mental ability, III: 3548  
time factors, IV: 3732, 4725
- TRAINING DEVICES** (*see also under* Aerial gunnery; Aircraft landings; Bailout; Compensatory tracking; Ejection from aircraft; Instrument flight; Jet plane piloting; Navigation; Night vision; Piloting; Psychomotor performance; Pursuit tracking; Radar operation; Rotary pursuit tracking; Target tracking; Traffic control operation. *See also* Flight simulators; Motion pictures as training devices; Training planes; *see also* Use of motion pictures *under* Pilots, training)  
effectiveness, IV: 4689  
human engineering, II: 1831, 1834
- TRAINING METHODS** *see under* Ejection from aircraft; High altitude flight; Instrument flight; Night flying; Night vision; Pursuit tracking; Survival; Target tracking
- TRAINING OFFICERS** (*see also* Instructors)  
duties, IV: 4161
- TRAINING PLANES**, IV: 4651; VI: 7673, 7677, 7678, 7679, 7688, 7696, 7702, 7709
- TRANQUILIZERS** (*see also* Meprobamate)  
effects on motor activity, VII-X: 10618
- TRANSDUCERS** *see* Pressure transducers
- TRANSFER OF INFORMATION** (*see also* Messages), I: 711, 712, 713, 714; II: 1397, 2152; V: 5584
- TRANSFER OF TRAINING** (*see also under* Learning; Mental performance; Peripheral vision; Psychomotor performance)  
effects of X-rays, VII-X: 11361  
effects on electromyogram, VI: 7106
- TRANSFUSION** *see* Blood transfusion
- TRANSPORTABILITY OF PATIENTS** *see* Air transportation of patients
- TRANSPORTATION** *see* Air transportation of patients; Medical personnel, air transportation; Passenger transportation; Stretchers
- TRANSVERSAL ACCELERATION** *see* Acceleration (Transversal)
- TRAUMA** *see* Injuries
- TRAUMATIC SHOCK**  
effects of altitude, VI: 7862
- TREMOR** *see* Arm tremor; Eye tremor; Finger tremor
- TRICRESYLPHOSPHATE**  
toxic effects, I: 525
- TRIFLUOPERAZINE**  
use in motion sickness, VII-X: 11982
- TRILAFON** *see* Perphenazine
- TRIMETON**  
use in motion sickness, I: 231, 233, 235, 236; II: 1226
- TROPICS** *see under* Rescue; Survival
- TUBA AUDITIVA** *see* Middle ear
- TUBERCULOSIS**, IV: 4665  
effects on air transportability, V: 6394  
incidence in aviators, IV: 4131; V: 6342; VII-X: 11896  
relation to blood lipase content, V: 6342
- TUMBLING** (*see also* Impact; Spinning)  
effects on:  
adrenal glands, V: 5813

- blood steroid content, V: 5799  
 brain metabolism, VII-X: 10143  
 circulation, IV: 4095  
 electrocardiogram, IV: 5149  
 enzyme activity, VII-X: 10143  
 sulfhydryl metabolism, III: 2458; IV: 3802  
 general physiological effects, I: 323
- TUMBLING TOLERANCE**  
 effects of heat, II: 1889
- TUMORS**  
 effects of cold acclimatization, VII-X: 10814  
 relation to flight duty, V: 6344
- TURBOJET ENGINES**  
 hazards, II: 1119, 1376, 1786; III: 2517; IV: 4682
- TYMPANIC CAVITY** *see* Middle ear
- TYMPANIC MUSCLE REFLEXES** (*see also* Auditory adaptation)  
 caused by:  
   noise, VII-X: 9369  
   sound, IV: 5159; VI: 7031, 7032, VII-X: 9401, 9402, 9416, 9446, 9448  
 effects on auditory thresholds, VII-X: 9416  
 research methods, VII-X: 9403
- TYMPANIC MUSCLES**  
 physiology, IV: 5156
- TYPE** *see* Blood types; Somatotype
- U.S.A.** *see* United States
- ULCERS** *see* Peptic ulcer
- ULTRAHIGH FREQUENCY RADIATION** *see* Microwave radiation
- ULTRASONIC VIBRATIONS**  
 effects on:  
   blood, VII-X: 10978, 11048  
   blood cells, I: 417; II: 1171, 1172, 1498; III: 2829; VII-X: 10990, 10991  
   blood cholinesterase content, VII-X: 10997  
   body temperature gradient, VII-X: 11006  
   bone, II: 1865  
   brain, II: 1566, 1865; III: 2829  
   brain metabolism, VII-X: 11047  
   cell division, VII-X: 11018  
   central nervous system, III: 2761  
   circulation, II: 1884; III: 2829  
   cochlea, IV: 3737  
   ear, II: 1865  
   electromyogram, III: 2762  
   endocrine system, II: 1174; V: 6086  
   enzyme activity, VII: 7504  
   eye, II: 1706  
   hearing, II: 1304; III: 2663; V: 5546  
   liver, VI: 7478  
   nerves, II: 1807  
   nucleic acid metabolism, VII-X: 10998, 10999, 11045  
   skin, VI: 7480; VII-X: 10931, 11045  
   teeth, VII-X: 11001  
   testis metabolism, VII-X: 10998, 10999  
 general physiological effects, I: 416, 687, 688; II: 1127, 2198, 2211; III: 2552, 2711, 2846, 3629; IV: 3982; V: 6088; VI: 7500, 7493; VII-X: 9989  
 test methods, III: 3260  
 tests, III: 2526  
 pathological effects, II: 1173  
 reduction, VI: 7493
- ULTRAVIOLET RAYS**  
 detection, VI: 8002  
 effects on:  
   dark adaptation, II: 1900; IV: 5182; VII-X: 11427  
   eye, VII-X: 10412  
   skin, III: 3095; VI: 7619; VII-X: 11404  
 general physiological effects, I: 216; II: 1841  
 bibliography, VII-X: 11298  
   reviews, VII-X: 11298  
   hazards, III: 2443; VII-X: 11414  
   relation to visual perception, II: 1900, 2221
- UNCONSCIOUSNESS** *see* Blackout; Fainting
- UNDERWATER BREATHING APPARATUS** *see* Breathing apparatus (Underwater)
- UNDERWEAR**  
 effects on:  
   cold tolerance, VII-X: 12262, 12282  
   heat tolerance, VII-X: 10920, 12282
- UNITED STATES** *see under* Aerospace medicine (by country); Aviation medicine; Balloon flight (by country); Military medicine; Space flight; Space medicine
- UPPER ATMOSPHERE**  
 analysis, VII-X: 8694  
 microorganisms, III: 2767, 2768, 3550; VI: 6783; VII-X: 8695  
 research, I: 649; II: 2104, III: 2865; IV: 4740, 5105; V: 5222; VI: 6788; VII-X: 8334, 9937  
 research methods, III: 2868
- URETHANE**  
 effects on anoxia tolerance, VI: 7868
- URINARY SYSTEM** *see* Kidney; Micturition
- URINE** (*see also* Micturition)  
 composition  
 effects of:  
   acceleration, II: 1881  
   altitude, VII-X: 9930, 10350, 10395, 10438  
   altitude acclimatization, II: 974; III: 3415, 3569; VI: 7185; VII-X: 10296, 10351  
   anoxia, II: 974; IV: 4980, 4981, 4982; V: 5948  
   clothing, VII-X: 9119  
   cold, III: 2959; IV: 4443; VII-X: 10351  
   cold acclimatization, VII-X: 10395, 10824  
   environmental temperature, IV: 5197; VI: 7185; VII-X: 9930, 10350  
   fatigue, VI: 7595; VII-X: 11141  
   flight duty, V: 5762; VI: 7180  
   heat, III: 2569, 2906, 2989; IV: 4440; VII-X: 10351, 10805  
   heat acclimatization, VII-X: 10395, 10823, 10824  
   humidity, VII-X: 9119  
   hypothermia, V: 5466; VII-X: 9089  
   negative pressure breathing, VII-X: 8845  
   physical work, III: 2722, 3229; V: 6108; VII-X: 11109  
   posture, IV: 3935; VII-X: 11442, 11443  
   sensory deprivation, IV: 4690  
   skin temperature, VII-X: 9119  
   stress, VI: 7184; VII-X: 9824, 9825  
   transversal acceleration, VII-X: 10016  
   water intake, VII-X: 8629  
 relation to:  
   annual cycle, VII-X: 8581, 10805  
   dehydration, VII-X: 9118  
   diurnal cycle, V: 5260; VII-X: 10805  
   sex factors, V: 5260  
 disposal, III: 3146, VII-X: 12895
- pH**  
 effects of hyperventilation, III: 3137
- protein content**  
 effects of:  
   physical work, VII-X: 11118  
   posture, VII-X: 11118
- sodium-potassium ratio**  
 effects of:  
   positive acceleration, VII-X: 10006  
   posture, VII-X: 11463  
 water recovery, VII-X: 12886, 12887, 12897, 12899, 12901
- URINE EXTRACT**  
 effects on hematopoiesis, VII-X: 10438
- UROGENITAL SYSTEM** *see* Kidney; Reproductive system

## UROPEPSIN EXCRETION

## effects of:

- fatigue, VI: 7597
- flight duty, VI: 7171
- physical work, VII-X: 11134

USEFUL CONSCIOUSNESS see Time reserve

## UTERUS

- effects of anoxia, I: 859

VACCINATION see Smallpox vaccinationVALSALVA MANEUVER (see also Anti-g procedures)

## effects on:

- blood pressure, II: 1106, 1965
- circulation, VII-X: 8777
- electrocardiogram, II: 1210
- middle ear, II: 1702

- relation to aerotitis media, VII-X: 11977

VALVES see Oxygen valvesVAN ALLEN BELT see Radiation belts

## VASCULAR TONUS

## effects of:

- environmental temperature, VII-X: 10895
- hypothermia, VII-X: 9053
- positive acceleration, VI: 7215
- tourniquets, VII-X: 10242
- effects on gas bubble formation in blood, VII-X: 10441

VASOCONSTRICTOR EFFECTS see under Atropine;

## Ephedrine

## VASOPRESSIN (Pitressin)

## effects on:

- anoxia tolerance, I: 608
- circulation, I: 608
- electrocardiogram, IV: 3699
- kidney function, VII-X: 11428
- pathological effects, II: 1173

## VECTORCARDIOGRAM

- abnormalities, VII-X: 11876, 11926

## effects of:

- acceleration, VII-X: 10025
- altitude acclimatization, VII-X: 10410, 10411
- physical work, VII-X: 11087
- positive acceleration, VI: 7199
- posture, VII-X: 11461, 11480

## VECTORCARDIOGRAPHY, VII-X: 12083

VEINS see Blood vessels; PhlebitisVELOCITY DISCRIMINATION (see also Motion percep-

## tion), V: 5626, 6618; VII-X: 9202, 9206

## effects of:

- light stimuli, III: 2548
- noise, V: 7501; VII-X: 10993
- rotation, VII-X: 10084
- sensory deprivation, VII-X: 11202
- visual noise, VII-X: 9517
- physical factors, IV: 3901, 3902, 4518; V: 5651; VII-X: 9328, 9466
- relation to dynamic visual acuity, VI: 7062
- test methods, II: 1163; V: 5648; VII-X: 9204
- tests, II: 1472, 1473; III: 2547; IV: 4047, 4637; VI: 7066, 7082; VII-X: 9205, 9248, 9498
- time factors, IV: 3902, 4518; V: 5626; VI: 7065

VENOUS INFUSIONS (see also Blood transfusions)

- in flight, VI: 7887

VENOUS PRESSURE see Blood pressure

## VENTILATED SUITS, IV: 4132, 4626, 4627; V: 6488; VII-X: 10654, 12176, 12193, 12194, 12195, 12309

## effects on:

- heat tolerance, VII-X: 10756, 12257
- thermal comfort, VI: 7998; VII-X: 12211, 12281
- water exchange, VI: 8006
- evaluation, V: 6487, 6492
- thermal properties, VII-X: 12267

VENTILATION see under Cabins

## VENUS (Planet)

- atmosphere, V: 5224, 5300, 5302; VI: 6785
- environment, VII-X: 8710
- expeditions, V: 5210; VII-X: 12476
- life conditions, I: 810; V: 5299; VI: 6790; VII-X: 8671, 8696, 8704

## VERATRINE

- effects on muscular function, II: 1490

## VERBAL PRETRAINING

- effects on psychomotor performance, II: 1764; V: 5664

## VERNIER ACUITY, II: 1714; IV: 4523

VERONAL see Barbituric acid derivativesVERTEBRAE see Spinal column

## VERTICAL ACCELERATORS, VII-X: 12752

VERTIGO see Spatial orientation, disturbancesVESSELS see Blood vesselsVESTIBULAR AREA see under Cerebral cortex

## VESTIBULAR DISTURBANCES

- caused by intestinal diseases, VI: 7834
- relation to flying ability, VII-X: 11914

VESTIBULAR HABITUATION (see also Rotation adapta-

## tion), VII-X: 9459

## VESTIBULAR REFLEXES

- role of cerebellum, VII-X: 9652

VESTIBULAR STIMULATION (see also Rotation)

## cause of:

- nystagmus, IV: 3785; VI: 7073, 7078; VII-X: 9518, 9526, 9536, 9557
- visual illusions, VII-X: 9507

- caused by Coriolis effect, VII-X: 9512

## effects on:

- aerial gunnery, VI: 7097
- auditory thresholds, V: 5793; VII-X: 9368
- blood glucose content, IV: 4900
- blood plasmalogen content, IV: 4644
- blood pressure, VI: 7047
- brain activity, II: 1669
- circulation, VII-X: 11866
- electrical potentials of visual cortex, VII-X: 9158
- electrocardiogram, III: 3488
- electroencephalogram, II: 2299; III: 3687; VII-X: 9167
- electromyogram, VII-X: 9160
- galvanic skin response, IV: 3811, 4818
- psychomotor performance, VI: 7097
- pulse rate, VII-X: 8791
- respiration, VI: 7047
- skin temperature, VII-X: 9461
- spatial orientation, III: 2975; VII-X: 9556
- visual accommodation, III: 2993
- visual perception, VII-X: 9354
- general physiological effects, IV: 3744
- tests, VII-X: 9524

## VESTIBULAR TRAINING, VII-X: 9468

VESTIBULE see Labyrinth

## VETERINARIANS

- duties, IV: 5118; VI: 7753; VII-X: 11745

VIBRATION (see also Bone conduction; Oscillation;

## Sound; Ultrasonic vibrations)

adaptation see Vibration adaptation

## cause of:

- pain, VII-X: 10204
- passive body movements, VII-X: 10155, 10953, 10954, 10955, 10957, 10961, 10980, 10981, 11041, 11053
- visceral displacement, VII-X: 10155, 10955
- conduction in body, VII-X: 10987
- control, VII-X: 11009

## effects on:

- auditory perception, VII-X: 11013
- blood, VI: 7487
- blood cells, VII-X: 11014
- blood pressure, VII-X: 10989

- body temperature, VII-X: 9069  
 bone, II: 2089, 2090  
 circulation, I: 450; II: 1505, 1506; V: 6071; VI: 7498; VII-X: 11025  
 digestive system function, VI: 7527  
 electrocardiogram, VII-X: 10944  
 electroencephalogram, VII-X: 10001  
 electromyogram, VII-X: 10979  
 endocrine system, II: 1176  
 enzyme activity, VII-X: 9843  
 equilibrium, VII-X: 10952, 11039  
 finger tremor, IV: 4551  
 hearing, VII-X: 11049  
 labyrinth, VII-X: 11013, 11049  
 metabolism, VII-X: 10949  
 muscular strength, VI: 7498  
 neuromuscular performance, III: 3105; VII-X: 11015, 11039  
 passenger comfort, V: 6583  
 psychomotor performance, VI: 7524; VII-X: 10969, 11039  
 reaction time, VI: 7494  
 reflexes, VII-X: 11050  
   conditioned reflexes, VII-X: 10983, 11003  
   patellar reflex, III: 3405  
   postural reflexes, VII-X: 10979  
 respiration, VI: 7508; VII-X: 10968  
 skin, II: 1649, 2089, 2090  
 skull, III: 2754  
 speaking, VII-X: 9668, 10935  
 steroid excretion, VII-X: 11014  
 tissues, I: 377  
 vigilance, VII-X: 9796  
 visual acuity, III: 3105; IV: 4551; VII-X: 11039  
 visual perception, III: 3405; VII-X: 11015  
 vitamin metabolism, VII-X: 11004  
 general physiological effects, I: 206, 377, 379, 384, 385, 679; II: 1175, 1176; III: 2847, 3065, 3105; IV: 3982, 4175; V: 6076; VI: 7484, 7485, 7492, 7528; VII-X: 10930, 10952, 10956, 10972, 11011, 11026, 11036, 11037, 11041  
   bibliography, VII-X: 11038  
   research methods, IV: 4177, VII-X: 10987, 12752  
   reviews, III: 2552; V: 5707  
 general psychological effects, VI: 7492; VII-X: 10972, 11036  
   bibliography, VII-X: 11038  
 handbooks and treatises, VII-X: 11009  
 in space vehicles, VII-X: 10970  
 pathological effects, IV: 4175; V: 6089; VII-X: 10963, 11037, 11966  
   bibliography, VII-X: 11038  
 reduction, II: 1735; IV: 4752; VII-X: 10956  
 tolerance *see* Vibration tolerance  
**VIBRATION ADAPTATION**, VII-X: 10983  
**VIBRATION PERCEPTION**, V: 5707; VII-X: 9657  
   measurement, V: 6068  
   relation to age, VII-X: 9669  
   thresholds, VII-X: 9669  
**VIBRATION TOLERANCE**, IV: 4217; VI: 7481, 7524; VII-X: 10174, 10954, 10970, 11011, 11060  
   animal experiments, VII-X: 11036, 11037  
   effects of caffeine, VII-X: 11050  
   relation to age, VII-X: 11037  
   sex factors, VII-X: 11037  
   test methods, II: 1934  
**VIGILANCE** (*see also* Alertness), IV: 4033; VII-X: 9784  
   analysis, VII-X: 9778, 9791  
   behavior, VII-X: 9776  
   effects of:  
     auditory signals, VII-X: 9803  
     climate, II: 1922  
     environmental temperature, II: 1922  
     fatigue, V: 6112; VI: 7592  
     heat, VII-X: 9796, 10674  
     intermittent noise, VII-X: 9783  
     ionized atmosphere, VII-X: 11474  
     noise, III: 2537; VI: 7502, 7503; VII-X: 9796, 11035  
     practice, III: 2537; VII-X: 9779  
     sleep deprivation, VII-X: 11174  
     task complexity, VI: 7166; VII-X: 9774, 9785  
     vibration, VII-X: 9796  
     warm air breathing, VII-X: 9782  
     work load, VII-X: 9804  
   effects on:  
     psychomotor performance, III: 2853  
     reaction time, III: 3539  
     visual perception, VI: 6962  
   fatigue, I: 352; II: 2255, 2256; III: 2532; IV: 3767; V: 5709; VII-X: 9790, 9806, 11147, 11150, 11162  
     physical factors, VII-X: 9799  
     general physiological factors, VII-X: 9780, 9890  
     in airplane flight, VII-X: 12581  
     measurement, V: 5709; VII-X: 9721  
     psychological factors, I: 188; II: 1024; V: 5713; VII-X: 9780, 9785, 9790  
     reaction time, VII-X: 9794  
   relation to:  
     conditioned reflexes, I: 188  
     galvanic skin response, VII-X: 9783, 9805  
     mental ability, VII-X: 9754  
   test methods, VII-X: 9780  
   tests, VI: 7164, 7165; VII-X: 9720, 9775, 9777, 9781, 9792, 9795, 9797  
   time factors, VI: 7166; VII-X: 9804  
**VIRUSES** *see* Influenza A virus  
**VISCERAL DISPLACEMENT** (*see also* Spleen, displacement; Body movements (passive))  
   caused by:  
     acceleration, V: 5789; VII-X: 10155  
     impact, VII-X: 10155  
     transversal acceleration, VII-X: 10096  
     vibration, VII-X: 10155, 10955  
**VISCOSITY** *see under* Blood  
**VISIBILITY** *see under* Colors; Instrument panels; Signal lights; Signal lights (Flashing); Targets  
**VISION** (*see also* Binocular vision; Color v.; Eye; Foveal v.; Monocular v.; Night v.; Peripheral v.; Retinal adaptation; Visual accommodation; Visual acuity; Visual field; Visual perception)  
   analysis, VII-X: 9359  
   bibliography, VI: 6948  
   disturbances, II: 1870  
   effects of:  
     jet plane flight, VII-X: 9932  
     traffic control operation, VI: 8170  
   test methods (*see also* Refractometry), I: 20, 94, 136, 152, 289; II: 2170; IV: 4188; V: 5493; VI: 7899  
**VISORS**, VII-X: 12192  
   evaluation, V: 6462  
   optical properties, II: 1460  
**VISUAL ACCOMMODATION** (*see also* Ametropia; Emmetropia; Myopia; Night myopia; Space myopia)  
   effects of:  
     altitude, IV: 3904  
     empty visual field, IV: 4351, V: 5490, 5543; VI: 7012  
     fatigue, VII-X: 9319  
     flight duty, VI: 7181  
     illumination, V: 5528, VII-X: 9184, 9185  
     quinine, II: 1245  
     radar operation, VII-X: 12588  
     vestibular stimulation, III: 2993

- visual cues, III: 3636, 3638; VII-X: 9213, 9295, 12607
- effects on electro-oculogram, VI: 6953
- follow-up studies, VII-X: 11776
- relation to:
- age, I: 258; V: 6284
  - depth perception, VII-X: 9500
  - mental ability, I: 258
  - night vision, II: 1680
- test methods, III: 3637; VI: 7901; VII-X: 9330
- tests, I: 885
- VISUAL ACUITY** (see also Ametropia; Dynamic visual acuity; Vernier acuity), II: 1894; V: 5506; VI: 6972
- effects of:
- acceleration, V: 5811
  - auditory stimuli, IV: 4884
  - eye movements, VII-X: 9266
  - illumination, I: 514; II: 2298; IV: 3825, 4069; VII-X: 9318
  - instrumental magnification, III: 3007
  - intermittent light, VII-X: 9316
  - ionizing radiations, VII-X: 11296
  - noise, IV: 4551
  - optical filters, I: 894
  - oxygen breathing, VII-X: 9305
  - positive acceleration, VII-X: 10065
  - subgravity, VII-X: 10264
  - vibration, III: 3105; IV: 4551; VII-X: 11039
  - X-rays, VII-X: 11362
- in binocular vision, III: 3257
- relation to:
- age, II: 2298; VII-X: 9264, 11763, 11783
  - color vision, II: 1893; VI: 6956; VII-X: 9200, 9299
  - dark adaptation, I: 294; II: 1157; III: 2660; IV: 4055
  - depth perception, III: 2979; IV: 5047
  - eye tremor, II: 1987; III: 3368; VI: 6984
  - night vision, IV: 4731
  - ocular dominance, VII-X: 9227
  - personality, IV: 4046
  - pupil size, III: 2340; VII-X: 9211
  - retinal adaptation, III: 2340, 2546; VI: 6956
- test methods, II: 1067, 1468, 2201; III: 2815, 3174; IV: 4069, 4653; VI: 7904
- tests, II: 1123, 1310, 1714; III: 3125; IV: 3722; VII-X: 9318
- time factors, I: 514
- VISUAL AFTERIMAGES**, VI: 6993; VII-X: 9353
- effects of:
- altitude, VI: 7320
  - fatigue, VI: 7594
  - flight duty, VII-X: 10000
- relation to size perception, VII-X: 9551
- VISUAL CORTEX**
- electrical potentials
- effects of:
- light stimuli, VII-X: 9158, 9315
  - vestibular stimulation, VII-X: 9158
- VISUAL CUES**
- effects on:
- depth perception, III: 2579
  - psychomotor performance, III: 2778; IV: 4223, 4342, 4475
  - spatial orientation, VII-X: 9496
  - speech intelligibility, IV: 4561; V: 5529
  - target identification, V: 5511
  - visual accommodation, III: 3636, 3638; VII-X: 9213, 9295, 12607
- use in:
- aircraft landings, IV: 4224; V: 6600, 6611; VII-X: 12564
  - piloting, IV: 4223
- VISUAL DEPRIVATION**
- effects on:
- neuromuscular performance, VII-X: 11213
  - spatial orientation, VII-X: 11201
  - visual perception, VII-X: 11213, 11239
- VISUAL DISPLAYS** (see also Charts; Printed words), II: 1994; VII-X: 12551
- effects on:
- decision making performance, VII-X: 9700
  - learning, V: 5711
  - spatial orientation, III: 2905
- interpretation (see also Aerial photointerpretation), II: 1027, 1363, 1484; III: 3111, 3112, 3113; IV: 3876, 4153, 4293; V: 5507, 5514, 5612, 6632, 6666; VII-X: 9262, 9293, 9348, 9508, 12604
- effects of visual noise, IV: 4812
- eye movements, VI: 6990
- relation to:
- age, V: 6286
  - visual field, VII-X: 9360
- motion estimation, IV: 3873
- position estimation, IV: 3755
- relation to control levers, III: 2523; IV: 4267
- use in:
- piloting, III: 2739, 2950, 3387; V: 6637; VII-X: 12587, 12622, 12645
  - simulated airplane flight, VII-X: 12756
- VISUAL FACTORS** see under Motion sickness
- VISUAL FATIGUE**, I: 201; II: 1049; III: 2466, 2470
- effects on brightness discrimination, VII-X: 9361
- in radar operation, V: 6597, 6598; VII-X: 12556
- prevention, VII-X: 11143
- VISUAL FIELD** (see also Empty visual field; Field of vision under Airplane flight; Prone position flight)
- effects of:
- oxygen breathing, VII-X: 9305
  - training, V: 5496
- measurement, II: 1005, 1006; IV: 3766
- relation to interpretation of visual displays, VII-X: 9360
- VISUAL FIXATION**
- effects on nystagmus, VII-X: 9483
- VISUAL FLIGHT**, I: 325; II: 2176
- learning, IV: 4855
- VISUAL ILLUSIONS** (Autokinetic phenomenon, Oculogravic illusion, Oculogyral illusion, Optical illusions) (see also Phosphenes; Visual afterimages), I: 410, 572, 716, 759, 783; II: 1482, 1585, 1614; III: 2700, 2905, 3123, 3195, 3384; IV: 4066; V: 5502; VI: 7056, 7072; VII-X: 9491, 9525
- cause of accidents, II: 1251; III: 3422; VII-X: 12594
- caused by:
- acceleration, I: 251, 408, 409, 410; IV: 3884; V: 5615; VII-X: 9472, 9479
  - continuous rotation, VII-X: 9507
  - empty visual field, VII-X: 11209
  - rotation, I: 99, 253, 407, 424, 425, 616, 620; II: 1500, 1501, 1502, 1529, 1877; III: 2840, 2851, 2931; V: 5802; VII-X: 9506, 9557, 10079
  - sensory deprivation, VI: 7611; VII-X: 11260
  - social isolation, VII-X: 11209, 11260
  - subgravity, I: 369; VII-X: 9497
  - vestibular stimulation, VII-X: 9507
- effects of:
- acceleration, V: 5791
  - auditory stimuli, II: 2119, VII-X: 9533
  - illumination, II: 2014
  - effects on spatial orientation, VII-X: 9479
  - general physiological factors, VI: 7057
  - in color vision, IV: 4741
  - in piloting, IV: 4501
- relation to:
- fatigue, II: 1759
  - nystagmus, V: 5627; VI: 7219; VII-X: 9474

- test methods, VII-X: 9532  
**VISUAL LANDINGS**, V: 6608  
**VISUAL NOISE**  
 effects on:  
 form perception, V: 5621  
 interpretation of visual displays, IV: 4812  
 pattern discrimination, V: 5512  
 psychomotor performance, V: 6599; VI: 7101  
 target tracking, VII-X: 9602  
 velocity discrimination, VII-X: 9517  
 visual perception, VII-X: 9302  
**VISUAL PERCEPTION** (see also Brightness discrimination; Color vision; Contour perception; Depth perception; Flicker fusion frequency; Form perception; Foveal vision; Motion perception; Pattern discrimination; Peripheral vision; Size perception; Velocity discrimination; Visual afterimages; Visual fatigue, Visual illusions. See also subdivision Visual requirements. See also under Moving objects), I: 20, 246, VII-X: 9330  
 bibliography, I: 877, VI: 6948  
 depth of focus, II: 1196; III: 2565  
 effects of:  
 acceleration, V: 5530; VII-X: 10076, 10100, 10180  
 anoxia, I: 192, 312, 339; II: 1088, 1089, 1393, 1941; III: 3414; V: 5530; VII-X: 10508, 10613  
 anxiety, III: 3470  
 atomic explosions, I: 886  
 carbon dioxide, II: 1393  
 contact lenses, I: 314  
 dazzle, I: 886; III: 3440; VII-X: 9276, 9334, 9339  
 drugs  
 alcohol, I: 242, 339  
 chloramphenicol, VII-X: 12006  
 dimenhydrinate, II: 1389  
 epinephrine, II: 1393  
 nicotine, II: 1393  
 nicotinic acid, I: 192  
 nitrites, I: 192; II: 1393  
 electrical stimuli, V: 5498  
 empty visual field, V: 5490; VI: 6957; VII-X: 9233, 9312, 9535, 12607  
 eye stimulation, V: 5498  
 fatigue, II: 1293, 1759, 1760; III: 3132  
 goggles and glasses, VII-X: 9201  
 high altitude flight, II: 1188, 1189; IV: 4582; V: 5865, 5907; VII-X: 9323  
 high speed flight, II: 1188, 1189; III: 2795; VII-X: 9265, 9323  
 hyperoxia, II: 1088, 1393, 1941  
 illumination, I: 201, 276, 760; IV: 4998; V: 5544; VI: 6992; VII-X: 9350  
 intermittent light, II: 1443; III: 3454; VI: 6960, VII-X: 9242  
 time factors, III: 2791, 2792; VI: 8209  
 noise, V: 6065; VII-X: 10976  
 olfactory stimuli, VI: 6961  
 optical filters, VII-X: 9183  
 peripheral pressure, V: 5795  
 physical work, VII-X: 11132  
 positive acceleration, VII-X: 10029  
 retinal image position, III: 3602  
 sensory deprivation, V: 6132; VII-X: 11236  
 sleep deprivation, VII-X: 11174  
 starvation, II: 1663; IV: 3903  
 supersonic flight, I: 138, 770; IV: 4959  
 tobacco, I: 339  
 training, VII-X: 9335  
 vestibular stimulation, VII-X: 9354  
 vibration, III: 3405; VII-X: 11015  
 vigilance, VI: 6962  
 visual deprivation, VII-X: 11213, 11239  
 visual noise, VII-X: 9302  
 eye movements, III: 3124; V: 5517; VII-X: 9271, 9274, 9277, 9300  
 fatigue see Visual fatigue  
 general physiological factors, II: 1161; III: 2912; IV: 4339  
 in radar operation, I: 183  
 of moving objects  
 relation to head movements, VII-X: 9220  
 physical factors, II: 1006; III: 2340, 2713, 2807, 2808; IV: 4114, V: 6609; VII-X: 9231  
 psychological factors, I: 110, 354; II: 1014, 1161; III: 2912; IV: 4339; VII-X: 9674  
 relation to:  
 electroretinogram, IV: 4854  
 pain, III: 2788  
 psychomotor performance, VII-X: 9641, 9642  
 retinal adaptation, I: 197; II: 1030, 1126, 1136; III: 2895; IV: 4998; V: 5544  
 retinal circulation, VI: 6994  
 retinal glycogen content, VI: 6994  
 ultraviolet rays, II: 1900, 2221  
 research, II: 1449; IV: 4458  
 research methods, VI: 6988, 6996  
 reviews, VII-X: 9341  
 role in:  
 motion sickness, VII-X: 11833  
 navigation, III: 2399  
 spatial orientation, I: 180, 375, 376, 617, 618, 619, 716, 829; II: 2224, 2237; III: 2633; IV: 3827, 3905, 4222; V: 5629; VII-X: 9520, 9541, 10268, 12399  
 role of:  
 blinking, V: 5513  
 ocular dominance, III: 3602  
 pupillary reactions, V: 5488  
 test methods, I: 340; II: 1235, 1312  
 tests, II: 1314, 2251; VI: 6982; VII-X: 9216, 9238, 9273, 11570  
 thresholds, II: 1030, 1104, 1124, 1125, 1136, 1157, 2014; III: 3367; V: 5516; VII-X: 9298, 9356  
 effects of:  
 fatigue, VII-X: 11150  
 illumination, VII-X: 9189  
 positive acceleration, VII-X: 10207  
 vitamin A, II: 1927  
 relation to:  
 age, II: 1926  
 reaction time, VI: 7011  
 retinal adaptation, VII-X: 9195  
 time factors, IV: 5153; VII-X: 9263  
 time factors, II: 1159, 1217, 1218, 1615, 1994; III: 3367; IV: 4070; V: 5544, 5545; VI: 6989; VII-X: 9193, 9339, 9537  
 measurement, II: 1217, 1869  
 research methods, V: 6665  
**VISUAL PROBLEMS** see under High altitude flight; High speed flight; Low altitude flight; Piloting; Space flight; Supersonic flight  
**VISUAL PURPLE** see Rhodopsin  
**VISUAL REQUIREMENTS** see under Aviators; Personnel; Pilot candidates; Pilots; Radar operators  
**VISUAL SEARCHING** (see also Aerial searching), III: 2426, 2714; IV: 4115; VI: 8158  
 analysis, VII-X: 9287, 9288  
 bibliography, VII-X: 9294  
 effectiveness, II: 1363, 1484, 1994  
 effects of:  
 auditory cues, VII-X: 9801  
 empty visual field, VII-X: 9309  
 effects on electromyogram, II: 2044  
 environmental factors, VI: 8157  
 relation to age, VI: 7781



- tests, II: 1291; IV: 4412; V: 5494; VII-X: 9187, 9196, 9287, 9730, 12551  
 time factors, VII-X: 9310
- VISUAL SIGNALS** (see also Signal lights; Warning devices (Optical))  
 effects on:  
 psychomotor performance, IV: 4844; VII-X: 9615, 9651  
 reaction time, I: 793; II: 1613, 1862, 2123; III: 2446  
 intelligibility, II: 1178  
 effects of auditory stimuli, II: 1856  
 interpretation, II: 1673, 1888; III: 3362  
 relation to auditory signals, V: 6657; VI: 8219, VII-X: 9798, 12552, 12710  
 use in airports, III: 2675
- VISUAL STIMULI** (see also Color stimuli; Empty visual field; Light stimuli; Visual cues; Visual noise)  
 cause of nystagmus, IV: 3864; V: 5614; VII-X: 9516  
 effects on:  
 cerebral circulation, VII-X: 8757  
 depth perception, II: 1452  
 intelligibility of auditory signals, II: 1856  
 nystagmus, VII-X: 9511  
 psychomotor performance, III: 2842  
 reaction time, III: 2842  
 sensory deprivation tolerance, VII-X: 11258  
 size perception, III: 2712; IV: 4113  
 sound localization, II: 995  
 general physiological effects, IV: 4026  
 localization, IV: 3905, 4519, 4520
- VISUAL THRESHOLDS** see Visual perception, thresholds
- VITAL CAPACITY**  
 effects of:  
 altitude, VII-X: 10407  
 hyperventilation, III: 3527  
 transversal acceleration, VII-X: 10221  
 follow-up studies, VII-X: 11776
- VITAL STATISTICS** see under Pilot candidates
- VITAMIN A** (see also Xanthophyll)  
 effects on:  
 dark adaptation, II: 1458  
 visual thresholds, II: 1927
- VITAMIN B COMPLEX** (see also Nicotinic acid; Pantothenic acid; Para-amino benzoic acid; Pyridoxine; Thiamine)  
 effects on:  
 cold tolerance, III: 3351  
 heat tolerance, III: 3014
- VITAMIN B<sub>1</sub>** see Thiamine
- VITAMIN B<sub>2</sub>** see Riboflavin
- VITAMIN B<sub>6</sub>** see Pyridoxine
- VITAMIN B<sub>C</sub>** CONJUGATE see Folic acid
- VITAMIN B<sub>12</sub>** see Cyanocobalamin
- VITAMIN C** see Ascorbic acid
- VITAMIN E** (Tocopherol)  
 effects on:  
 altitude tolerance, III: 3411, 3541; V: 5841  
 anoxia tolerance, III: 2469, 2817, 2818, 2819  
 electrocardiogram, III: 2818  
 hyperoxia tolerance, II: 2162; IV: 5046  
 pulse rate, III: 2819  
 teeth, VII-X: 9998  
 relation to hematopoiesis, V: 5840
- VITAMIN P** see Hesperidin
- VITAMIN METABOLISM**  
 effects of vibration, VII-X: 11004
- VITAMIN REQUIREMENTS** (see also items under individual vitamins), III: 3208, 3211
- VITAMIN SUPPLEMENTS**, VII-X: 10848, 10899  
 effects on:  
 blood, V: 6035  
 cold tolerance, V: 6035
- VITREOUS HUMOR**  
 effects of retinal adaptation, IV: 4952  
 oxygen tension  
 effects of:  
 anoxia, V: 5335, 5766  
 hyperoxia, V: 5335, 5766
- VOCATIONAL INTEREST** (see also under Personnel)  
 III: 3291, 3376, 3392; V: 6272; VII-X: 11596, 11612, 11794  
 of aviators, II: 1022, 1028, 1029, 2026, 2181; V: 6184  
 of instructors, V: 6266, 6267  
 of jet plane pilots, V: 6268  
 of officers, V: 6270  
 of pilot candidates, V: 6266, 6277; VI: 7712; VII-X: 11751  
 of pilots, V: 6227  
 role in personnel selection, VII-X: 11522
- VOICE**  
 effects on speech intelligibility, IV: 4676
- VOICE IDENTIFICATION**, II: 1952; V: 5585
- VOLUME** see Blood plasma volume; Blood v.; Body v.
- VOLUNTARY APNEA** see Apnea (Voluntary)
- VOLUNTEERING**  
 for hazardous duty, VII-X: 9719
- VOMEX A**  
 use in motion sickness, I: 745
- VOMITING**  
 prevention, VI: 7872
- VOMITING CENTER**  
 effects of narcotics, III: 3038
- WAKEFULNESS** see Sleep deprivation; Vigilance
- WAKING**  
 effects on electroencephalogram, VII-X: 9156
- WALKING** see Locomotion
- WARM AIR BREATHING**  
 effects on:  
 electroencephalogram, VII-X: 9782  
 respiration, VI: 6812  
 vigilance, VII-X: 9782
- WARM WATER IMMERSION**  
 effects on:  
 circulation, VII-X: 10711  
 respiration, VII-X: 10711
- WARMING** see Prewarming
- WARNING DEVICES** (see also Monitoring devices), V: 6640; VII-X: 12660  
 effectiveness, VI: 8207; VII-X: 12710  
 for anoxia, I: 217, 450; III: 2373; IV: 3773, 4647; VII-X: 10579, 12674, 12689  
 for fainting, VII-X: 11860  
 for fire, VI: 8198, 8201  
 for hypercapnia, I: 217  
 use of electroencephalogram, VII-X: 12686
- WARNING DEVICES (ACOUSTICAL)**, II: 2123; VII-X: 12675  
 effectiveness, V: 6456; VII-X: 12719
- WARNING DEVICES (OPTICAL)** (see also Signal lights), I: 793; II: 2123; III: 2426; V: 6629; VII-X: 12427  
 effectiveness, V: 6645, 6650, 6651; VI: 8224, 8231; VII-X: 12719  
 for anoxia, I: 545  
 human engineering, III: 3585; V: 6646
- WARNING DEVICES (TACTILE)**, V: 6630; VII-X: 11636  
 effectiveness, VII-X: 12719
- WASPS**  
 on aircraft  
 hazards, VII-X: 12452
- WASTE PRODUCTS** see Biological waste products
- WATER** (see also Cold water immersion; Ejection from aircraft; Hot water immersion; Rescue on water; Survival on water; Warm water immersion; Wet clothing. See also Landing on water under Space vehicles)
- WATER DEPRIVATION** (see also Dehydration)

- effects on:  
 activity rhythm, VII-X: 11471  
 body temperature, V: 6109  
 nitrogen metabolism, VI: 6929  
 survival, II: 1040; III: 3015, 3016  
 water exchange, V: 6369; VI: 6929  
 general physiological effects, IV: 4524
- WATER EXCHANGE** (see also Dehydration; Water deprivation; Water intake), IV: 4174  
 effects of:  
 altitude, II: 1938, 2206  
 altitude acclimatization, II: 1938, 2206; III: 3478  
 cold, VI: 7385  
 heat, III: 2341, 3330; IV: 4440; VII-X: 10785, 10863  
 hyperventilation, IV: 4016  
 sea water intake, VI: 6932  
 starvation, V: 5369  
 ventilated suits, VI: 8006  
 water deprivation, V: 6369; VI: 6929  
 in hot climates, III: 3000; IV: 4525; VII-X: 10721  
 relation to:  
 annual cycle, VII-X: 8633  
 diurnal cycle, III: 3194  
 sleep, VI: 6930  
 role of respiration, VII-X: 8906  
 through skin, I: 691; II: 2161
- WATER EXCHANGE RHYTHM**  
 effects of:  
 heat, VII-X: 8606  
 physical work, VII-X: 8606  
 relation to diurnal cycle, VII-X: 8606
- WATER INTAKE** (see also Dehydration; Sea water intake)  
 effects of:  
 diet, II: 1674  
 environmental temperature, VII-X: 10916  
 effects on:  
 anoxia tolerance, V: 5918  
 blood sodium content, VII-X: 10896  
 heat tolerance, IV: 4487; VI: 8063; VII-X: 10734  
 ketone metabolism, VII-X: 8923  
 kidney function, VI: 6930  
 perspiration, III: 2709; IV: 4435  
 urine composition, VII-X: 8629  
 work capacity, VII-X: 9131, 9132, 10863  
 relation to diurnal cycle, VII-X: 8572
- WATER RECOVERY**, VII-X: 12851, 12881  
 from biological waste products, VII-X: 12889, 12890, 12891, 12896, 12899  
 from urine, VII-X: 12886, 12887, 12897, 12899, 12901
- WATER REQUIREMENTS** see under Space flight
- WATER SUPPLY**  
 in the desert, VII-X: 12318  
 sanitary aspects, I: 888; IV: 4916
- WEATHER** (see also Environmental temperature; Humidity; Wind)  
 effects on:  
 circulation, I: 290; II: 1776  
 flicker fusion frequency, VII-X: 9935  
 perspiration, IV: 4580  
 physical fitness, VII-X: 11479  
 reaction time, VII-X: 9935  
 general physiological effects, IV: 3751
- WEATHER OBSERVERS**  
 training, III: 2355
- WEIGHT** (see also Body weight; Organ weight), I: 443, 444; VII-X: 9949
- WEIGHT DISCRIMINATION**  
 effects of subgravity, VII-X: 10231, 10265  
 relation to size perception, VI: 7085  
 tests, VII-X: 9454, 9455
- WEIGHT LIFTING**, V: 6095
- WEIGHTLESSNESS** see Subgravity
- WET CLOTHING**  
 effects on heat loss, VII-X: 12234
- WHOOPING COUGH** (Pertussis)  
 effects of:  
 airplane flight, I: 769, 876; IV: 4316; V: 6336, 6348, 6349  
 altitude, VI: 7938; VII-X: 11975
- WIND**  
 effects on:  
 reaction time, VII-X: 9647  
 skin temperature, VII-X: 11475  
 temperature regulation, VII-X: 9031  
 general psychological effects, I: 135  
 relation to thermal comfort, VII-X: 10715
- WIND BLAST**  
 general physiological effects, VII-X: 11489  
 protection, IV: 4648
- WIND BLAST TOLERANCE**, I: 752; IV: 4999; V: 5806; VII-X: 11489, 12352
- WINDSHIELDS**  
 human engineering, III: 2543, 2544, 2631, 3067; IV: 4231
- WINTER** see Parachute jumping in winter
- WINTER SHELTERS**  
 evaluation, VII-X: 12365
- WOMEN** see Instructors (Female): Sex factors
- WORDS** see Printed words
- WORK** see Mental work; Physical work
- WORK AREAS** (see also Work space; Workshops)  
 human engineering, V: 6607, 6621; VII-X: 12500  
 handbooks and treatises, V: 6604
- WORK CAPACITY**  
 effects of:  
 altitude, III: 3604  
 altitude acclimatization, III: 2874, 3604; V: 5825, 5830, 5890; VII-X: 10356  
 anoxia, II: 1032; III: 3109  
 blood loss, II: 1032; III: 2874  
 carbohydrates, VII-X: 9132  
 clothing, VII-X: 12297  
 cold, III: 3220  
 dehydration, VI: 7639  
 diet, III: 2901  
 drugs, VII-X: 10657  
 alcohol, III: 3220  
 amphetamine, VI: 7354  
 environmental temperature, VII-X: 10924, 10925  
 fatigue, III: 2431, 2432  
 food intake, VII-X: 9131, 9132  
 heat, III: 3220, 3256; VI: 7448; VII-X: 10657  
 hot climates, V: 6119  
 motivation, VII-X: 11721  
 noise, VII-X: 11021, 11024  
 oxygen breathing, II: 1034; III: 2437, 3204; IV: 4685; VII-X: 8829  
 physical training, V: 6102; VI: 7639; VII-X: 10432, 11082, 11083, 11084, 11117  
 physical work, VII-X: 11066  
 posture, V: 6167  
 pressure suits, VII-X: 12273  
 rest, II: 1092, 1094, 1096; III: 2485, 3220, 3231  
 social isolation, VII-X: 11211  
 starvation, II: 1663; III: 2915; IV: 3915; VII-X: 11492  
 subgravity, VII-X: 12495  
 training, VII-X: 11095  
 water intake, VII-X: 9131, 9132, 10863  
 work-rest cycle, VI: 7580; VII-X: 11136, 11153  
 general physiological factors, VII-X: 10657  
 measurement, III: 2432, 3626; V: 5361; VII-X: 11083  
 physical factors, VII-X: 12511  
 race factors, VI: 7546  
 relation to:

- age, III: 2613; V: 6291; VI: 7772; VII-X: 11083, 11754  
 body weight, VI: 6937  
 circulation, VII-X: 8754  
 diurnal cycle, III: 2530  
 lactic acid metabolism, V: 6117  
 respiration, III: 3286  
 social factors, III: 3209  
 test methods, V: 6115; VII-X: 11133, 11693, 11754  
**WORK DECREMENT** see Fatigue  
**WORK LOAD**  
 effects on:  
 performance of traffic control operators, VII-X: 11706  
 psychomotor performance, VII-X: 9566, 12503  
 rest requirements, IV: 3840  
 vigilance, VII-X: 9804  
**WORK-REST CYCLE** (see also Activity cycle)  
 effects on:  
 body temperature rhythm, VII-X: 8602, 8619  
 carbon dioxide production, VII-X: 11091  
 galvanic skin response, VII-X: 9610  
 oxygen consumption, VII-X: 11090, 11091  
 performance, VII-X: 8563, 8613, 11076, 11153, 11691  
 psychomotor performance, VI: 7122; VII-X: 9650, 11690  
 work capacity, VI: 7580; VII-X: 11136, 11153  
 general physiological effects, VII-X: 11062  
 relation to:  
 diurnal cycle, VII-X: 8551, 8627  
 mental performance, VIII-X: 11690  
**WORK SPACE**  
 for chimpanzees, VII-X: 12548  
 human engineering, VII-X: 12485  
 relation to body measurements, VII-X: 12321, 12457, 12495  
**WORKSHOPS** (see also Work areas)  
 sanitary aspects, VII-X: 11354  
**WORLD WAR II** see under Air transportation of patients; Aviation casualties; Aviation medicine, history  
**WOUND HEALING**  
 effects of blood lipid content, VII-X: 11890  
**WOUNDED** see Patients  
**WOUNDS** see Battle wounds; Injuries  
**WRITTEN TESTS** (see also Questionnaires), VII-X: 9494  
 intelligibility, II: 1738; III: 3104  
**XANTHOPHYLL AND DERIVATIVES**  
 effects on retinal adaptation, III: 3518  
**XENO BIOLOGY** see Extraterrestrial life  
**X-RAY TOLERANCE**  
 animal experiments, VII-X: 11346  
 effects of:  
 acceleration, VII-X: 10192  
 altitude, I: 791; II: 2117  
 altitude acclimatization, V: 5856; VII-X: 10404  
 anoxia, II: 1913; III: 3352; VII-X: 10501, 10575, 11363  
 carbon monoxide, IV: 4476  
 drugs, VII-X: 11346, 11364, 11398  
 heat, I: 686; IV: 4077  
 hypothermia, I: 535, 537; II: 2141; VII-X: 11346  
**X-RAYS** (see also Roentgenogram; Roentgenography)  
 biological effects, VII-X: 11310, 11407  
 effects on:  
 acceleration tolerance, VII-X: 10192  
 altitude tolerance, I: 536; IV: 4477; VII-X: 10403, 10404  
 anoxia tolerance, I: 536; II: 1668, 1873; III: 3251  
 brightness discrimination, II: 1431  
 cold tolerance, VII-X: 10725  
 conditioned reflexes, VII-X: 11295  
 hyperoxia tolerance, III: 2797  
 learning, VII-X: 11362  
 muscular system, I: 373  
 skin, VII-X: 11407  
 transfer of training, VII-X: 11361  
 visual acuity, VII-X: 11362  
 general physiological effects, III: 3024  
 general psychological effects, II: 1639  
 hazards, I: 216  
 tolerance see X-ray tolerance  
**YOGA PRACTICE**  
 effects on:  
 electroencephalogram, VII-X: 8731  
 metabolism, VII-X: 8731  
**ZERO ACCELERATION** see Subgravity