A CUMULATIVE INDEX
TO THE 1972 ISSUES OF
A CONTINUING BIBLIOGRAPHY ON
AEROSPACE MEDICINE
AND BIOLOGY

JANUARY 1973

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### SUPPLEMENTS COVERED IN THIS INDEX

<table>
<thead>
<tr>
<th>Document</th>
<th>Page Range</th>
<th>Date</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASA SP-7011 (99)</td>
<td>1–47</td>
<td>February 1972</td>
<td>January 1972</td>
</tr>
<tr>
<td>NASA SP-7011 (100)</td>
<td>49–93</td>
<td>March 1972</td>
<td>February 1972</td>
</tr>
<tr>
<td>NASA SP-7011 (101)</td>
<td>95–145</td>
<td>April 1972</td>
<td>March 1972</td>
</tr>
<tr>
<td>NASA SP-7011 (102)</td>
<td>147–211</td>
<td>May 1972</td>
<td>April 1972</td>
</tr>
<tr>
<td>NASA SP-7011 (103)</td>
<td>213–264</td>
<td>June 1972</td>
<td>May 1972</td>
</tr>
<tr>
<td>NASA SP-7011 (104)</td>
<td>265–319</td>
<td>July 1972</td>
<td>June 1972</td>
</tr>
<tr>
<td>NASA SP-7011 (105)</td>
<td>321–360</td>
<td>August 1972</td>
<td>July 1972</td>
</tr>
<tr>
<td>NASA SP-7011 (106)</td>
<td>361–405</td>
<td>September 1972</td>
<td>August 1972</td>
</tr>
<tr>
<td>NASA SP-7011 (108)</td>
<td>449–488</td>
<td>November 1972</td>
<td>October 1972</td>
</tr>
<tr>
<td>NASA SP-7011 (109)</td>
<td>489–538</td>
<td>December 1972</td>
<td>November 1972</td>
</tr>
<tr>
<td>NASA SP-7011 (110)</td>
<td>539–574</td>
<td>January 1973</td>
<td>December 1972</td>
</tr>
</tbody>
</table>

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SPECIAL NOTICE

The abstract sections of the monthly supplements of *Aerospace Medicine and Biology* can be bound separately. Individual abstracts can be located readily by means of the page numbers given at each entry, e.g., p0119 N72-14061. To assist the user in binding Supplements SP-7011 (99) through SP-7011 (110), a title page is included in the back of this Cumulative Index.
A CUMULATIVE INDEX
TO
A CONTINUING BIBLIOGRAPHY ON
AEROSPACE MEDICINE
AND BIOLOGY

This Cumulative Index supersedes the indexes contained in supplements [SP-7011 (99) through SP-7011 (110)] published by NASA during 1972.
Introduction

WHAT THIS CUMULATIVE INDEX IS

This publication is a cumulative index to the abstracts contained in NASA SP-7011 (99) through NASA SP-7011 (110) of Aerospace Medicine and Biology: A Continuing Bibliography. NASA SP-7011, by means of supplements, serves as a current abstracting and announcement journal for references on bioscience and biotechnology. It has been compiled through the cooperative efforts of the American Institute of Aeronautics and Astronautics (AIAA), and the National Aeronautics and Space Administration (NASA). Entries prepared by the two contributing organizations are identified as follows:

1. NASA entries by their STAR accession numbers (N72-10000 series);
2. AIAA entries by their IAA accession numbers (A72-10000 series);

HOW THIS CUMULATIVE INDEX IS ORGANIZED

This Cumulative Index includes a subject index, a personal author index, and a corporate source index.

HOW TO USE THE SUBJECT INDEX

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

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

   DOSE
   U DOSAGE
   AIRLINERS
   U COMMERCIAL AIRCRAFT
   U PASSENGER AIRCRAFT

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

   FATIGUE (BIOLOGY)
   NT AUDITORY FATIGUE
   NT FLIGHT FATIGUE
   NT MUSCULAR FATIGUE

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

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

illustrates a case where two references on different topics are listed under the same subject term.
HOW TO USE THE PERSONAL AUTHOR INDEX
All personal authors used in the abstract-section citations in the individual Supplements appear in the index. Differences in transliteration schemes may require multiple searching of the index for variants of an author's name. For example:

EMELIANOV, M.D.

and

YEMELYANOV, M.D.

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

NEW MEXICO STATE UNIV., LAS CRUCES. DEPT. OF BIOLOGY

NEW MEXICO STATE UNIV., LAS CRUCES.

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

Page 195 will be found in Supplement 102.

AVAILABILITY OF DOCUMENTS
Information concerning the availability of documents announced in Aerospace Medicine and Biology supplements is found in the Introduction to the most currently issued monthly supplement.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Subject Index</th>
<th>A-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Author Index</td>
<td>B-1</td>
</tr>
<tr>
<td>Corporate Source Index</td>
<td>C-1</td>
</tr>
</tbody>
</table>
Typical Subject Index Listing

AERO SPACE TECHNOLOGY

Aerospace technology transfer to biomedical research problems, including transfer innovations and potential applications

ABBREVIATIONS

ABBREVIATIONS

AERO SPACE INDUSTRY

Aerospace technology transfer to biomedical research problems, including transfer innovations and potential applications

ABBREVIATIONS

ABBREVIATIONS

AERO SPACE TECHNOLOGY

Atmospheric model for proteins abiogenesis, considering heteropolypeptides formation from hydrogens cyanide and water

Protobionts formation by random aggregation and reproduction from proteins and nucleic acids macromolecules

Conservate drops oxidoreductases and stability in primitive prebiological systems, using polyhydrol oxidase-carbohydrate-histone-quinones

Pigments participation in lipid systems formation, considering chlorophyll photosynthetic activity in surface active agents

Ion selective accumulation model of carbohydrates diffusing through artificial polymer membranes, relating prebiological systems to catalytic microsystems

Antibiotic polypeptide synthesis of gramicidin S and tyrocidin, using primitive model of sequential addition of amino acids on polypeptides

Genetic code numerical structure association with logarithmic optimization rule for hierarchy of structures from molecular biology experiments

Inorganic polyphosphates effect on phosphorous metabolism evolution in primary living organisms, noting polyphosphate glucokinase distribution in various microorganisms

Biological energy transformation origin and evolution, discussing inorganic pyrophosphates precursor to adenosine phosphates as energy carriers

Prebiological food origin in carbonaceous meteorites, considering extraterrestrial environments, organic synthesis and terrestrial analogs

Extraterrestrial life on Mars and Venus and Jupiter atmospheres, discussing abiogenesis failures on life-supportable planets

Ionizing radiation as effective energy in primordial organic synthesis, discussing small molecule formation and subsequent condensation into polypeptides and polynucleotides

Biological phosphate origin through atmosphere-hydrosphere interrelations, discussing concentrative processes, dehydration mechanisms and evaporation

Book on origin of life by natural causes covering physical geology, astronomy, biochemistry and evolution of life stages, orogenetic cycle, fossil, and primordial atmosphere

Papers on exobiology covering abiogenesis, extraterrestrial life, primordial organic chemistry, biochemical evolution electronic factors, organisms origin, molecular chirality, protein and cellular evolution, etc

Extraterrestrial life origin and development possibilities from earth chemical and biological evolution description, noting external conditions requirements

Structure, function and origin of biological membranes, considering related surface phenomena
with simulated head-up predictive guidance.

Human acceleration stress tolerance monitoring techniques for supraliminal, biaxial and radial arterial blood flow and indirect systolic and diastolic blood pressure measurements.

Thromboelastographic and coagulographic studies of gravitational effects on blood coagulation in cats under acceleration stress.

Fat-adrenal cortex structural changes under repeated radial acceleration, noting atrophic process and autonomous reactions roles.

High gravity, cold and starvation space stress effects on oxidative metabolites of ethylmorphine, aniline and p-nitroanisole in male rat liver.

Russian book - Intracranial blood circulation under conditions of accelerations and weightlessness.

Participation of cholinergic structures in the development of disturbances of the functional state of the cerebellum under the action of centripetal accelerations.

Hematologic responses to hyperbaric hyperoxia.

Vestibular labyrinth reactions and symptoms in dogs during negative angular accelerations and simulated chronic galactic acceleration from 60 gamma source.

Study of hemodynamics during the action of decompression and accelerations.

Hemodynamic reflexes during acceleration stresses, considering vessel walls, cardiac rhythms, blood distribution andmins carotid receptors.

Features of a speech signal during cumulative action of Coriolis accelerations.

Relation between a pilot's sensory perception of linear accelerations and the aircraft motion.

Influence of vision on susceptibility to acute motion sickness studied under quantifiable stimuli-responses conditions.

Human physiological responses to high sustained short duration positive accelerations, considering peripheral vision loss as function of time.

Effects of spacecraft environmental conditions on humans, and space biomedical problems.

Relation between response thresholds of supraliminal, biaxial and radial arterial blood flow and indirect systolic and diastolic blood pressure measurements.

Selectivity in human adaptation to Coriolis, linear, and swirling accelerations.

Optic functions and retinal circulation in humans exposed to combined centripetal and Coriolis accelerations.

Photocyclogrammetric study of coordination of voluntary movements of humans subjected to negative angular accelerations in plane of horizontal semicircular canals.
ACCELERATION TOLERANCE

Morphology of cerebral vascular system of dogs subjected to transverse acceleration
Effects of digestive tract receptor stimulation on vestibular somatic reflex reactions of rabbits
Human vestibular tolerances in rotating chairs at differing head tilt positions
Mathematical model for acceleration forces acting on receptor formations in human vestibular analyzer during physiological head movements
Flight acceleration stress effects on pathogenesis of illness, sensations and metabolic changes in human body
Radiation and acceleration effects on structure of cytoplasms in aerospace environments
Vertical cockpit acceleration and vibration measurement in Boeing 707 noting pilot performance
Head linear and angular accelerations of humans during exposure to abrupt linear deceleration during impact
Analysis of vestibulo-ocular counterroll reflex in Rhesus monkeys subjected to high gravity forces
Physiological effects produced by rotation of human subjects in sagittal plane at various rates of rotation and accelerations
Changes in atrial nerve cells following transverse acceleration of dogs
Magnetic field and transverse acceleration effects on pharyngeal and esophageal nerve cells of cats
Increased glycogen levels in embryonic mice after transverse acceleration
Chest-back acceleration effects on rabbit telencephalic vessels
Chest-back acceleration effects on rabbit mesencephalic and metencephalic blood vessels
Hypodynia, hypokinesia and subsequent hypergravitation effects on vascular system of rabbit knee joint capsule
Human tolerance and physiological changes caused by acceleration and ejection stresses
Clinical observation of vertebral injuries caused by vertical acceleration of spine
Physiological tests of vestibulo-ocular reflex by counterroll to determine effects of positive acceleration on dynamics of vestibular system of rhesus monkeys
Lower body negative pressure and acceleration effects on human hemodynamics
Biodynamic cerebellar model for samall acceleration response
Effects of increased gravity on rat eochalocating mechanisms

ACCELERATION TOLERANCE

Nice tolerance to long term accelerations or supergravities, detailing physiological consequences
Navigators, pilots and airman training response to Coriolis accelerations, investigating sinusus sensitivity coefficient relationship to motion sickness resistance
Aerospace vehicle acceleration effects on human performance, noting visual, motor and intellectual impairment levels relating to physiological tolerance limits

SUBJECT INDEX

Stenberg hypothesis for zero gravity produced inversion illusion mechanism in aircraft parabolic flight, noting otolithic membrane deflection result of force on maculae
Chis-sternu-heart syndrome from partial parachute failure, with close reference to atrial endocardial and myocardial lacerations
Leg cooling effect improving tolerance to positive headward acceleration in sitting position
Pathogenesis of in-flight illusory acceleration sensations, discussing amino acid level, protein metabolism rate and pyridoxin metabolism
Acceleration tolerance increase by static forearm muscular contraction exercise comparison to -g-unit protection during human centrifuge tests
Acceleration effects on human cardiovascular system during centrifuge tests, studying ECG changes in terms of cardiac rhythm, heart rate and wave parameters
Centrifugation tolerance reduction after 14 days bed rest with moderate exercise, determining rehydration effects
Bed rest and positive radial acceleration effect on peripheral visual response time, considering blackout or grayout prediction possibilities
Valsalva and N-1 maneuvers acceleration tolerance protective effects during high-g centrifuging with and without anti-g suits
Acceleration protection properties of modified partial pressure suit, determining tolerance with respect to required energy absorber force-deflection relationship
Acceleration stress tolerance dependence on electron or ion transport across cell surface activation energy barrier, studying rat survival times
Human tolerance to high, sustained +Gz acceleration, comparing human and animal tolerances
Crash energy absorption for prevention of fatal injuries, considering human deceleration tolerance with respect to required energy absorber force-deflection relationship
Acceleration stress tolerance dependence on electron or ion transport across cell surface activation energy barrier, studying rat survival times
Human tolerance to high, sustained +Gz acceleration, comparing human and animal tolerances
Problem of artificial gravitation in terms of experimental physiology
Acceleration tolerance of man after a lasting exposure to conditions of simulated weightlessness
Influence of high temperature on the onset of motion sickness
Influence of prolonged longitudinal accelerations on control habits
Hypothermia and resistance of mice to lethal exposure to high gravitational forces
Relationship of sodium deprivation to +Gz acceleration tolerance
Changes in activity of aspartate aminotransferase and mitochondrial enzymes in rats exposed to transverse and centrifugal acceleration, respectively
Human tolerance to acute hypoxia and acceleration following exposure to hyperbaric atmosphere
Physiological effects produced by rotation of human subjects in sagittal plane at various rates of rotation and accelerations
Development of model to determine effects of pilot accuracy of monocular motion parallax absolute speed-accuracy tradeoff
Experimental investigation of acclimatization of cold acclimatization by exercise-induced elevation of body temperature.
Acclimatization ability of divers analyzed to determine effect of cold tolerance on work capacity.
Experimental investigation of acclimatization of human subjects to high temperature environments.
Acclimatization and water balance of miners doing heavy work in hot damp climate.
ACCUMULATION
WT VISUAL ACCOMMODATION
ACCURACY
Theoretical models for speed-accuracy tradeoff during difficult visual discrimination tasks under time pressure.
Development of model to determine effects of pilot performance and aircraft dynamics on accuracy of tactical weapon delivery.
Accuracy of monocular motion parallax absolute distance estimation before and after training.

ACIDS
[AD-72-0078]}

ACETALS
Evolution of endogenous metabolism of Baker's yeast (Saccharomyces cerevisiae) as function of oxidized exogenous substrate (acetate, ethanol, or glucose).

ACETALDEHYDE
In vitro measurements of oxygen tension effect on telocent and amphibian retinal lactate dehydrogenase activity, discussing acetazolamide produced hypoxia effects.

ACETONE
Dihydroxyacetone/β-DHA/ an antioxidant in growing fats diet, showing unsuitability of regenerant DNA-containing formose mixtures for space crew diets.

ACETYL COMPOUNDS
Cardiac membrane pain sensitivity in vagotomized cats under sensitizing acetylcholine influence during reduced cholinesterase activity.

ACID BASE EQUILIBRIA
Acid base equilibrium effects on chlorophyll primary photosynthetic regulating mechanism, considering electron transfer to NADP and ATP formation.

ACIDIC BLOOD
Determining pH and bicarbonate content variation by Antrac microethod.

ACID BASE EQUILIBRIUM
Acid base balance shift during muscular exertion, determining pK of bicarbonate content variation by Antrac microethod.

ACID BASE EQUILIBRIUM
Acid base equilibrium in arterialized capillary blood in men after maximal short duration exercise.

ACID BASE EQUILIBRIUM
Experimental studies on the alkali-acid metabolism, determining pK of bicarbonate content variation by Antrac microethod.

ACIDIC BLOOD
Acid base balance in arterialized capillary blood in men after maximal short duration exercise.

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Acid base equilibrium in arterialized capillary blood in men after maximal short duration exercise.
Circadian rhythms variations for sleep, EEG, temperature and activity in monkeys, indicating acrophase, amplitude and level regulation. p0156 A72-19528

Phase resetting behavior of circadian rhythm of pupal eclosion in fruitfly populations. p0156 A72-19529

Day/night workers sleep patterns in terms of intrasleep REM/Non-REM ultradian cycle, notation sleep temporal instability for night workers. p0226 A72-23730

Sleep-wakefulness cycle variations effect on reaction time and spontaneous tempo during time isolation experiment, showing tendency toward circadian rhythm. p0275 A72-26687

Nocturnal private jeton trivirgatns wakefulness-sleep cycles during dark/light periods expressed in REM/non-REM percentages. p0226 A72-23930

Pulse rate studies of human adaptation to 16 hour work-rest cycle, showing persistence of 24 hour cycle. p0327 A72-29316

Statistical periodic analysis of cyclical activity in human perceptual-motor performance. p0331 A72-29845

Relaxation phenomena in the biological carbon cycle under conditions of variable atmospheric CO2-content. p0412 A72-34897


Mutual relations between different physiological functions in circadian rhythms in man. p0519 A72-62979

Information and energy costs in human daily circadian work-rest cycle. p0122 A72-14077

ACUITY

BT. VISUAL ACUITY

Auditory intensity discrimination, signal detection, and receiving characteristics. (A0-736046) p0358 A72-23082

ACCLIMATION

Energy transfer conditions of dehydration reactions on primate earth leading to transphosphorylation, transacylation and peptide synthesis. p0061 A72-14768

ADAPTATION

BT. ACCLIMATIZATION

BT ALTITUDE ACCLIMATIZATION

BT. COLD ACCLIMATIZATION

BT. DARK ADAPTATION

BT. DESERT ADAPTATION

BT. LIGHT ADAPTATION

BT. RETINAL ADAPTATION

Soynz 9 flight crew physiological data, discussing mental and physical performance and adaptation and readaptation to space-earth environments. p0612 A72-10933

Eye-hand coordination modifiable parameters under optical distortion conditions, deriving quadratic equation for hand response adaptation. p0622 A72-11897

Concurrent and terminal display exposure effects on perceptual adaptation for localizing movements with displacing prism. p0655 A72-13878

Conditioned reflex as component of artificial conditioned-natural unconditioned reflex system controlling adaptive behavioral patterns, noting contribution to complex nervous activity understanding. p0673 A72-15582

Respiratory adaptation to pure oxygen excess pressure after cockpit depressurization from flight simulator tests with pressure-suit pilots, presenting ECG reactions. p0672 A72-16749

Adjustment to subjective horizontal, vertical, and 45 deg tilt in dark as function of age in 3-20 year old subjects. p0174 A72-20989

Soviet papers on human higher nervous activity physiology covering conditioned reflexes and adaptive behavior, neurotrophic substance effects, mathematical and structural modeling, etc. p0161 A72-21036

Biosural peristimulatory loudness adaptation measurement by delayed and single simultaneous balance methods, discussing intensity, frequency and duration effects. p0182 A72-21896

Auditory adaptation tests confirmation of Small loudness model prediction of lower adaptation for test tone greater than adapting tone intensity. p0182 A72-21897

Skeletal bone ash content in man and primates, implying differences due to adaptive physiological function. p0227 A72-23736

Metabolic and hormonal response adaptation to prolonged hypodynamics in water immersion/bed out, noting diurnal and nocturnal differences in circadian rhythms. p0292 A72-28267

Energy metabolism and ATP balance characteristics during muscular activity as function of organism adaptation to activity. p0323 A72-28640

Pulse rate studies of human adaptation to 16 hour work-rest cycle, showing persistence of 24 hour cycle. p0327 A72-29316

Heart rate diurnal rhythm adaptation to work-rest cycle change, using recumbent and sitting position data parameters. p0337 A72-30391

Human organism readaptation after prolonged hypokinesia and weightlessness, discussing coordination disturbances, vegetative and vascular system instabilities, reduced orthostatic stability and asthma. p0340 A72-30745

Stress and adaptation response to repeated acute acceleration. p0410 A72-34729

New experimental data on the morpho-physiological analysis of the adaptation phenomena in the acoustical reflex arch. p0416 A72-35023

Adaptability limits on protein-nucleus-water life under embiological extreme conditions, considering macromolecules, extraterrestrial life search and origin. p0518 A72-38958

Cortical metabolism regulation and effector systems of the adaptation process. p0597 A72-40760

Target distance and adaptation in distance perception in the constancy of visual direction. p0599 A72-41022

Role of the thyrotropic region of the hypothalamus in the adaptation activity of the organism. p0509 A72-42167

Animal vessel adaptation to gravitational overloads in head-pelvis direction (FB-200183-T). p0604 A72-11080

Man as element of dynamic control system and capacity for human adaptation and system modification. p0612 A72-11622

Influence of adaptation level in perception of various aspects of visual space (J1-1291961). p0617 A72-20086

Adaptation of cardiac contractions to changes in sleep-wakefulness rhythms. p0386 A72-24112

ADAPTIVE CONTROL

BT LEARNING MACHINES

BT SELF ADAPTIVE CONTROL SYSTEMS

Online identification on human describing function by iterative differential analyzer, noting application to man-machine systems and on-line adaptive control systems. p0331 A72-12661

Adaptive neural nets of threshold logic units as models of perception and memory in biological systems. p0502 A72-23580

Prediction role in execution of manual control with display device to aid human operator adaptation. p0502 A72-41406
Respiration control mechanisms ensuring adaptation to power requirements and chemical environment maintenance in tissues, considering brain stem location.

Development of adaptive displays for assisting human operator in detecting, diagnosing, and adapting to changes in systems or environment (AD-729285).

Heterostatic theory for brain functions and artificial adaptive systems (AD-742229).

Determination of bacterial ATP as measure of visual acuity restoration improvement after flash.

Muscle metabolism during isometric exercise and lactate and pyruvate levels in rat brains, noting anoxic limit value relation to age.

Glycylis in fibroblasts of rat embryos infected with adenoviruses, and oncogenic adenoviruses type 12 (NAS-TT-7-14661).

Electrostatic adhesive devices for zero-g intra/extravehicular activities, noting applications to astronaut and cargo maneuvering, worksite restraint, tool and equipment tiedowns, etc.

Pulse oxygen atmosphere effects at 450 and 600 m on rats in vitro liver and adipose tissue lipid synthesis, measuring food intake and plasma components.

Adrenergic response to prolonged high altitude exposure, showing rapid neural stimulation with delayed hypokinesia.

Acid base equilibrium effects on chlorophyll primary photosynthetic regulating mechanism, considering electron transfer to NADP and ATP formation.

Biological energy transformation origins and evolution, discussing inorganic pyrophosphates precursor to adenosine phosphates as energy carriers.

Inhaled oxygen pressure variation effects on adenosines, glucose, lactate and pyruvate levels in rat brains, noting anoxic limit value relation to age.

Development of adaptive displays for assisting human operator in detecting, diagnosing, and adapting to changes in systems or environment (AD-729285).

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Pulse oxygen atmosphere effects at 450 and 600 m on rats in vitro liver and adipose tissue lipid synthesis, measuring food intake and plasma components.

Adrenergic response to prolonged high altitude exposure, showing rapid neural stimulation with delayed hypokinesia.
Subject Index

- Exogenous modifications of circadian rhythms of adrenal hormones in man. p0519 A72-42978
- Influence of elevated partial oxygen pressure on the sympathetic-adrenal and acetylcholine systems. p0551 A72-04595
- Unconjugated urinary corticosterone excretion in laboratory rats exposed to high pressure helium-oxygen environments. p0557 A72-45656
- Alkaline phosphate activity of adrenocortical cells in tailed newts. [NASA-77-F-14577] p0561 N72-32104

Adrenergics

- Beta-adrenergic blocking effect on canine coronary and cardiac function from cardiac anesthetics. p0519 A72-42978
- Influence of elevated partial oxygen pressure on the sympathetic-adrenal and acetylcholine systems. p0551 A72-04595
- Unconjugated urinary corticosterone excretion in laboratory rats exposed to high pressure helium-oxygen environments. p0557 A72-45656

AERIAL RECONNAISSANCE

- Comparison of operator performance from nose of aircraft with performance from side of aircraft during aerial reconnaissance operations. [AD-729926] p0087 N72-13094
- Effect of apparent scene illumination on in-flight visual detection of ground targets during aerial reconnaissance. [AD-728629] p0128 N72-14122
- Airborne visual reconnaissance tests to determine effect of yellow sunglassess on visual acuity of observers. [AD-730920] p0130 N72-14132
- Target background metric for predicting ability of airborne visual target acquisition tasks. [AD-737693] p0391 T2-24140

- Isolation of a polyvalent bacteriophage for Enterococcus cloaceae, Klebsiella pneumoniae, and Aerobacter aerogenes. p0450 A72-37650
- Growth of Aeromonas proteolytica and production of proteolytic enzymes inside spacecraft cabin during space flight. [NASA-CR-125905] p0209 N72-19073

AEROBIOLOGY

- Water soluble filter for trapping airborne microorganisms. [NASA-77-F-14577] p0562 N72-32111

AERODYNAMICS

- Aerodynamic forces. BY BLAST LOADS
  - Laughing gull metabolism dependence on flight speed and angle during tunnel tests from oxygen consumption, carbon dioxide production and aerodynamic forces analyses. p0174 A72-21080
  - Relation between a pilot's sensory perception of linear accelerations and the aircraft motion. p0557 A72-45654
  - Analysis of aerodynamic forces causing deviation of limbs and flailing of body extremities following ejection seat bailout at high speed. [NASA-CR-21070] p0145 N72-15121

AERODYNAMIC LOADS. BY BLAST LOADS

AERODYNAMIC NOISE


AERODYNAMIC VEHICLES. BY AIRCRAFT

AIRBORNE

- Computer assisted monitoring of EKG waveforms and heart sounds frequency spectra to detect bubble laden blood during decompression sickness. p0272 A72-26626
- Interactions between gas bubbles and components of the blood - Implications in decompression sickness. p0557 A72-45652
- Ultrasonic technique for bubble detection in biological systems exhibiting decompression sickness. [AD-739700] p0574 N72-28083

AEROSPACE ENGINEERING


AEROSYSTEMS

- Development of concepts to improve selection and training of apprentices in aviation work.
Life support, aerospace medic, and environmental and research facility aspects of Space stations and Skylab

Adaptation of cells to aerospace environments noting cell renewal, resolution, and mutations

Radiation and acceleration effects on structure of cytoplasm in aerospace environments

Analysis of medical and biological problems - associated with life support systems required for extended human subjects during prolonged space flights

Radiation effects in Drosophila due to space environment

Effect of weightlessness and spacecraft environment on spontaneous and radiation induced somatic mutation rates and cytologic changes in Tradescantia

Effect of weightlessness and spacecraft environment on spontaneous and radiation induced somatic mutation rates and cytologic changes in Tradescantia

Aerospace technology transfer to biomedical research problems, including transfer innovations and potential applications

Case report on compensated hemolytic anemia, associated with dilbert syndrome, discussing implication in aviation

Case history of student aviator with psychosomatic musculoskeletal reaction related to vestibular apparatus

Medicosocological surveillance of astronaut pilots during preflight pilot school, stressing time factor in pilot training

Medical equipment advancements through NASA sponsored aerospace research program, describing prosthetic arterial valve, endo-aortic, radiation dosimeter and electromyographic muscle trainer

Functional diagnostics of teeth condition as pilot health factor in stomatological aviation medicine, discussing caries, periodontal disease, and radiation effects

Asthmas evolution and treatment in armed forces airmen, noting acetylsalicylic acid treatment

Hypersensitivities, eust and licheniasis among operating air crews, discussing diagnosis and, relation to arteriosclerosis

Persistent flight unfitness attributable to air service, noting orthopedic traumatic sequelae, cardiovascular illnesses, psychological and ophthalmological causes

Space medical urological problems from experience with Biosatellite 3 monkey, discussing closed catheter conduit system, urinary calcium changes in immobilized animals and urinary dysfunction

Medical evaluation of manned space flight physiological effects, considering Mercury,
Peripheral afferent input to monkey cortical Bussian book on visual sensor signal dynamics
Cat respiratory center activity phase relation to Hembutal barbiturate effects on afferent signals
Visceral afferentation role in vestibular system
Aerospace technology application and transfer Life sciences and space research Proceedings of Biomedical problens of space flight based on Aerospace medicine history and survey of human
Aerospace medicine and exobiology problens of articles on research in space biology and medicine
Recommendations of Joint Working Group on Space medicine and biology - May 1972
Aerospace medicine history and survey of human anatomy and physiology
Annotated bibliography and indexes on aerospace medicine and biology - May 1972
Aerospace technology transfer and utilization in manned space flight
Biomedical problems of space flight based on experiments in stress physiology and stress psychology
Aerospace technology transfer and utilization in medical research and health care
Aerospace technology transfer and utilization in medical research and health care
Liquid and gaseous oxygen accidents involving space, aircraft, and ground systems
Aerospace technology transfer and utilization in biomedical systems
Aerospace technology application and transfer program to biomedical areas
Biological effect of cosmic radiation under flight conditions as analyzed from data collected in experiments conducted during past 40 years
APCS (CONTROL SYSTEM) U AUTOMATIC FLIGHT CONTROL
Afferept Nervous SYSTEMS
Pyramidal tract neuron reactions to antidromic and afferent stimuli in cats, determining somatosensor cortical neurons responses by intra- and extracellular potential outlets
Pog and rabbit sciatic nerve afferent impulse recordings during prolonged sinusoidal vibration of foot
Visceral afferentation role in vestibular system activity from experiments on rabbit stomach and rectus mecanoreceptor stimulation effects on vestibular-ocular motor reflexes
Cat respiratory center activity phase relation to arterial chemoreceptor afferent discharges oscillations effect on lung ventilation frequency
Neural barbiturate effects on afferent signals transmission and thalamocortical level of somatosensory system
Perihemispheric afferent input to monkey cortical afferent neurons of distal forelimb muscle control, using single microelectrode for intracranial stimulation and cellular discharge recording
Russian book on visual sensor signal dynamics covering nerve signal transformation, light stimuli responses, afferent flow, bionics,
AEROSPACE SCIENCES

SUBJECT INDEX

AEROSPACE SCIENCES

Articles on research in space biology and medicine (JPHS-56495)
Aerospace medicine and exobiology problems of manned space flight (JPHS-56675)
Recommendations of Joint Working Group on Space Biology and Medicine for NASA and USSR
Accomplishments and activities of biomedical team concerned with application and utilization of NASA technology (NASA-CR-127792)
Annotated bibliography and indexes on aerospace medicine and biology - May 1972
Aerospace medicine history and survey of human anatomy and physiology
Annotated bibliography and indexes on aerospace medicine and biology - May 1972
Biomedical problems of space flight based on experiments in stress physiology and stress psychology
Aerospace technology transfer and utilization in medical research and health care
Aerospace technology transfer and utilization in medical research and health care
Liquid and gaseous oxygen accidents involving space, aircraft, and ground systems
Aerospace technology transfer and utilization in biomedical systems
Aerospace technology application and transfer program to biomedical areas
Biological effect of cosmic radiation under flight conditions as analyzed from data collected in experiments conducted during past 40 years
APCS (CONTROL SYSTEM) U AUTOMATIC FLIGHT CONTROL
Afferept Nervous SYSTEMS
Pyramidal tract neuron reactions to antidromic and afferent stimuli in cats, determining somatosensor cortical neurons responses by intra- and extracellular potential outlets
Pog and rabbit sciatic nerve afferent impulse recordings during prolonged sinusoidal vibration of foot
Visceral afferentation role in vestibular system activity from experiments on rabbit stomach and rectus mecanoreceptor stimulation effects on vestibular-ocular motor reflexes
Cat respiratory center activity phase relation to arterial chemoreceptor afferent discharges oscillations effect on lung ventilation frequency
Neural barbiturate effects on afferent signals transmission and thalamocortical level of somatosensory system
Perihemispheric afferent input to monkey cortical afferent neurons of distal forelimb muscle control, using single microelectrode for intracranial stimulation and cellular discharge recording
Russian book on visual sensor signal dynamics covering nerve signal transformation, light stimuli responses, afferent flow, bionics,
AEROSPACE SCIENCES

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Recommendations of Joint Working Group on Space Biology and Medicine for NASA and USSR
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Annotated bibliography and indexes on aerospace medicine and biology - May 1972
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Annotated bibliography and indexes on aerospace medicine and biology - May 1972
Biomedical problems of space flight based on experiments in stress physiology and stress psychology
Aerospace technology transfer and utilization in medical research and health care
Aerospace technology transfer and utilization in medical research and health care
Liquid and gaseous oxygen accidents involving space, aircraft, and ground systems
Aerospace technology transfer and utilization in biomedical systems
Aerospace technology application and transfer program to biomedical areas
Biological effect of cosmic radiation under flight conditions as analyzed from data collected in experiments conducted during past 40 years
APCS (CONTROL SYSTEM) U AUTOMATIC FLIGHT CONTROL
Afferept Nervous SYSTEMS
Pyramidal tract neuron reactions to antidromic and afferent stimuli in cats, determining somatosensor cortical neurons responses by intra- and extracellular potential outlets
Pog and rabbit sciatic nerve afferent impulse recordings during prolonged sinusoidal vibration of foot
Visceral afferentation role in vestibular system activity from experiments on rabbit stomach and rectus mecanoreceptor stimulation effects on vestibular-ocular motor reflexes
Cat respiratory center activity phase relation to arterial chemoreceptor afferent discharges oscillations effect on lung ventilation frequency
Neural barbiturate effects on afferent signals transmission and thalamocortical level of somatosensory system
Perihemispheric afferent input to monkey cortical afferent neurons of distal forelimb muscle control, using single microelectrode for intracranial stimulation and cellular discharge recording
Russian book on visual sensor signal dynamics covering nerve signal transformation, light stimuli responses, afferent flow, bionics,
Manipulation of projected afterimages by means of the physiological theory imposed on the observer.

Concurrent-contingent color aftereffects - Retinal area specificity.

Discontinuity of seen motion reduces the visual motion aftereffect.

Investigations concerning the problem of virtual contours in visual perception.

The effect of size, retinal loci, and orientation on the visibility of a single afterimage.

Interactions between spatial and kinetic dimensions in movement aftereffect.

Complete annihilation of briefly presented lines.

The photopigment bleaching hypothesis of complementary after-images - A psychophysical test.

Mathematical model of optical illusions and figural aftereffects.

AGE (CONTROL) U AUTOMATIC GAIN CONTROL

AGE DETERMINATION U CHRONOLOGY

AGE FACTOR

Age and physique effects on human continuous work capacity, monitoring heart rates during task performance.

Age-related diminution in ballistocardiographic and electrocardiographic amplitudes, observing relation to heart position lateralization and size reduction.

Age-related hypoxia resistance and endurance in dogs of various ages, discussing homeostasis, rotation, altitude, ceiling, and survival time.

Doppler ultrasonic probe phonocardiography for human cardiovascular velocity measurement, showing normal training and aging effects.

Electrocardiographic age trends in adult healthy populations, discussing diagnostic implications and overweight, exercise and latent coronary artery disease influence.

Aging effect on visual acuity variations relation to refraction variations in flight deck personnel, noting eye functional value diminution.

Adjustment to subjective horizontal, vertical and 45 degree tilt in dark as function of age in 3-20 year old subjects.

Arterial hypoxemia development during hypoxic: osteogenesis early stages related to age in dogs.

Ventricular andsupraventricular arrhythmias incidence during maximal treadmill exercise in normal man, noting age factor and cardiovascular disease presence effects.

Human body efficiency in paced and un-paced performance as function of age.

EEG measurement of sleep behavior patterns, discussing sleep stages, temporal patterns, circadian rhythms, in-sleep process stability and age factor.

Neodynamic criteria for physical fitness in airmen, discussing age-dependent variations in heart beat, arterial pressure and body temperature.

Physiological index changes in parachutists of various ages, considering plasma recalcification, blood pressure, time, fibrinolytic activity, pressure and heart beat.

Triグルールdepression to age, relative weight and ischemic cardiology probability from ECG, anthropometry and lipid and glucose metabolism studies.

Review of aeromedical records for grounding USAF flying personnel during 1956-1970, noting increased age factor effect.

Chlorophyll population age structure and cell requirements correlation with nutrient medium nitrogen and phosphorus absorption.

Work capacity and physiological responses to maximal exercise in 54 year old men in relation to heart disease and cardiovascular hazard studies.

Developmental relationships between field independence and finiteness-mobility.

Assessment of life span age difference relations in visual perceptual tasks, taking into account maturation and generational differences.

Effect of size, age, and mode of stimulus presentation on information-processing speed.

Age dependence of changes in pupil diameter in the dark.

Echocardiographic investigation of heart rate, sex and normal aging effects on mitral valve leaflet movement in healthy subjects.

Collagen in human myocardium as a function of age.

The scoliosis of congenital heart disease.

Interrelationships of age, attitude and training performance scores for air traffic controllers.

Effect of age on TCT produced hypocalcemia and hypophosphatemia in rats.

Measurement of psychological stress caused by sonic booms during sleep as function of age.

AGGLUTINATION

Light transmission measurements of blood flow to quantify red cell aggregation and dispersion.

AGING (EXOGN)

Erythrocytosis in rats, resulting in prolonged red blood cell survival due to oxygen consumption decrease and altered erythrocyte enzymatic processes.

Viruslike particles in salivary glands, muscles and nerves of normal and gamma-irradiated Drosophila melanogaster, showing age dependent infection.

Blood circulation minute volume and peripheral resistance changes during human aging process, accounting for body weight.

Vascular-capillary study of age related angiarchitectonic features of human brain optic lobe.

Changes of the mitral echocardiogram with aging and the influence of atherosclerotic risk factors.

Aging-induced long-term memory changes in animals.

Natural aging and radiation-induced life shortening in Drosophila melanogaster.

Effects of cosmic rays on cells and aging action of heavy ions on cerebral cortex.

AEROSPACE

Performance of subjects with different cognitive complexity during negotiation in bilateral mode, with mediation, and in presence of observer.

Agriculture

 Lunar horticulture possible role as life support.
AIB PIBACI
AIB POLLOTIOI
AIB BA7IGATIOI
AIB LOCKS
AIB FILTEBS
AIB DEPEHSB
AIB COIDITIOIIIG
AIB BLASTS
AIB PIBACI

Air conditioned underground for use in environmentally controlled suit in sterile chambers [NASA-CASE-LAB-10076-1] p0391 872-26061

AIB AIR TRAFFIC CONTROL

- Terminal area ATC specialists and trainees job attitude and motivation from questionnaire on challenge, tasks, salary, work schedule, etc p0109 872-17865
- Anthropotechnical aspects of aircraft taxiing in airfield runway areas, suggesting computerized operational system p0216 872-22779
- ATC tasks workload assessment. Conference, Darmstadt University of Technology, June 1971 p0218 872-23126
- Human operator role in ATC system analysis, evaluating tasks with respect to job demands and personal fulfillment p0218 872-23127
- Air traffic control systems efficiency evaluation, discussing measures for criteria construct solution p0218 872-23128
- Operator mental processes during ATC task performance, discussing workload effect, mental representation and operator algorithms definition p0219 872-23129
- Operator, task level and workload effects on operative strategy, showing controllers methods modification in ATC center p0219 872-23130
- Landing sequence strategy variations for individual ATC operators, indicating dependence on flight progress data variation, existing maneuvering conditions and controller personality traits p0219 872-23131
- Pilot and ATC radar controller workload variations relation, discussing distraction stress effects p0219 872-23132
- Time analyses of ATC approach controller tasks, developing flow diagram for task component sequencing and quantifying p0219 872-23133
- ATC operator stress factor evaluation from information theory analysis of radio telecommunication information content p0219 872-23134
- ATC task analysis by subjective rating of work load, discussing information processing measures, scoring method and observer rating procedure p0219 872-23135
- Time series analysis of physiological and work study data in ATC tasks, using heart rate as strain indicator p0220 872-23137
- Frankfurt Airport air traffic controller opinion survey of attitudes toward work and working environment p0220 872-23138
- Acceptable load standards in ATC tasks, defining moments of conscious brain control and mental load measure p0220 872-23139
- ATC system analysis by fast time arithmetic simulation techniques, describing ground model development p0220 872-23141
- Air traffic control messages syllabic and word prominence patterns, discussing impact on continuous speech recognition by machine p0224 872-23581
AIRCRAFT BRAKES

Passenger behavioral inaction in survivable aircraft accidents, suggesting maladaptive behavior counteraction by leadership and/or training.

Aircraft accident statistical project 1966-1973 from human error review, analyzing situational circumstance limitations.

Human tolerance limitations related to aircraft crashworthiness.

Response of a seat-passenger system to impulsive loading.


Intoxicating liquor and the general aviation pilot in 1971.

Evaluation of equipment used in aircraft crash response operations.

Impact parameter effects on severity of human cranio-cerebral trauma in aircraft accidents.

Personal observations of 340 fatal aircraft accidents for clarification of lacerations to victims.

Protective helmets designed to lessen effects of head injury due to impact in aircraft accidents.

Use of shoulder harness in general aviation aircraft to prevent or minimize injury during crashes.

Effectiveness of restraint equipment in controlling head impact forces and body kinematics in enclosed aircraft areas.

Analysis of spatial disorientation occurrences among military pilots and classification according to types of aircraft and nature of accidents.

Analysis of military aircraft accidents caused by spatial disorientation.

Statistical analysis of military aircraft accidents to determine incidents caused by spatial disorientation.

Psychophysical and environmental factors involved in aircraft accidents of military aircraft and effect of flying experience in reducing spatial disorientation.

Biodynamic models for determining suitability of energy absorber in protecting seated man from high acceleration aircraft impacts.

AIRCRAFT BRAKES

Foot forces exerted at various aircraft brake-pedal angles, observing 20 degree zone with maximum effectiveness.

AIRCRAFT BREATHING APPARATUS

U-BREATHEING APPARATUS

AIRCRAFT CABIN

AIRCRAFT COMPONENTS

AIRCRAFT CABINROSS

Night Carrier Landing Trainer flight and carrier environment simulator for A-7 aircraft pilot training, discussing performance predictions from computer data analysis.

Pilot landing performance prediction criteria based on day and night carrier qualification trials and flight training.

Factor analysis and statistical criteria for human carrier landing performance criteria.

AIRCRAFT COMMUNICATION

Automation in planning and execution of flights, considering navigation, communication, flight instruments monitoring, control/stabilization and warning systems.

AIRCRAFT COMPONENTS

Effects on threshold luminous intensity and display visibility in aircraft cockpits.

AIRCRAFT CONFIGURATIONS

Technological forecasting of future pilot-aircraft interface requirements.

AIRCRAFT CONTROL

ST HELICOPTER CONTROL

Anthropotechnical aspects of V/STOL aircraft control, discussing instrument and control systems concepts based on development and flight tests of experimental Do-31 VTOL aircraft.

Individual style differences between operators of simulated aircraft control.

Pilot-aircraft system model for relationship between weapons delivery accuracy and manual flight control system design, noting display, computation, and control aids to pilot.

FAA program for revision of aviation training, maximum allowable control forces specifications, taking into account female pilots' capabilities.

Airplane attitude display motion relationship to external world as factor in pilot error due to visual frame of reference shift.

Relationships among isometric forces measured in aircraft control locations.

Lectures on theory of manual-vehicle controls.

Results of the investigation of different extrapolation displays.

Airframe interception avoidance problem solved by differential game theory, discussing human operator decision making for random pursuit tracking.

Measurement of pilot stress in simulated aircraft control tasks.

Contribution of reduced visibility and turbulence to loss of aircraft control and inadvertent aircraft maneuvers.

Mathematical models for describing pilot performance during multiple input-output controller tasks.

Performance of human model in controlling attacking fighter aircraft.

Measurement of maximum isometric forces male subjects can exert at six locations of hand operated aircraft controls.

AIRCRAFT DESIGN

Human factors engineering of aircraft cockpit data entry keyboards on area navigation control and display units.

Aircraft design for acceptable vibration levels, discussing flight vibration and runway response.

Energy absorbing seat design for light aircraft, describing development and static and dynamic testing.

LOX supply systems installation for civil transport aircraft crew and/or passenger breathing oxygen.

Human engineering requirements in aircraft system development.

AIRCRAFT DETECTION

The visibility range when observing an aircraft.
SUBJECT INDEX

AIRCRAFT PILOTS

- Efficiency, navigation aids, meteorological conditions and control procedure factors
- Computerized analysis of display requirements for aircraft longitudinal control in landing approach
- Development and application of training films for instructing pilots in landing T-37 aircraft
- Convergence effects in visual distance perception of pilot during aircraft landing
- Development of an analytical model for determining probability of successful instrument landing and assessment of interaction of factors with flight crew

AIRCRAFT EQUIPMENT

- NT EJECTION SEATS
  - Performance and support requirements of life support systems for aircraft flight crew
- Negative g strap for restraint, and performance during aircraft aerobatics, vibration, and crash impact
- Simulator evaluation of airborne displays used on traffic situation monitors in high density terminal airspace to determine effect on aircraft pilot performance

AIRCRAFT ERRORS

- Boeing 707 rapid decompression at 25,000 feet, noting rivet hole fatigue damage
- Hypoxia incidents in Strategic Air Command due to cabin pressurization malfunction
- Acute toxicity of brief exposures to BF, BC1, H02, and C02 singly and in combination with CO which constitute some products produced in aircraft fires

AIRCRAFT INSTRUMENTS

- Electronic head-up displays for aircraft instrument indication in symbolic form at pilot eye level
- Comparison of human performance in reading aircraft instrument display systems consisting of vertical tape and vertical light emitting diode devices
- Colors for elements of multicolored aircraft display to insure minimum number of instrument reading errors
- Integrated cockpit research procedure used to identify control and display requirements for advanced aircraft
- Prediction and measurement of multichannel pilot performance, and system design implications for pilot capability and limitations
- Assessment of design, aircraft cockpit layout, and display/control system

AIRCRAFT LANDING

- Night Carrier Landing Trainer flight and carrier environment simulator for A-7 aircraft pilot training, discussing performance predictions from computer data analysis
- Workload modification effects on pilot neurobehavioral changes during Boeing 707 jettown, approach and landing
- Pilot landing performance prediction criteria based on day and night carrier conditions...
AIRCRAFT SAFETY

Dislocation and related experiences reported by pilots flying several aircraft types, comparing with previous reports p0074 172-12188

Alerting light and audio signals for aircraft pilots, considering implications for aircraft design p0015 172-11291

Saccadic eye movements significance for jet pilots, noting saccade rate diurnal fluctuations and alcohol and tranquilizer negative effects p0095 172-15800

Pilots' oxygen uptake vs flight time and altitude as indicators of physical condition, noting large fluctuations and differences for individual pilots and different flights p0102 172-16748

Respiratory adaptation to pure oxygen excess pressure after cockpit depressurization from flight simulator tests with pressure-suited pilots, presenting ECG reactions p0102 172-16749

Aero-medical diagnostics for aircraft pilot hearing sense tests, considering cockpit environment and stress-produced impairments in central nervous system p0102 172-16781

Aircraft pilot performance during instrument approach in low visibility conditions p0147 172-15832

Idiopathic subvalvular aortic stenosis, characterized by muscular or membranous obstruction in left ventricular infundibulum, discussing diagnostic importance for pilots p0164 172-20189

Aircraft pilot seating protection from dynamic environment to active vibration isolation, discussing human frequency response characteristics p0269 172-26391

Life support equipment and pressure suit operational requirements from viewpoint of flight crews and test pilots p0283 172-27516

Multivariate analysis of optimal content and form for cardiovascular risk assessment in pilots and air transport personnel p0291 172-28264

Pilots seating active and passive isolation from LF vibrations in helicopters and jet aircrafts, discussing human factors and dynamic environment p0300 172-29558

Aircraft pilot reaction capability for switch activation in response to voice countdown, zone initiation and termination, noting standard deviation p0345 172-31787

Technological forecasting of future pilot-aircraft interface requirements p0087 172-13010

Management procedures to improve training, quality, career development, and duty assignment of military pilots [AD-729760] p0163 172-15107

Distribution of visual aids and display devices in front of aircraft pilots p0191 172-16023

Environmental control and life support systems for aircraft flight crews [AD-732015] p0244 172-18101

Causes of compartment fractures and resumption of duties by Greek pilots after recovery p0259 172-19149

Analysis of effects of alcohol level on performance of aircraft pilots during simulated instrument landing approaches [PA-AM-72-41] p0386 172-24694

Human centrifuge tests to determine aircraft pilot disorientation during aircraft catapult launches p0393 172-25077

Analysis of aircraft pilot reports on occurrence of unreality and detachment during flight, and relationship to spatial disorientation p0393 172-25042

Anthropometry and medical re-evaluation of pilots p0395 172-25055

Radiological spinal examination of combat pilots and limits angle for scoliosis p0395 172-25056

AIRCRAFT SAFETY

Alcohol-induced postmortem fixation systems and detection of alcohol intoxication in pilots p0277 172-25060

Factors contributing to attrition from active airman status, particularly biological and medical characteristics [FAA-AR-72-13] p0400 172-25104

Effects of high intensity anticoagulant light pulses on physiological responses of instrument rated pilots and non-pilots [FAA-AR-72-8] p0306 172-26072

Cholinesterase methods for assessing pesticide poisoning in blood of aerial applicator personnel [FAA-AR-72-12] p0400 172-25060

Fighter aircraft pilot tolerance to sustained linear acceleration [AD-738784] p0474 172-28079

Analytical and experimental evaluation of pilot chine-airbag system utilizing inflatable collar to protect head against violent rotation and loss of consciousness during crashes [AD-724689] p0530 172-30121

Attitude of force pilots returning from Vietnam [AD-746655] p0535 172-31131

Impact of isoniazid on psychomotor performance of aviator instructors [AD-728623] p0564 172-32120

AIRCRAFT SAFETY

Human ejection vestibular injury data in aircraft accidents by cross reference to final medical diagnosis, considering costs and prevention for new systems p0220 172-11714

Safety factors of aircraft flight instruments, discussing altimeter and artificial horizon reading errors and modifications p0300 172-17250

Human factors relation to pressurized cabin development, discussing aircraft pilots, high altitude tests, pressure loss, expeditions and cabin altitude selection p0300 172-17250

Aircraft safety enhancement by computerized flight simulator training of air crews, discussing Boeing 747 program p0148 172-18839

Crashworthy upper torso restraint systems for general aviation, incorporating strap type devices p0160 172-21578

Dynamic deceleration anthropomorphic dummy tests of general aircraft occupant lap belt/shoulder harness restraint systems [SAR PAPERS 720325] p0266 172-25598

Flight crew training programs cost and quality, emphasizing safety and flight simulator application p0278 172-26998

Analysis of pilot performance and response to collision threats provided by pilot warning instruments [FAA-AR-71-54] p0287 172-13082

Recover flow personal ventilation system for reducing thermal stress during aircraft operations [FFPC/HERO-2501] p0353 172-22097

Annnotated bibliography on vestibular functions and aviation safety [FAA-AR-72-41] p0395 172-25055

AIRCRAFT SPECIFICATIONS

FAA program for revision of aviation aircraft maximum allowable control forces and limitations taking into account female pilots capabilities p0299 172-28325

AIRCRAFTS

U-FLIGHT CREWS

AIRCRAFT SURFACE MOVEMENTS

Anthropotechnical aspects of aircraft taxiing guidance in airfield runway areas, specifying computerized operational system p0216 172-22779

Airline Operations

Civil aviation physician duties for airline personnel and passenger benefit, discussing medical advice, health precautions, first aid, training, etc p0176 172-21269

How United trains DC-10 pilots p0252 172-37898
ALLERGIC DISEASES

Human immunological status during prolonged maintenance in bioregenerative life support system, discussing possible allergic reaction to chlorella gaseous metabolites.

ALOSS
AT STAINLESS STEELS
ST STEELS
Materials and designs of protective armor

ALPHA PARTICLES
The influence of molecular binding on the stopping power of alpha particles in hydrocarbons.

ALPHA RADIATION
U ALPHA PARTICLES
ALPHABETIC CHARACTERS
ST DIGITS
Alphabetic characters for small SV type raster displays, describing legibility experiment for character height optimization.

PROXIMITY and direction of arrangement in numeric displays.

ALSTR
U APOLLO LOBAR SURFACE EXPERIMENTS PACKAGE
ALTERATION
U REVISIONS
ALTIMETERS
Safety factors of aircraft flight instruments, discussing altimeter and artificial horizon reading errors and modifications.

ALTITUDE
MT FLIGHT ALTITUDE
MT HIGH ALTITUDE
MT LOW ALTITUDE
MT SIMULATED ALTITUDE
ALTITUDE ACCLIMATIZATION
Acute, short and long term and life-long high-altitude hypoxia exposure effects on pulmonary gas exchange control and efficiency during physical exercise.

Sublethal / radiation effects on rat erythropoietic system during altitude hypoxia acclimatization.

Plasma erythropoietin concentration in men and mice during altitude acclimatization.

Cortisol content in blood plasma, cerebral cortex and skeletal muscles during hypoxia adaptation in rats.

Stepwise adaptation to high mountain conditions: effect on brain and sarral muscle oxidation processes in rats.

Erythrocyte hemolysate cataphoresis studies of human hemoglobin changes during stepwise adaptation to high mountain conditions.

High altitude acclimatization effects on human lung diffusing capacity for carbon monoxide at different oxygen tensions.

Urine and plasma protein and creatinine measurements in acclimatized and unacclimatized men before, during and after high altitude ascent.

Erythrocyte life span in mice under normal atmospheric pressure and various degrees of hypoxia acclimatization, using radioactive labeled doped erythrocytosephosphate fluoride.

Chronic hypoxia adapted rat myocardial tissue sensitivity to increased carbon dioxide tensions.

High altitude hypoxia preadaptation effects on left ventricle myocardial noradrenaline concentration in rats with experimental vitium cordis.

Exercise role in ventilatory acclimatization to graded hypoxia in goats from carbon dioxide response curve measurements.

SUBJECT INDEX

Adrenocortical response to prolonged high altitude hypoxia in hypothalamic desoxycortisone rats showing rapid neural stimulation with delayed humoral activation.

Pressure chamber training effects on rats chain motor reflexes hypoxia adaptation, noting norepinephrine receptors impairment is compensatory-adaptive reactions.

Concentrated and extended learning effects on formation rate and retention degree of conditioned reflex during mice adaptation to high altitude hypoxia.

Stepwise altitude acclimatization and subsequent realization after blood loss caused clinical death effects on dog peripheral blood erythrocytes, reticulocytes, hemoglobin and hematocrit.

Mountain inhabitants cardiocirculatory adaptation to chronic hypoxia, studying coronary flow and myocardial oxygen consumption and efficiency.

Ventilatory peripheral chemoreflex response to hypoxia during physical exercise in native highlanders and altitude-acclimated lowlanders.

Thyroidal influence on myocardial changes induced by simulated high altitude.

Myocardial metabolic changes in chronic hypoxia.

Role of the synthesis of nucleic acids and proteins in the adaptation of the organism to altitude hypoxia.

Cardiac performance and the coronary circulation of man in chronic hypoxia.

Pulmonary gas exchange in Andean natives at high altitude.

Hemopoiesis in the pig-tailed monkey Macaca nemestrina during chronic altitude exposure.

Regional lung function during early acclimatization to 3,100 m altitude.

Lack of effect of high altitude on hemoglobin oxygen affinity.

Hypoxic pulmonary steady-state diffusion capacity for CO and alveolar-arterial O2 pressure differences in growing rats after adaptation to a simulated altitude of 3500 m.

Cardiac output, arterial and mixed-venous O2 saturation, and blood O2 dissociation curve in growing rats adapted to a simulated altitude of 3500 m.

Cardiac hypertrophy, capillary and muscle fiber density: lung fiber diameter; capillary radius and diffusion distance in the myocardium of growing rats adapted to a simulated altitude of 3500 m.


Adaptive processes responsible for natural acclimatization of human organisms to low ambient pressures at high altitudes.

Sorophenetic evaluation of changes in lung structure due to high altitude.

The carotid body in animals at high altitude.

Suprapontine influences on hypoxic ventilatory control.

Genetic aspects of the blunted chemoreflex ventilatory response to hypoxia in high altitude adaptation.
ALTITUDE SICKNESS
Reproducibility of acute mountain sickness severity and duration in individuals under high altitude simulation, noting relationship to hypoxia.

Mountain sickness relation to ventilation response to hypoxia, noting response intensity dependence on peripheral chesoreceptor sensitivity.

Effects of simulated high altitude on renal-aldosterone and Na homeostasis in normal man.

Vascular headache of acute mountain sickness.


Chronic altitude sickness pathology based on anatomical and histological findings in abnormal mountain inhabitants autopsies, comparing with cardiovascular system morphology in normal people.

Heart function and pulmonary circulation in humans suffering from chronic mountain sickness.

Transarterial leakage: A possible mechanism of high altitude pulmonary oedema.

ALTITUDE SIMULATION
Hypoxia induced by hypoxia in rats, discussing colonic temperature during high altitude exposures and seasonal variations.

Human factors relation to pressurized cabin development, discussing aircraft safety, high altitude tests, pressure loss predictions and cabin altitude selection.

Hypoxia effect on aircraft pilot performance during altitude and flight simulation, testing instrument landing approaches.

Physiological evaluation of modified jet transport passenger oxygen mask from altitude chamber experiments.

Physiological and clinical effects of long distance flight in pressurized commercial planes with simulated altitudes over 1500 meters.

ALTITUDE TESTS
MT HIGH ALTITUDE TESTS
Disposable emergency oxygen mask for air passengers based on continuous flow, phase dilution principle, describing altitude chamber tests with human subjects to study physiological responses.

Life support system for rescue crew in altitude chamber tests.

ALTITUDE TOLERANCE
High altitude hypoxia effects on rat myocardial lactate dehydrogenase isozyme complement and anaerobic tolerance.

Hypoxia tolerance among pupil pilots during aeromedical instruction in decompression chamber, obtaining EEG and cardiac rhythm recordings.

Altitude hypoxia resistance and endurance in dogs of various ages, discussing homeostasis retention, altitude ceiling and survival time.

Student pilot syncope during altitude chamber training, discussing physiological mechanism from cardiovascular studies and psychiatric evaluation.

Statistical survey of baroresistinits incidence in U.S. Navy flying personnel during altitude chamber training, discussing diagnostic methods and clinical management.

ALUMINIUM
Biodegradation of coated aluminium by microorganisms.

ALVEOLAR AIR
Lung ventilation nonuniformity determination by single calm breath method, showing nitrogen concentration in alveolar phases.

Single breath diffusing capacity and alveolar dead space measurements for carbon monoxide using respiratory mass spectrometer.

Single breath method for pulmonary diffusing capacity measurement with respect to total lung capacity and inspiration time.

Compression cycles effects on alveolar volumes of sea lions and dogs exposed lungs, noting compression sickness prevention by airways cartilage reinforcement.

Digital computer simulation of circulatory and respiratory systems interaction model for oxygen and carbon dioxide gas exchange between pulmonary blood and alveolar air.

Four-parallel-compartment lung model for emptying pattern study, using expired nitrogen concentration data to calculate alveolar dilation ratio and emptying rate.

Rebreathing studies of carbon dioxide pressure level effect on carbon dioxide content difference in arterial blood and alveolar gas during exercise and rest.

Respiratory frequency and alveolar oxygen and carbon dioxide tension relationship to hypercapnia in man.

Blood oxygenating ability of helium and argon-oxygen environments relative to air, using alveolar gas concentration to predict arterial oxygen pressure.

A model of fluctuating alveolar gas exchange during the respiratory cycle.

ALVEOLI
Electron microscope examination of freeze-etched alveoli extracellular lining layer, discussing sample preparation techniques.

Blood flow stratification effect on alveolar gas exchange in liquid-filled lungs, in dogs from He 133 concentration measurements.


**ABSTRACT TEMPERATURE**

Sheet flow theory for pulmonary alveolar blood flow, discussing blood pressure effects, membrane tension, blood volume and transit time distribution.

Alveolar carbon dioxide pressure-ventilation response curve measurement by Campbell rebreathing method in consecutive daily trials

Cell proliferation in lungs of mice exposed to elevated concentrations of oxygen.

**ABSTRACT ENVIRONMENTAL TEMPERATURE**

Various work-rest cycles and environmental temperature effects on body temperature, determining external auditory canal and core temperature relationship.

Environmental temperature effect on motion sickness sweating, discussing nausea and disorienting symptomology prediction.

Sweating related to body temperature after exhaustive exercise for various oxygen uptakes and ambient temperatures.

**ABSTRACT AMBIGUITY**

Man-machine systems, communication ambiguities due to information misinterpretation involving sense organs, previous experience and expectation bias.

Psychological evaluation of 16PF and MMPI for items ambiguity characteristics.

Annotated bibliography of selected works on ambiguity and its effect on decision making.

**ABSTRACT AMBULANCES**

General aviation patient transportation, investigating military helicopter aviator performance.

**AMIDES**

MT ACETAOLAMIDE

MT UREAS

Esters and amides participation in prebiotic polymers, discussing ribosome bonds and messenger RNA.

**AMINES**

MT ALINE

MT CATECHELAMINE

MT CYSTAMINE

MT DIMETHYLAMINES

MT QUATERNARIES

MT HYDROGEN

MT SIBOROBIN

MT TRIDEPAMINES

Aluminum oxide chromatography for ethanol-amine, acetyl derivatives detection and separation in animal tissue extracts, using water-butanol solution as solvent.

**AMINO ACIDS**

MT GLUTATHIONE

MT METHIONINE

MT GLUTAMINE

MT PEPTIDES

MT PHOTONERIES

MT PYRUVATES

MT TIRBOZINE

MT TRIFURPHAN

Hydrostatic pressure and temperature effects on growth of psychrophilic marine bacteria, emphasizing inhibited amino acid transport and respiration

Molecular evolutionary changes in amino acids of proteins due to muton random fixation, comparing human and fish hemoepolin chains

Evolutionary rate of cistrons in vertebrates, discussing hemoepolin and cytochrome c changes involving amino acid mutation substitution

Cytochrome c X ray structure and molecular evolution rates using amino acid sequence comparative data

**SUBJECT INDEX**

Interstellar formaldehyde and ammonia molecules effects on prebiological amino acids evolution

Protein evolution, discussing biological group amino and nucleic acid structure variations from phylogenetic tree of cytochrome c data

Pathogenes of in-flight lullabry acceleration sensations, discussing amino acid level, protein metabolism rate and pyridoxin metabolism

Fat tissue autolysis rate during hypokinins, discussing relation to free amino acid background changes

Rapid eye movement sleep deprivation and hyperbaric oxygenation influence on gamma-aminoxybutyric acid levels in mice brains, suggesting protective mechanism against nerve cell oxygen intoxication

Amino acid sequences of proteins from living organisms, considering evolutionary process.

Evolutionary significance of primary amino acid or nucleotide base sequences of 0HMs within various phylogenetic groups

Biochemical analysis of cat brain regions for gamma-aminoxybutyric, aspartic and glutamic acids, glycogen and phosphatidylpeptide concentrations during paradoxical sleep deprivation.

The uptake, metabolism and release of C/H/-tamine by retin a in vitro.

Gas dynamics and chemistry of lightning-produced shock waves /thunder/ in postulated pritordial reducing atmosphere, noting amino acid production.

Protein synthesis in the cell-free system of the human thyroid gland

Effects of free amino acid doses and of amino acid metabolism cofactors on the distribution of regional free amino acid reserves in the brain and blood of animals

Amino acid substitution correlation with genetic code in human, bovine, porcine, and salmon calcitonins, suggesting mutation occurrence time during evolution.

Recently published protein sequences.

Wet extraction methods for proteins, amino acids, nucleic acids, enzymes, and other organic compounds in soils

Interstellar formaldehyde and ammonia molecules effects on prebiological amino acids evolution

Physiological effect and therapeutic action of apomorphin sodiun in mice during hypokinesis and isolation

Uroternally produced cavitation events correlation to amoeba cells number decrease under 1 MHz irradiation

In concentration in chromatoid bodies of ribose crystals in Entamoeba invadens, using absorption spectroscopy, electron microprobe and dithiothreitol staining techniques

Uroternally produced cavitation events correlation to amoeba cells number decrease under 1 MHz irradiation

Development of algae, nerve cells, and amphibia eggs applied to space flight

Nosing behavior of salamanders subjected to sensory impairment and manipulative techniques
Digital and analog simulation of deep space rendezvous by astronauts using self-sensing units and considering human reactions and fuel consumption

ANALOG TO DIGITAL CONVERTERS
Image processing of diagnostic echocardiogram by ultrahigh speed analog to digital converter interfacing digital computer
Arterial pressure data recording technique using magnetic tape recorder and automatic conversion to digital form
A system for the mass examination of electrocardiograms
Development of system for processing of cardiac performance data from analog to digital form for direct entry into computer

ANALOG COMPUTERS
Cardiovascular analog computing circuits with outputs for left ventricular pressure maximum rise rate, cardiac stroke volume and atrioventricular conduction time
Dynamic electrocardiography with analog computer program to detect, count and classify atypical ventricular depolarization complexes
Design of a specialized analog computer for online monitoring of cardiac stroke volume by means of modified version of pressure pulse contour method
On-line analog display system for cardiovascular functions and heat-by-heart cardiac output derived from single aortic blood flow measurement
Development of system for processing of cardiac performance data from analog to digital form for direct entry into computer

ANALOG DATA
Digital and analog simulation of deep space rendezvous by astronauts using self-sensing units and considering human reactions and fuel consumption

ANALOG TO DIGITAL CONVERTERS
Image processing of diagnostic echocardiogram by ultrahigh speed analog to digital converter interfacing digital computer
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ANALOG COMPUTERS
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On-line analog display system for cardiovascular functions and heat-by-heart cardiac output derived from single aortic blood flow measurement
Development of system for processing of cardiac performance data from analog to digital form for direct entry into computer
Subject Index

Alcohol ingestion effects on vestibular responses 0056 A72-1847a
Mathematical model for semicircular canal dynamic response to angular acceleration, emphasizing role of perilymph over endolymph in cupula displacement 0155 A72-19491
Doe thyroid gland structural changes under repeated radial acceleration, noting atrophic process and autonomous reactions 0329 A72-29334
Alcohol ingestion effect on vestibular responses to angular acceleration and Coriolis stimulation, discussing spontaneous and subjective responses 0343 A72-31050
Airline pilot rotation perception during angular acceleration tests, noting power law description of subjective motion for three major body axes 0377 A72-33649
Effect of impact angular acceleration on human body under emergency conditions-aircraft ejection 0561 A72-32100

Angular Motion

Angular Acceleration

Effect of inhalation of freon 113 on laboratory animals 0176 A72-20897
Influence of vision on susceptibility to acute motion sickness in subjects exposed to translational accelerations in rotating room 0189 A72-16003
Vestibular response parameters estimated by test procedure using short triangular waveforms of angular velocity about Y and Z axes 024A A72-18097

Anesthesia

Anaerobic Starvation effects on male rats, mice and guinea pigs hepatic drug metabolism, discussing ethylmorphine, p-nitroanisole and aniline 0014 A72-11262

Animals

Effects of air pollution on livestock health and feed-effect of feeding factor in productivity 0264 A72-19387
Effects of air pollution on livestock health and feed-effect of feeding factor in productivity 0264 A72-19388
Automatic pair feeding device for controlled feeding of test animals 0313 A72-21052
Bioelectric and histochemical changes in brain of hibernating animals 0356 A72-23071
Biological effects of gravitational forces on animal microcirculatory system 0249 A72-19076
Critical review of research on assimilation of nitrogen by higher organisms 0383 A72-28075
Sensor and motor psychology studies with trained animals 0297 A72-25081
Nocturnal orientation by amphibians using moonlight 0299 A72-25095
Effects of toxic methyl isobutyl ketone vapor on physiological processes in dogs, monkeys, and rats during 90 day continuous exposure 0400 A72-25012

Anesthesiology

Effects of high pressure on physiological systems in animals and plants 031 A72-25043
Oxygen starvation effects on functions of animal endocrine system 0383 A72-29069

Subject Index
ANISOTROPIC MEDIA
Hydroxyapatite isotropic and anisotropic elastic properties compared with experimentally observed anisotropic behavior of bone
0008 A72-10625
ANISOTROPY
Polarization measurements and optical model for anisotropic areas in eye tissue
0013 A72-15060
ANNUAL VARIATIONS
Hypothermia induced by hypoxia in rats, discussing colonic temperature during high altitude exposures and seasonal variations
0004 A72-10214
Meteorological-astrochronological diurnal and seasonal environmental rhythms simulation for psychological stress analysis in long term space missions
0028 A72-29322
Seasonal rhythms of endocrine system in hibernating mammals, discussing central and peripheral biological clocks in relation to hypothermia and pancreas/thyroid gland
0031 A72-32100
Time series analysis of meteoropathological disturbances human regulation mechanisms, investigating annual variations diurnal rhythms
0019 A72-12977
ANOMALIES
O ABNORMALITIES
Anoxia
High altitude hypoxia effects on rat myocardial dehydrogenase isozyme complement and anoxic tolerance
0032 A72-12834
Thyroidal influence on myocardial changes induced by simulated high altitude.
0041 A72-174730
Acute myocardial anoxia - anatomical changes and their possible relation to pathological processes.
0013 A72-28981
Anoxic tolerance of the heart muscle in different types of chronic hypoxia.
0041 A72-28981
Anoxygenic strain effects on ionizing radiation damage and repair of deoxyribonucleic acid in Escherichia coli
0082 A72-12028
ANTARCTIC REGIONS
Computer analysis of clothing and human acclimatization to Antarctic Region
[AD-738071]
Evaluations of human cold acclimatization during stay in polar regions.
0033 A72-21055
Human physiologic reactions and pathology in Antarctic acclimatization.
0031 A72-29662
Clinical evaluation of human physiologic acclimatization processes in Antarctica.
0033 A72-29662
Physiologic characteristics of human cold acclimatization in Antarctica.
0033 A72-29665
Psychophysiological factors of human adaptation to Antarctic life.
0034 A72-29666
Sleep patterns of human adaptation to Antarctic life.
0034 A72-29667
Polar light review of human blood systems during Antarctic life.
0034 A72-29668
Oxygen saturation of human blood during prolonged stay in Antarctic region.
0034 A72-29669
Spirographic examination of human pulmonary functions during stay in Antarctica.
0034 A72-29670
ANTARCTICA
U ANTARCTIC REGIONS
ANTARCTIC COUPLING CIRCUITS
ANTHROPOLOGY
Bibliography of anthropological documents on human body size and biochemical characteristics of Air
A-26
SUBJECT INDEX
Force personnel
[AD-743029]
ANTHROPOMETRY
Anthropometric data utilized for military pilot/aircraft compatibility evaluation, discussing cockpit exclusion code development and implementation
0029 A72-23824
Chamois leather mechanical reactions comparing stress relaxation and frequency response characteristics to human skin for applications in anthropometric density construction
0030 A72-32606
Anthropometric data for tary divers electra and analyzed for mean, standard deviation, skewness, and kurtosis.
[AD-72950]
Anthropometric data comparing length of relaxed hand with flat straightened hand
[AD-711138]
Anthropometry of flying personnel in Royal Swedish Air Force for application in design of cockpits and aircraft equipment.
0044 A72-15116
[RAE-LIB-TRANS-1502]
Anthropometric requirements for entrance into naval flight training programs
[AD-735101]
Anthropometry and medical re-evaluation of pilots
0035 A72-21067
Anthropometry and medical re-evaluation of pilots
0035 A72-25055
Feasibility analysis for use of anthropomorphic dummy, animal, and skin in biological modeling and scaling for impact damage prediction
[AD-740843]
0025 A72-30089
ANTIDRUGS
Beta-adrenergic blocking effects on canine coronary and systemic hemodynamic adaptation during treadmill exercise.
0026 A72-25802
Systemic hemodynamics in borderline arterial hypertension - response to static exercise before and under the influence of propranolol.
0044 A72-27773
Effect of beta-adrenergic blocker on plasma volume in human subjects.
0044 A72-38029
ANTIFUNGALS
AD PHENICILLINS
Antibiotic polypeptide synthesis of gramicidin S and tyrocidine, using primitive model of sequential addition of amino acids on polypeptides.
0034 A72-12949
ANTIBIOTICS
Beta-adrenergic blocking effect on plasma volume
0026 A72-21055
Antimicrobial study of rat liver homogenate.
0041 A72-28924
The production and characterization of specific antibodies to aldosterone
0053 A72-18875
Increased radioresistance in mice by mobilization of antigenic supplements for astronauts.
0042 A72-29661
ANTICHOLINERGICS
Elevated cortical potentials changes from emotional visual word stimuli stress under amvazol.
0037 A72-21194
ANTICHLORHYDRIA
U MOUNTAINS
ANTICLIMAX MOUNTAIN
ANTICOAGULANTS
Human coagulating and anticoagulating blood systems changes due to emotional stress during parachute jumps, noting plasma recalcification time increase.
0071 A72-15233
Ascorbic acid influence on blood coagulation and anticoagulation systems in dogs with acute hypoxia, discussing plasma recalcification time and heparin tolerance
0029 A72-28217
ANTIDHDERTOGENS
Renal clearance studies of left atrial distention effect in dogs, indicating diuretic hormone inhibition mechanism of diuresis
0037 A72-27828
ANTIGENS
Dietary antigenic supplements for astronaut immunology during prolonged space flight conditions.
APOLLO 13 FLIGHT

Temporal relation of the second heart sound to aortic flow in various conditions.

Aortic regurgitation variation with respiratory sinus arrhythmia and respiratory cycle in dogs during tachycardia and bradycardia.

APOLLO FLIGHTS

Biochemical and physiological effects of Apollo flight diet, noting no significant variations in serum electrolytes, endocrine values, body fluids and hematologic parameters.

Ground and flight crews coordinated effort in Apollo mission operations, noting experts on ground and spacecrew spot judgments capability.

Red cell mass plasma volume decrease in Apollo mission crews, indicating erythropoiesis inhibition.

Astronauts physiological and psychological reliability, discussed Apollo flights and prolonged missions to other planets.

Bioastronautic results of Apollo space flight biomedical operations, discussing weightlessness, sleep impairment, motion sickness, preventive medicine, etc.

Light flashes seen by Apollo astronauts caused by ionization in retina by cosmic nuclear [NASA-CR-125453] 

High T particle measurements by polycarbonate plastic dosimeter on Apollo astronauts.

Radiochemical analysis of Apollo astronaut wastes for radiation absorption dosage.

Characterization and origin of light flashes seen by astronauts onboard Apollo 11, 12, 13, and 14.

APOLLO LUNAR SURFACE EXPERIMENTS PACKAGE

ALSEP human engineering design criteria for crew interface, describing astronaut trainer.

APOLLO PROJECT

Apollo manned mission real time ground support computer simulation for NASA flight controller training to maximize flight crew safety.

Development and evaluation of freeze dried vegetables to be used in Apollo food system.

Specific aspects of Apollo health and quarantine programs considered for potential application to broad program required for protection of life and health of US astronauts in future manned space flight.

APOLLO SPACECRAFT

Zero-gravity open type urine receptacle for Apollo command module.

Biinstrumentation for improving Apollo biomedical ground monitoring system.

APOLLO 11 FLIGHT

Carbon compound distribution on moon from Apollo 11 samples, comparing with earth data.

APOLLO 12 FLIGHT

Apollo 12 asterial effect on tobacco tissues cultures, noting pigment increase.

Determining radiation exposure of astronauts by gamma analyses of neutron activated fecal samples from Apollo 12 and 13 missions.

APOLLO 13 FLIGHT

Determining radiation exposure of astronauts by gamma analyses of neutron activated fecal samples from Apollo 12 and 13 missions.
Simulation of emergency occurring on Apollo 13 flight and development of procedures for employing lithium hydride canisters to reduce ambient carbon dioxide levels.

Apollo 14 Flight.
Apollo 14 food system, describing new items, improvements in production methods, packaging, and preparation with emphasis on rehydratable foods.

Analysis of vegetable seedlings grown in contact with Apollo 14 lunar surface fines.

Postflight analysis of Apollo 14 cryogenic oxygen system.

Apollo 15 Flight.
Radiochemical technique for determining radionucleides present in urine and feces of Apollo 15 astronauts.

APPENDIX

U EQUIPMENT

APPENDICES

NT ARM (ANATOMY)

NT FOOTWEAR

NT HAND (ANATOMY)

NT KNEE (ANATOMY)

NT LEG (ANATOMY)

APPLIED SCIENCES

Mathematical methods for treating biomedical problems in chemotherapy, radiotherapy, and mental health.

APPROXIMATION

GT FINITE ELEMENT METHOD

APSIDAL ANGLES

G ANGLES (GEOMETRY)

APTITUDE

Aptitude screening test of ATC training applicants, using directional heading determination under aural-distraction.

Interrelationships of age, aptitude measures, and training performance scores for air traffic controllers.

Development of motion picture test for determining aptitude of human subjects for air traffic duties.

Validity of aptitude tests for air traffic controller selections.

Motion picture test for air traffic control aptitude for use in personnel selection and evaluation.

Development and application of multiple task performance tests for preliminary screening of air traffic control trainees.

AQUAFIC BACTERIA

Aqueous formaldehyde effects on Bacillus subtilis spores, showing sporostasis due to germination inhibition and sporocidal, due to temperature dependent inactivation.

Water-soluble insulin receptors from human lymphocytes.

APOLLO 14 FLIGHT

Apollog-14 flight analysis of Apollo 13 cryogenic oxygen system.

Aphoic regions

Medical aspects of human cold acclimatization.

Arctic regions

Exposure to cold and ice conditions by aviators.

Argon

Coronary blood flow measurement in various hemodynamic conditions by argon technique, determining oxygen consumption and coronary vascular resistance.

ASBESTOS

Biological effects of argon laser on retinas of monkeys.

ASPIRATION

Biocomputerized simulation.

ASSEMBLIES

MT ARM (ANATOMY)

Human arm arterial pressure and flow pulsations numerical analysis, constructing electrical analog circuit from mathematical model.

Human body movements basic kinematics, measuring static forces, angle and tangential acceleration of horizontal arm swings.

Electrophysiological determination of muscular compliance during arm movements, using on-line analog computer.

Physical conditioning effect on central and peripheral circulatory responses to arm work, measuring cardiac output at 80 percent maximum aerobic power.

Human arm muscle motor neuron reflex response to rectangular pulse excitation of ulnar nerve.

Hand steadiness during unrestricted linear arm movements and eye-hand coordination tasks, showing tremor occurrence in up-down plane.

Development of analytical model for determining probability of successful instrument approach and control stick movements.

Target acquisition by systems with unaided acceleration control or rate control with exponential time lag, discussing number-of-approach and control stick movements.

Development of analytical model for determining probability of successful instrument landing and assessment of interaction of factors with flight crew.

Atrophy threshold in human arm muscles.

Human hand-arm system vibration characteristics, describing mechanical impedance measurements for theoretical modeling.

Analysis of arm performance subjected to external load during crank turning task.

Experimental research on movements in large joints of arm.

ARMED FORCES

Armored forces (foreign).

Armored forces (United States).

NAVY

Adverse biomedical effects of noise on man in military environment.

Soviet research in military human factors engineering.

Airborne forces (foreign).

Methods for measurement of the state of health.

Clinical causes for permanent grounding of German armed forces flying personnel.

Neuropsychiatric and other causes for permanent grounding of French Air Force flying personnel.
Ten year analysis of medical factors in flying and flight training in Greek Air Force

Description of routine cardiologic program to determine flight fitness for German Air Force

Long term electrocardiograms in analysis of rhythmic heart disturbances of German Air Force

Physiological factors possibly contributing to coronary risk among German Air Force pilots

Nasal and aural disorders and flight fitness in German armed forces

Ophthalmological reasons for grounding pilots of German Air Force

Possible diabetes mellitus in flight crews, Canadian Air Force

Psychiatric reasons for permanent grounding of flight crew members in Royal Air Force

Psychological factors in pilot grounding in German Air Force

Personnel management system in aeronautical engineering service of East German Air Force/Air Defense

Job performance test for determining effectiveness of O-1 helicopter used by Vietnamese air force

Maintenance personnel job performance test for O-1 helicopter used by Vietnamese Air Force

ARD Forces (UNITED STATES)

Decompression sickness treatment in USAF hyperbaric oxygen chambers

Role of flight surgeon and physician-pilot in evaluation and treatment of jet fighter pilots

Trends and factors related to medical causes for grounding flyers, based on USAF School of Aerospace Medicine experience

Medical practice, management, and reasons for grounding in relation to Air Force flying personnel

Operation of, and medical cases reviewed by, Navy Special Board of Flight Surgeons

Cardiac conditions as factor in evaluation flight fitness of Air Force personnel

Factors in medical suspensions of Air Force flying personnel

Early aptitude-achievement discrepancies as predictors of voluntary withdrawal from naval aviation training

Effects of Q forces on injuries during ejection/extraction escape in USAF

USAF training of airbase skills in ground environment

Application of systems engineering concept to US Coast Guard aviator training programs

Automated technical training devices for Air Force instruction program

ABSORB

Development of materials for providing flotation capability for personnel wearing body armor

Materials and designs of protective armor

AROUSAL

Human vestibulo-ocular responses to oscillatory rotational stimulation during various sleep and arousal stages, discussing Single-Jones reflex system mathematical model

Short sleep period and oxygen breathing effects on arousal level of air traffic controller during detection task performance

Circadian rhythm effects on introverts and extraverts biochemistry, physiology and performance, suggesting arousal mechanism differences

Effects of nocturnal jet aircraft noise on physiological arousal patterns in sleeping humans

ARRHYTHMIA

Ventricular ectopic arrhythmias from treadmill exercise in patients observed during ECG monitoring

His bundle electrocardiography for arrhythmia studies, discussing conducting tissue potential recording, ventricular delay and block site determination and electrophysiological effects of drugs

Arrhythmias relation to coronary artery disease, discussing conduction defects, sudden death propranols and prevention and digitalis as antiarrhythmic agent

Pamplon cardiacopathy detection by electrocardiography noting arrhythmias, ventricular hypertrophy, abnorral Q waves and intraventricular conduction defects

Quotient of arrhythmias relation to physical work load, noting heart rate amplitude and frequency variations

Atherosclerosis, chest pains and arrhythmias - Conference, Brussels, October 1970

Ventricular and supraventricular arrhythmias incidence during arsial treadmill exercise in normal man, noting age factor and cardiovascular disease presence effects

ECG, physical exercise and drug use in diagnosis and aeromedical evaluation of supraventricular arrhythmia, presenting case histories of pilots with wandering cardiac pacemakers

Hyperthermia effects on cardiac arrhythmias, through a saline bridge in the diagnosis of...

Heart rate variability in a binary choice reaction task - In evaluation of some scoring methods

Aortic regurgitation variation with respiratory sinus arrhythmia and respiratory cycle in dogs

Continuous ECG monitoring method /acacoregram/ for arrhythmia patters recognition in intensive care units

Analysis of intracavity electrocardiograms through a saline bridge in the diagnosis of cardiac arrhythmia

Experimental and clinical studies in treating digitalis carried cardiac arrhythmias with sodium citrate using heart patients and dogs

Hyperthermia effects on cardiac arrhythmias, arterial pressure, and respiration in dogs and electrocardiographic effectiveness in diagnosing threatening onset

Measurement of arrhythmia in relation to physical and mental work loads
AETIOLOGY OF CHANGES OF THE MITRAL ECHOCARDIOGRAM WITH AGEING

LIPID, AND GLUCOSE METABOLISM DISTURBANCE.

ARTERIOSCLEROSIS

LEVELED RELATION TO AORTICHEMOTRICHART DISEASE.

THYROID PARENCHYMA ATROPHY FROM AUTOIMMUNE THYROIDITIS.

BLOOD LIPID LEVELS AND DIETARY HABITS IN RELATION TO ARTERIOSCLEROSIS.

LIPID METABOLISM ABNORMALITY RELATION TO HYPOTHYROIDISM LEADING TO ARTERIOSCLEROSIS.

BLOOD GLUCOSE LEVELS AND DIETARY HABITS IN RELATION TO ARTERIOSCLEROSIS.

DIETARY AND PHARMACOLOGICAL TREATMENT OF ARTERIOSCLEROTIC HYPERTENSION FROM LIPID-SUGAR BALANCE AND LIPID EFFICACY STUDIES.

NEGATIVE AND POSITIVE EMOTIONAL STATES INFLUENCE ON BLOOD CHOLESTEROL AND ARTERIAL PRESSURE LEVELS IN DOGS, SUGGESTING COMMON SUBCORtical GENESIS OF ARTERIOSCLEROSIS AND HYPERTENSION.

SERUM CHOLESTEROL, PHOSPHOLIPID AND LIPOPROTEIN LEVELS RELATION TO ARTERIOSCLEROTIC HEART DISEASE OCCURRENCE IN STAFF PERSONNEL

CLOFIBRATE TREATMENT FOR ARTERIOSCLEROSIS.

CAROTID VEIN DISEASE PREVENTION AMONG SABENASAC PERSONNEL.

HYPOXIC THEORY FOR ARTERIOSCLEROSIS FORMATION, NOTED IN BLOOD PLASMA PROTEIN CONCENTRATION EFFECTS ON OXYGEN DIFFUSION.

CHANGES OF THE MITRAL ECHOCARDIOGRAM AGEING AND THE INFLUENCE OF ARTERIOSCLEROTIC RISK FACTORS.

NEURODYNAMIC INDICES IN FLIGHT CREW PERSONNEL DURING HYPERTONIC SICKNESS AND ARTERIOSCLEROSIS OF CORONARY ARTERIES.

A SPECIAL VITAMIN COMPLEX FOR PROPHYLAXIS OF ARTERIOSCLEROSIS IN AVIATION PERSONNEL.

ANIMAL STUDIES OF EFFECT OF CHRONIC EXERCISE ON THE HEART AND ARTERIOSCLEROSIS - A REVIEW.

CLINICOECHOGRAPHIC CORRELATIONS IN ANDERSON PECTORAL MAP WITH AND WITHOUT MYOCARDIAL INFARCTION.

B-V INTERVALS IN LEFT BUNDLE-BRANCH BLOCK - CLINICAL AND ELECTROCARDIOGRAPHIC CORRELATIONS.

ARTHRITIS

TWO STAGE DESCRIPTION OF MIDDLE QER ECARTICL CHRONIC POLYARTHRITIS, NOTED IN ARTICULAR AND VASCULAR WALL TISSUE NERVIOS.

ARTHRITIDES

BT BEES

BT BEETLES

BT CRABS

ARTIFICIAL GRAVITY

ARTIFICIAL HEART VALVES

ARTIFICIAL INTELLIGENCE

ARTIFICIAL SATELLITES
ASBESTOS

ASBESTOS
Lungs fibrosis and cancer caused by asbestos fibers inhalation, noting environment control for protection against workers health hazards.

0265 AT2-25548

ASBESTOS reinforced plastics safe handling and manipulation ensured by regulations provided precautions.

0265 AT2-25549

ASCENT

ASCENT

ASCORBIC ACID

Anasorbic acid influence on blood coagulation and anticoagulation systems in dogs with acute hypoxia, discussing plasma recalification time and heparin tolerance.

0290 AT2-28217

ASCORBIC ACID METABOLISM

Enzyme activity and ascorbic acid concentration as an index of rat thyroid gland tissue functional activity during hyperthermia.

0305 AT2-31098

ASHES

ASHES
Skeletal bone ash content in man and primates, implying differences due to adaptive physiological function.

0227 AT2-23736

ASPHYXIA

Hypertrhemia, asphyxia and ionizing radiation effects on rat immunology defense mechanisms against particulate antigens.

0375 AT2-33555

ASSAULTING

U ATTACKING (ASSAILING)

ASSESSMENTS

ASSESSMENTS

ASSESSMENTS

MT TECHNOLOGY ASSESSMENT

Subjective probability distributions for random device-generated Bernoulli process unknowns, discussing distribution medians and quartiles and hypothetical sample impact assessment techniques.

0095 AT2-15812

ASSIMILATION

Complete assimilation of briefly presented lines.

0346 AT2-48150

Keldahl semi-micro and mass spectroscopic methods.

For studying atmospheric nitrogen assimilating ability of small embryos.

[NASA-TT-F-14273]

0382 AT2-24069

Critical review of research on assimilation of nitrogen by higher organisms.

[NASA-TT-F-14274]

0383 AT2-24075

ASTHMA

Asthmatic evolution and treatments in armed forcing aircrews, noting acetylcholine test.

0176 AT2-21270

ASTHMONIA

Neural effects on human visual resolution of horisontal and vertical gratings, resulting from early abnormal visual inputs due to asthmonia.

0230 AT2-24348

ASTHROLOGY

U EKIOLOGY

ASTRONAUT LOCOMOTION

Experimental investigation of an astronaut maneuvering scheme.

0429 AT2-37026

ASTRONAUT MANUFACTURING EQUIPMENT

Medical and technical aspects of rescue and survival of astronauts in high mountain and mountainous remote areas.

0409 AT2-34434

Digital and analog simulation of deep space rendezvous by astronauts using self maneuvering units and considering human reactions and fuel consumption.

0087 AT2-13089

Development of unstablized propulsion devices for astronaut maneuvering in zero gravity - Skylab program.

[NASA-TS-D-6674]

0261 AT2-19169

ASTRONAUT PERFORMANCE

MT BLACKOUT PREVENTION

Astronaut zero gravity adaptive response in performance, locomotion, orientation, sleep, and psychological and functional characteristics.

0055 AT2-13867

Soviet book on astronaut activity psychological features covering space flight living conditions, space and time perception.

0265 AT2-25549

SUBJECT INDEX

as psychophysiologic mechanism changes and weightlessness effects.

0056 AT2-14246

Artificial gravity effects on space station crew performance, discussing unusual mechanical and perceptual phenomena.

0107 AT2-17715

Medicobiological investigations of prolonged weightlessness effects on astronaut physiological system based on Soyuz flight program.

0230 AT2-24409

Ground and flight crews coordinated effort in Apollo mission operations, noting experts on ground and spacecraft spot judgments capability.

[AAIA PAPER 72-226]

0270 AT2-26557

Russian book on medicobiological principles of air and space pharmacology covering stress and fatigue reduction and pilots and astronauts performance improvement.

0288 AT2-27926

Astronauts physiological and psychological reliability, discussing Apollo flights and prolonged missions to other planets.

0339 AT2-30677

Medical investigations during Salyut space station flight, discussing weightlessness effects and efficiency evaluation of preventive measures for crewsmembers high performance in space flight.

0366 AT2-31918

Psychological and physiological parameters correlation for astronaut functional state relating to emotional tension level during ground and flight tests.

0376 AT2-33563

Russian book - Space aerokinetics.

0409 AT2-40300

Biological rhythms origin and mechanisms, discussing 24-hour cycle, subcellular-biological clock and rhythms disruption effects in speleologists, astronauts and pilots.

0508 AT2-41985

Psychic adaptation of man to a long-duration stay in space.

0508 AT2-41988

The prediction of condition of man during a space flight.

0508 AT2-42067

Motor activity capability of an astronaut in flight.

0509 AT2-42220

Effects of weightlessness on astronaut flight.

0539 AT2-43385

Operator visual perception capacity under different conditions in spacecraft.

0522 AT2-14076

Physiological and physical effects of space flight on visual perception of astronauts.

0335 AT2-15051

Selection, training, and performance of astronauts during actual and simulated space flight - USCSS.

0386 AT2-24096

Abstract on artificial gravitational environment for maintaining physiological processes and astronaut workability during prolonged space flight.

0477 AT2-28103

ASTRONAUT TRAINING

ALSEP human engineering design criteria for crew interface, describing astronaut trainer.

0068 AT2-15100

Soviet space crews selection and training based on professional and scientific background, emphasizing psychological qualities for working compatibility in space environment.

0225 AT2-23672

Some aspects of survival and rescue of astronauts in polar regions.

0409 AT2-34435

Russian astronaut training in aircraft for IVA and EVA in space.

[JPSS-54649]

0087 AT2-13076

Abstract on space biology and medical research in cosmonaut training.

[JPSS-55687]

0312 AT2-21043

Training of cosmonauts for prolonged space flight.

[JPSS-56181]

0346 AT2-26081

ASTRONAUTES

Calcium metabolism perturbations in astronauts under weightlessness conditions and in immobilized test subjects, noting bone tissue.
### Atmospheric Pressure

**Atmospheric Chemistry**
- Gas dynamics and chemistry of lightning-produced shock waves (Nuhms/ in postulated primordial reducing atmosphere, noting amino acid production)
  - p0151 A72-19245
- USAEC 1970 progress report on radioactive atmospheric processes and effects on plant life
  - [BNL-1551-VOL-2-PT-1]

**Atmospheric Composition**
- Atmospheric moisture
  - Planetary atmospheres composition diversity, discussing evolution of Mars, Venus, earth and Jupiter from primitive solar nebula
  - p0164 A72-22012
- Microorganisms effects on oxygen and compounds cycles, leading to changes in oxygen distribution in earth crust, hydrosphere, atmosphere and biosphere
  - p0224 A72-23592
- Life on Mars, investigating ground based and probe observations of atmospheric composition and pressure, surface temperature and features and UV radiation
  - p0284 A72-27624
- Hypoxia effect on aircraft pilot performance, using Link GT 7 trainer and controlled composition atmosphere under varied altitude conditions for simulated ILS landing approaches
  - p0297 A72-28313
- Relaxation phenomena in the biological carbon cycle under conditions of variable atmospheric CO2-content.
  - p0412 A72-34897
- Inert gas effects on embryonic development.
  - p0515 A72-26746
- Effects of atmospheric composition on intestinal glucose metabolities in rats
  - p0121 A72-14071
- Influence of biological processes on cycling of selected atmospheric gas constituents
  - p0381 A72-20457

**Atmospheric Density**
- Diving operations medical aspects significance for manned planetary surface exploration in high density atmospheres, considering protective clothing, breathing apparatus and gas mixtures, etc.
  - p0280 A72-27415

**Atmospheric Impurities**
- U air pollution
  - p0332 A72-29929

**Atmospheric Models**
- Dynamic models
  - Atmospheric model for proteins abiogenesis, considering heteropolypeptides forastation from hydrogen cyanide and water
  - p0061 A72-14772

**Atmospheric Moisture**
- Ordinary and macroporous structured polycrystalline oxidation-reduction polymers synthesis, discussing application to organic impurities removal from atmospheric moisture condensates
  - p0101 A72-16665
- Sanitary-hygienic evaluation of the extraction method for water recycling in atmospheric moisture condensates
  - p0491 A72-40435

**Atmospheric Physics**
- Visual fields of luminous objects in earth atmosphere
  - [IFA-SR-36]
  - p0535 A72-31124

**Atmospheric Pressure**
- Increased atmospheric pressure influence on blood coagulation in rabbits, showing post-decompression hypercoagulation followed by hypo-coagulation
  - p0225 A72-23597
- Low pressure chamber as aerospace medical diagnostics tool for flying personnel examinations regarding oxygen deficiency, low air pressure and air pressure fluctuations tolerance
  - p0361 A72-30819

### Subject Index

- renewal cycle modification, calcemia variations and bone calcification
- Meteorological-astrological diurnal and seasonal environmental rhythms simulation for psychological stresses alleviation in long term space missions
  - p0328 A72-23932
- Astronaut selection criteria for training and optical measuring instruments for assessing visual responses during labor and sports activities
  - p0376 A72-33564
- Thermal environment control for astronauts
  - p0092 A72-10130
- Measurement of radionuclide content in feces and urine of Apollo astronauts caused by ionization in retina by cosmic nuclei
  - p0192 A72-16034
- Proton penetration calculations for tissues of astronauts in simulated spacecraft environment bombarded by solar flares and radiation belt protons
  - p0207 A72-17618
- Determination of light flashes seen by Apollo astronauts by analysis of urine salts and raw feces in gamma ray spectrometers
  - p0117 A72-14007
- Proton penetration calculations for tissues of astronauts in simulated spacecraft environment bombarded by solar flares and radiation belt protons
  - p0207 A72-17623
- Astronaut selection criteria for training and compatibility in spacecraft environment
  - p0245 A72-18109
- Astronaut selection criteria for training and compatibility in space mission environment
  - p0245 A72-18109
- Characterization and origin of light flashes seen by astronauts onboard Apollo 11, 12, 13, and 19
  - p0383 A72-20726
- Portable life support system for astronaut working outside of lunar module
  - p0402 A72-27109
- Optical measuring instruments for assessing visual standards in astronaut selection
  - p0529 A72-30115

**ATA**
- Tandem walking on floor with eyes closed as ataxia test for vestibular function assessment
  - p0284 A72-27476

**Clinical Tandem Walking Test**
- Ataxial battery test performance in detecting vestibular problem
  - p0351 A72-22683
- Revised normative standards of performance of men, women 16-60 years, on quantitative ataxia test battery
  - p0352 A72-31103

**Atletocines**
- Pulmonary atelectasis and arterial-venous shunting and heart displacement prevention during centrifuging of dogs breathing carbonated liquid fluorocarbon in water immersion respirator
  - p0270 A72-26609

**Athletes**
- Atypical ECG of sportsmen, considering repolarization disorders due to ischemia, lesion, arrhythmia and conduction signs
  - p0168 A72-20575
- Longevity and cardiovascular mortality among former college athletes
  - p0558 A72-45689
- Biotelemetric measurements of physiological responses during labor and sports activities
  - p0311 A72-20148
ATMOSPHERIC TEMPERATURE

- Flying personnel auditory defects caused by environmental conditions, discussing aircraft noise, vibrations and atmospheric pressure effects (p0099 A72-40929)
- Speech intelligibility during exercise at normal and increased atmospheric pressures (p0511 A72-02496)

ATMOSPHERIC TOLERANCE

- Effect of environmental temperature on sweat onset during motion sickness (p0531 B72-31102)

ATOMIC ENERGY

- U NUCLEAR ENERGY
- U NUCLEAR EXPLOSIONS
- U ADENOSINE TRIPHOSPHATE (ATP)

ATTACK

- Exercise and denervation effects on intrafusal muscle fibers morphology, noting 29-33 percent cross-sectional area atrophy in nuclear bag and chain fibers (p0066 A72-14989)
- Atrophy threshold in human arm muscles (p0132 B72-15027)
- Hypokinesia effects on rat skeletal muscles (p0250 B72-19085)
- Atrophy and cytochemical changes in rat skeletal muscles caused by hypokinesia (p0250 B72-19086)
- Atrophy of rabbit leg muscles caused by prolonged hypokinesia (p0251 B72-19090)
- Effect of microorganisms on growth and destruction of malignant tumors (p0383 B72-24072)
- Effect of diabetes mellitus on spinal impact tolerance in Rhesus monkeys (p0526 B72-30096)

ATTACK AIRCRAFT

- MT FIGHTER AIRCRAFT

ATTACHING (ASSAULTING)

- Performance of human model in controlling attacking fighter aircraft (p0435 B72-26077)

ATTENTION

- Selective attention dichotic listening test as flying proficiency prediction criteria, discussing omission and commission errors (p0153 B72-19351)
- Book on sustained attention/vigilance, discussing effects of signal frequency, magnitude and distribution, task complexity, noise, age, intelligence, etc (p0159 A72-19910)
- Character recognition experiments to determine attention control and temporal/spatial capacity limitation during visual information processing (p0278 A72-27074)
- Self-estimated distractibility in subjects related to attention lapses during perceptual motor performance, including psychophysiological changes (p0296 A72-28307)

AUDIO

- Divided attention effect localization, using choice tracking task reaction time in sequential trial model for human information processing (p0322 A72-29952)
- Experimental tests of Voth-Nawan hypothesis of autokinesia mediation by attention distribution mechanism (p0427 A72-36904)
- Repression-sensitization and duration of visual attention (p0428 A72-36917)
- Human performance on tracking tasks under divided attention demands (p0359 B72-23088)
- Effect of auditory distraction on Stroop color-word interference performance tests (p0404 B72-25132)

AUDIOLOGICAL

-Review of neurophysiological mechanism involved in selective attention (p0472 B72-28067)

ATTENUATION

- BT ACOUSTIC ATTENUATION
- BT THERMISTORS

ATTITUDE (INCLINATION)

- MT TAN

ATREXIA

- Receptive fields of units in the visual cortex of the cat in the presence and absence of bodily tilt (p0555 A72-38046)

Tilt table tests for orthostatic tolerance, measuring heart rate, blood pressure and responses of fainters and nonfainters (p099 B72-41020)

Human vestibular tolerance in rotating chairs at differing head tilt positions (p073 B72-14078)

Effects of specialized auditory stimuli on human performance of spatial orientation tasks (p074 B72-25112)

ATTITUDE CONTROL

- MT DIRECTIONAL CONTROL
- LONGITUDINAL CONTROL

ATTITUDE INDICATORS

- Airplane attitude display motion relationship to external world as factor in pilot error due to visual frame of reference shift (p0345 B72-31151)

ATTRACTION

- Psychological tests to judge maximum and minimum nonphysical subjective attraction forces between two parallel bars (p0408 A72-36919)

AUDIO EQUIPMENT

- BT MICROPHONES

Use of perception to recognize patterns generated by audio preprocessor located after cockpit cochlear system (p0832 A72-21086)

Conventional and high frequency audiograms of prop, jet, and rotary pilots (p087 A72-29098)

AUDIO FREQUENCIES

- Perceived noise level correction for background noise effects based on frequency band NR (p0161 A72-20170)

Monaural prestimulatory loudness adaptation measurement by delayed and simultaneous balance methods, discussing intensity, frequency and duration effects (p0982 A72-21996)

Audiovisual measurement of error due to attitude distribution in nonfliers and fliers (p087 A72-28081)

AUDIO VISUAL EQUIPMENT

- BT TRAINING DEVICES

AUDIOLOGY

- Audio medical diagnosis for aircraft pilot hearing sense tests, considering cockpit environment and stress-produced impairments in central nervous system (p0102 A72-16781)

German book - Hearing, voice, balance /Physiology of the senses II (p0517 A72-42784)

The physiology of hearing, I -The middle and the inner ear (p0517 A72-42785)

AUDITORY

- Directional hearing perception threshold in normal and auditory-defective patients, studying frontal and median planes for rising and falling noise frequencies (p020 A72-11740)

Flight helmet optimal fitting technique, using automatic recording audiometer and mechanism for acoustic leakage detection (p0064 A72-14877)

Right ear prevalence in hearing process determined by dichotic-speech audition (p0073 A72-15584)

Hearing damage scaling methods, discussing audiometric effects of noise and damage risk criteria (p101 A72-20169)

Monaural prestimulatory loudness adaptation measurement by delayed and simultaneous
AUDITORY SENSATION AREAS

Hydrogen and ear drum evoked auditory potentials and cortical responses to 0.2 millisecond voltage pulse acoustic stimuli

Determination of the functional state of the auditory analyzer through the action of short-term acoustic stimuli of increasing intensity

An aspect of the problem of pitch dependence on the duration of short sinusoidal signals

Effect of electrical excitation of various auditory analyzer levels on a conditioned motor reflex

Display device design and human operator training based on visual and auditory sensation and perception principles, emphasizing fitting between man and information

Reactions of auditory cortex neurons to ociculococlear fiber stimulation

Susceptibility of chinchilla ear to damage from impulse noise

Quantitative characteristics of auditory cortex response in anesthetized cats to sound from different directions

Doppler frequency discrimination in high background noise of rotary winged aircraft

Auditory intensity discrimination, signal detection, and receiving characteristics

Effect of middle ear muscle contractions on hearing and echo processing in Mustache Bat

Measurement of auditory nerve response to loud sounds

Cerebral cortex potentials evoked in man by perceived and not perceived acoustic stimuli

Auditory loss and recuperation of guinea pigs using sonic boom 8-wave

Comparison of two methods of riating messages

Influence of biological rhythm on daily periodical hearing in person subjected to prolonged noise

Literature survey and review of factors which perceived and not perceived acoustic stimuli

Evoked potentials of the primary auditory cortical zone produced by positive and inhibitory conditioned stimuli

Dependence of inhibitory areas of inferior colliculus neurons on the time characteristics of acoustic stimuli

Subjects INDEX

Auditory sensations

Responses of anesthetized cats to acoustic stimuli

Quantitative characteristics of auditory cortex response in anesthetized cats to sound from different directions

Medical research abstracts on limulus visual analyzer, electronic neuron model development, and auditory adaptation in horseshoe crab

Auditory signals

Alerting light and audio signals for aircraft pilots, considering implications for aircraft design

Vibratoctile warning device effectiveness under auditory and visual loads, investigating reaction time and errors number

Head-up omnidirectional two dimensional auditory display device for visual detection facilitation in aircraft collision avoidance systems

Preferences for signaled unsignaled noise from psychophysical test of rate discrimination between standard and attenuated auditory signal intensities

Response bias and sensitivity variations in psychophysical test of rate discrimination between standard and attenuated auditory signal intensities

Energy detection model for transient overshoot in tonal signals masked by narrow band auditory stimuli, discussing masking produced by gated sinusoid

Effect of fringe on masking-level difference when dating from uncorrelated to correlated noise.

Reaction time to the second of two shortly spaced auditory signals both varying in intensity.

Training in identification of sound characteristics in sound classification task

Auditory intensity discrimination, signal detection, and receiving characteristics

Pilot performance and reaction time in response to auditory signals during low level helicopter flight

Measurement of auditory nerve response to loud sounds

AUDITORY STIMULI

Bats auditory cortex electrical responses to ultrasonic stimuli, determining maximum sensitivity frequency range

Nocturnal auditory stimulation frequency effects on human orienting reaction habituation and sleep onset

Human trace responses generation and storage under light stimuli reinforcement of sounds conditioning from salivary skin reactions observation

Human cortical auditory evoked response to speech and sound effects, relating ETC interhemispheric wave amplitude asymmetry to stimulus meaningfulness

Cat auditory cortex neurons response to auditory and somatic patterns body electrical stimulation

Effect of electrical excitation of various auditory analyzer levels on a conditioned motor reflex

Evoked potentials of the primary auditory cortical zone produced by positive and inhibitory conditioned stimuli

Dependence of inhibitory areas of inferior colliculus neurons on the time characteristics of acoustic stimuli

A-36
Jet aircraft noise effect on sleeping EEG and subsequent waking performance, showing presence of carry-over effects

Cat auditory cortex neurons response to auditory and medial geniculate body electrical stimulation

Periodic, continuous and aperiodic white noise effects on human serial decoding performance, relating subjective and autonomic responses

Vigilance effects for noise or vibration stimuli duration judgment task performed with or without simultaneous mental arithmetical task

Compensatory tracking task performance with continuous error information feedback via visual, auditory or electrocutaneous displays

Aircraft pilot reaction capability for switch activation in response to voice countdown, tone initiation and termination, noting standard deviation

Human cerebral hemodynamic changes during arousal and orienting reactions to auditory stimuli

Auditory display in dual-axis compensatory tracking task, discussing performance measures in terms of squared error integral and human operator describing functions

Lateral inhibition in auditory perception proved by psychophysical study of nervous activity stimulus patterns, noting erroneous measurement of pure tone masked threshold

Energy detection model for transient overshoot in tonal signals masked by narrow band auditory stimuli, discussing masking produced by gated narrow band auditory stimuli, discussing masking produced by gated narrow band auditory stimuli

Auditory display in dual-axis compensatory tracking task, discussing performance measures in terms of squared error integral and human operator describing functions

Subjective index:

Jet aircraft noise effect on sleeping EEG and subsequent waking performance, showing presence of carry-over effects.

Cat auditory cortex neurons response to auditory and medial geniculate body electrical stimulation.

Periodic, continuous and aperiodic white noise effects on human serial decoding performance, relating subjective and autonomic responses.

Vigilance effects for noise or vibration stimuli duration judgment task performed with or without simultaneous mental arithmetical task.

Compensatory tracking task performance with continuous error information feedback via visual, auditory or electrocutaneous displays.

Aircraft pilot reaction capability for switch activation in response to voice countdown, tone initiation and termination, noting standard deviation.

Human cerebral hemodynamic changes during arousal and orienting reactions to auditory stimuli.

Auditory display in dual-axis compensatory tracking task, discussing performance measures in terms of squared error integral and human operator describing functions.

Lateral inhibition in auditory perception proved by psychophysical study of nervous activity stimulus patterns, noting erroneous measurement of pure tone masked threshold.

Energy detection model for transient overshoot in tonal signals masked by narrow band auditory stimuli, discussing masking produced by gated narrow band auditory stimuli.

Auditory display in dual-axis compensatory tracking task, discussing performance measures in terms of squared error integral and human operator describing functions.
AUTOMATA THEORY

Mechanism

AUTOMATA THEORY
Problems of complex object modeling based on
heuristic self-organization

p0427 A72-36904

Semi-automatic methods for airlines crew scheduling

p0556 A72-45509

Mathematical modeling, automata theory, speech
synthesis, and mechanical model of heart and lungs

p0405 A72-25135

AUTOMATIC CONTROL
MT ADAPTIVE CONTROL
MT AUTOMATIC FLIGHT CONTROL
MT AUTOMATIC GAIN CONTROL
MT DYNAMIC CONTROL
MT FEEDBACK CONTROL
MT FEEDFORWARD CONTROL
MT LEARNING MACHINES
MT OPTIMAL CONTROL
MT SELF ADAPTIVE CONTROL SYSTEMS
MT TIME OPTIMAL CONTROL

Data display techniques in man operated automatic
control system, assessing information volume
versatility and operability

p0269 A72-26451

Automatically controlled delay in self-excited
pulsating systems based on artificial muscles

p0454 A72-38466

An automated instrument for monitoring the quality
of recovered water

p0461 A72-39161

Human consciousness and choice role in biological
control processes; automatic to define differences
between manual and automatic control systems

p0502 A72-61405

Man in a control circuit during an information
phase test

p0557 A72-45520

Automatic volume control for recording complex
signals with broad frequency band on ultrasonic
Doppler cardiograms

p0076 A72-12007

Future prospects of cybernetics

p0682 A72-12039

Automatic control device for regulating inlet
water temperature of liquid cooled spacecru

p0142 A72-15098

Formation scheme for automatic control of
information resources and document display
system for personnel

p0261 A72-19167

Automatic analysis of ECG at rest, during and
after exercise with two computer systems

p0395 A72-25052

Automatic temperature control for liquid cooled
space suit

p0408 A72-25129

Behavior of man in technical, and socioeconomics
control systems

p0437 A72-26194

AUTOMATIC CONTROL VALVES
MT PRESSURE REGULATORS
AUTOMATIC DATA PROCESSING
U DATA READING
AUTOMATIC FLIGHT CONTROL
Development trends in airborne man machine flight
control, discussing optimal solution between
human pilot and machine in relation to total
system performance and economic factors

p0217 A72-22789

AUTOMATIC GAIN CONTROL
Gain control of cat retinas rapid light adaptation
process to autonomic signals reaching retinal
dendritic cells from photoreceptors

p0300 A72-27299

Gain control and contrast sensitivity in the
vertebrate retina

p0409 A72-34418

AUTOMATIC PATTERN RECOGNITION
U PATTERN RECOGNITION
AUTOMATIC PATTERN
Reccognition of relationship between system
design, training variables, and operation
maintenance performance on automatic pilots

p0410 A72-13491

AUTOMATIC VOYAGE PATTERN RECOGNITION
U COMPUTERIZED SIMULATION

SUBJECT INDEX

AUTOMATIC TEST EQUIPMENT
Considerations in the design of an automatic
visual field tester

p0429 A72-37013

Automatic biocompatibility testing of cells

p0248 A72-19071

Automatic pair feeding device for controlled
feeding of test animals

p0312 A72-21052

Pressure ramp programmer for automatic blood
pressure recording during exercise

p0313 A72-21070

Automated visual sensitivity tester for
determining visual field sensitivity and blind
spot size

p0317 A72-21079

AUTOMATION
Automation in planning and execution of flights,
considering navigation, communication, flight
instruments monitoring, control, stabilization
and warning systems

p0216 A72-22780

Automatic ECG recording and analysis by electronic
data processing equipment, discussing methods of
data acquisition and transmission for routine
diagnosis and prophylactic mass examinations

p0286 A72-27821

AUTOMOBILE ACCIDENTS
Impact tests to obtain skull fracture data for
Federal Motor Vehicle Safety Standard

p0005 A72-11092

Test procedures and resulting data from
preliminary vehicle tests of inflatable occupant
restraint systems - Vol. 2

p0005 A72-11092

Airbag and seat belt analysis as restraints in
serious injury European car collisions

p0256 A72-19130

Structural crashworthiness performance of
conventional automobiles and performance of
structural devices designed for protection

p0258 A72-19142

AUTOMOBILES
Automobile crash tests to determine effectiveness
of inflatable occupant restraint systems

p0008 A72-10118

Test procedures and resulting data from
preliminary vehicle tests of inflatable occupant
restraint systems - Vol. 2

p0008 A72-10118

Graphs illustrating dummy accelerations and other
data obtained in preliminary vehicle tests of
inflatable occupant restraint systems

p0005 A72-11092

Photographs of vehicles used in preliminary tests
of inflatable occupant restraint systems

p0006 A72-11092

Test procedures and instrumentation used in
preliminary vehicle tests of inflatable occupant
restraint systems

p0006 A72-11092

Restraints for passengers in automobiles

p0046 A72-19122

Analysis of pedal operation by seated operator
with application to design of foot controls for
automobiles and other equipment

p0316 A72-21089

Influence of sensory pattern and alcohol on
vehicular velocity sensing

p0531 A72-31096

Combined shoulder harness and lap belt restraint
system for use in aircraft or automobiles

p0536 A72-31117

AUTONOMIC NERVOUS SYSTEM
MT SYMPATHETIC NERVOUS SYSTEM
Cardiac output and autonomic nervous system role
in hemodynamic response to acute thoracic
superior vena cava constriction

p0018 A72-11651

Beta-adrenergic and vagal blockage altered
autonomic control effects on left ventricular
function in conscious dogs, noting heart rate,
stroke volume and end-diastolic and end-systolic
diameters

p0170 A72-12090

Simulated sonic boom effect on tracking
performance and autonomic response, noting heart
rates, skin conductance and startle reflex

p0170 A72-17868

Autonomic blockade effects on reifler bradycardia
due to phenylephrine induced arterial pressure
in man during rest and supine exercise

p0170 A72-20688
Dynamic orthosympathetic control of cardiovascular system, studying efferent efferent link between autonomous centers and effector cells.

p0179 A72-21588

Autonomic nervous system role in controlling coronary and cardiac responses to hypoxic hypoxia, measuring blood flow with Doppler ultrasonic flow transducer.

p0297 A72-28313

Venous nerve re-generation in humans after stomach cancer surgery.

p0325 A72-28779

Respiratory and vasomotor autonomic centers functional state relation to vestibular system from labyrinth electrical stimulation and shaking experiments.

p0336 A72-30387

Role of the autonomic nervous system in the hypoxic response of the pulmonary vascular bed.

p0426 A72-36572

Hypothalamic control of the electrical activity of the spinal cord.

p0496 A72-40598

Cortical effects mechanisms in animal vegetative systems, noting biological oxidation and organic phosphorus compound studies.

p0897 A72-40759

Localization and structural-functional organization of the system of venous nerve nuclei constituting the 'cardiac center' of the medulla oblongata.

p0506 A72-41673

Prediction of vegetative reactions in the case of stress and extreme effects upon the organism.

p0508 A72-62069

Respiration control mechanism ensuring adaptation to power requirements and chemical environment, maintenance in tissues, considering brain stem location.

p0551 A72-44600

Gravitational stress effects on neurons in autonomic nervous ganglia of cats.

p0249 N72-19077

Effects of motion sickness on autonomic nervous system role in ventilatory-respiratory-vasomotor reflexes.

p0388 N72-24108

Effects of sleep deprivation and work-rest cycles on human performance and automatic and central nervous systems.

p0532 A72-31104

Autopilots

U AUTOMATIC PILOTS

AUTOTHERM

AVIATION

U AERONAUTICS

AVIATORS

U AIRCRAFT PILOTS

AVIONICS

Recent research applicable to the design of electronic displays.

p0827 A72-36902

Aerodynamics

U COLLISION AVOIDANCE

Heat exposure effect on Sidman avoidance performance in rats, discussing organism thermoregulatory capacity disruption and shock and body temperature regulation.

p0301 A72-12525

Aircraft interception avoidance problem solved by differential game theory, discussing human operator decision making for random pursuit tracking.

p0557 A72-45523

AXES

Functional organization and neurophysiological mechanisms of return corticothalamic system in aesthesic alligatores, showing aural and visual presynaptic depolarization.

p0324 A72-28762

Visual cortex neuron reactions to anticoagulant stimulation of cat pyramidal tract, noting axon activation increased discrimination in animals.

p1010 A72-28781

Neuronal fiber and synaptic axonal contact structure of cat spinal gray matter in corticospinal, rubrospinal and reticulospinal terminal zones by Golgi method.

p0493 A72-40579

The ultrastructure of the lateral basilar region of the spinal cord.

p0693 A72-40581

Supraspinal effects in the activity of preganglionic sympathetic neurons delivering axons to the cervical sympathetic centers.

p0587 A72-40599

The effect of membrane parameters on the properties of the nerve impulse.

p0507 A72-41936

ANESDES

MT LACTIC ALANIDE

MT THYMOphan

B-52 AIRCRAFT

Crew compartment vibration environment in B-52 aircraft during low altitude, high speed flight.

p0401 N72-10127

Backus

Dry heat resistance of bacillus spores on spacecraft metal surfaces for different pressures, atmospheres and materials.

p0073 A72-15261

Acetone formaldehyde effects on Bacillus subtilis spores, showing sporostasis due to germination inhibition and sporocidie due to temperature dependent inactivation.

p0377 A72-33772

The effects of various cure cycles upon the viability of Bacillus subtilis Var. nigri spores within solid propellant.

p0423 A72-36437

Lactate dehydrogenase from an extremely thermophilic bacillus.

p0509 A72-44850

Temperature effects on destruction of Bacillus subtilis as function of relative humidity in spacecraft sterilization.

p0239 N72-18063

Regulation mechanism of alpha-acetoxyhryrocdyl synthetase properties in Bacillus cereus T.

p0240 N72-18072

Survival data for Bacillus subtilis spores and microorganisms in simulated space UV solar flux and vacuum.

p0523 N72-30071

Backscatter

Aircraft accident in the Faroe Islands in 1970 - Observations from a medical point of view, with special reference to spinal fractures.

p0610 A72-34556

Background noise

Perceived noise level correction for background noise effects based on frequency band SRB.

p0361 A72-20170

Cryogenic Josephson function magnetometer in magnetocardiography, discussing high ambient noise levels in unshielded environment.

p0279 A72-27280

Interactions of signal and background variables in visual processing.

p0519 A72-24931

Effect of background radio chatter on performance of pilots in training.

p0041 N72-10125

Doppler discrimination in high background noise of rotary winged aircraft.

p0314 N72-21056

Background radiation

Dark adaptation with logarithmically time decreasing background luminance, noting threshold time lag variation with rate of background change.

p0158 A72-19827

Achromatic and chromatic thresholds during dark adaptation against varying background luminances, noting trend change at transition from cone to rod function.

p0158 A72-19828

Effect of target-background luminance contrast on binocular depth discrimination at photopic levels of illumination.

p0071 A72-34679

Determining effective flashing light intensity as function of duration and area at threshold and
suprathermal luminescence with different background luminances  [AD-728587]  

**BACKSCATTERING**

Effects of high intensity anticollision light pulses on physiological responses of instrument rated pilots and non-pilots  [FAC-A-72-08]  

**BACTERIA**

- **BT BACILLUS**
- **BT CLOSTRIDIUM BOTULINUM**
- **BT ESCHERICHIA**
- **BT HYDROBACTERIA**
- **BT PHENOCOCUS**
- **BT SALMONELLA**
- **BT STAPHYLOCOCCUS**
- **BT STREPTOCOCCUS**

Hydrotrophic pressure and temperature effects on growth of psychrophilic marine bacteria, emphasizing inhibited amino acid transport and respiration  

Space flight biological effects on lysogenic bacteria and human cells in culture  

Fugent system and primary photosynthesis evolution, using comparative analysis of bacteriochlorophyll, bacterioviridin and chlorophyll  

Bacterial respiration through oxidative phosphorylation origin hypotheses, discussing photosynthesis and sulfite respiration in anaerobic atmosphere and thiothrix and aceroxenic evolution in oxygen atmosphere  

Thin layer chromatography technique for rapid quantification of bacterial cell dehydrogenase tritohydrase, using microscope ultraviolet photometer  

Thermophilic tricarboxylic acid cycle in psychrophilic Clostridium at moderate temperatures  

Biological experiments on plants, animals and bacteria aboard Zond 5, 6 and 7 space probes, noting flight conditions effect on physiological functions and terminal structures  

Ionic and hydrosoluble interactions effects on microcosmic lysozyme phosphide stabilization process  

Spacecraft bacteria population resistance to simulated Jovian trapped radiation belt electrons and solar wind protons, noting dependence on isolate, dose and electron energy  

Isolation of extremely halophilic carbohydrate-utilizing bacteria, using acid fermentation from various sugars as carbohydrate metabolism index  

Studies of the electron transport chain of extremely halophilic bacteria. VII - Solubilization properties of manganous reductase  

Survival of common terrestrial microorganisms under simulated Jovian conditions  

Cytosplastic heredity theory linking mitochondria origin to bacteria  

Mathematical model of two-component alga-bacteria biocenosis  

Functional reliability of the biological component of a life support system  

Effects of simulated space vacuum on bacterial cells  

Engineering process of obtaining bacteria free water from human waste during extended space mission  

Data acquisition and data analysis of microspectrophotometric data in presence of noise  

**SUBJECT INDEX**

Development of facility and technique for producing nutritional single cell bacteria from waste sugarcane bagasse  [NASA-CE-123368]  

Efficiency of biotransfer shift and detection and types of bacteria found in spacecraft components  [NASA-CE-125416]  

Effect of composition of gas mixture on growth of bacteria assimilating gaseous hydrocarbons  [NASA-CE-128199]  

Effect of flight conditions and prolonged ground storage on viability and radioresistance of hydrogen bacteria cells  [NASA-CE-127645]  

Feasibility of chemiluminescence method for monitoring sterility of reclaimed water using tape sample transport system  

Clinical observation of constant diet, minimal oral hygiene, and simulated weightlessness on microbial populations in human dental plaque  [AD-735275]  

Biological effects of Zond 5, 6, and 7 flight on plants, animals, and bacteria  

Bacteria detection of urine using bioluminescent reaction of ATP with luciferin and luciferase  

PCE cold sterilization of nutrient media  [NASA-TP-7-14587]  

Survival of bacterial isolates exposed to simulated Jovian trapped radiation belt electrons and solar wind protons  [NASA-CE-127560]  

Mathematical model for algal-bacterial community during nonsterile cultivation of Chlorella  

Effects of dry heat on bacteria spore growth at 125c C at Cape Kennedy  [NASA-CE-127769]  

Bacterial degradation of organophosphorus insecticide parathion  [NASA-CE-127911]  

Terminal decontamination of rooms by gaseous formaldehyde  [NASA-TP-7-14564]  

Effect of various magnesium salts on luminescent intensity and duration in phosphorescent bacteria  [NASA-TP-7-14543]  

Development of bactericide agent for space shuttle tape sample transport system  [NASA-CE-123902]  

Isolation of an active polyvalent bacteriophage for Aerobacter aerogenes. Arthrobacter crystallopoietes. Escherichia coli, Klebsiella pneumoniae, and Aerobacter aerogenes.  

Use of plasma cleaning and Anger spectroscopy to remove and monitor organic contamination on Viking spacecraft surfaces  [NASA-CE-128302]  

A re-evaluation of material effects on microbial release from solids  

Effect of flight conditions and prolonged ground storage on viability and radioresistance of hydrogen bacteria cells  [NASA-CE-125943]  

Bacteriophage synergistic inactivation by heat and ionizing radiation from kinetic model describing dose rate and temperature dependences  [NASA-113-18185]  

Isolation of a polyvalent bacteriophage for Escherichia coli, Klebsiella pneumoniae, and Aerobacter aerogenes.  

Effects of gamma radiation and weightlessness on cell growth of Salmonella typhimurium or induction of bacterial prophage  [EXPT-P-11517]  

Ballistic missiles RT MINUTEMAN ICBM  

Ballistocardiography and clinical studies - conference, Atlantic City, 2 May 1970  

Ballistocardiography and clinical studies - conference, Atlantic City, 2 May 1970  [PO-72-13141]
SOMATIC INDEX

Idiopathic hypertrophic subaortic stenosis
Ballistocardiography, measuring ventricular function by angiography
Regular sinus rhythm bundle branch block effect on ballistocardiogram dynamics
Ane related diminutions in ballistocardiographic and electrocardiographic amplitudes, observing relation to heart position, lateralization and size reduction
Ballistocardiographic measurement of net cranial blood inflow during cardiac ejection
Hf ballistocardiogram in erect position, noting tracing quality in Stabr table
Ballistocardiographic and anergiographic correlations of ventricular function in patients with idiopathic hypertrophic subaortic stenosis
Correlation between ergometry, ballistocardioangiography and coronary angiography in 267 patients.
Mathematical models for flow ejection and acute pressures based on displacement ballistocardiography and time dependent incompressible flow theories respectively
Some preliminary observations on the correlation of the high frequency acceleration/ body ballistocardiogram with the apex cardiomax, carotid pulse and its derivatives.
Computerized simulation of ballistocardiograph, subjective evaluation and objective manual measurements, correlating heart beat with ideal patterns
Digital computer technique for ballistocardiogram simulation, using distributed parameters for vessel segments in circulatory system model
Two-mass system as human body dynamic model in ballistocardiography, outlining transfer function parameter calculation procedure
A large-scale model of the human cardiovascular system and its application to ballistocardiography.
: (JACOH PAPER 72-407-0)
Bandpass filters
Design of digital low pass and bandpass filters for analyzing biomedical data for diagnostic purposes
(BIOP-710217-1)

BANDWIDTH

BANDWIDTH

BANKING FLIGHT

BARODYNAMIC BALLISTOCARDIOGRAPHY

BLOOD PRESSURE

BLOOD PRESSURE

BARORECEPTORS

Cat mean renal nerve activity modification by hypoxemia stimulation and baroreceptor reflex interactions, discussing mean aortic pressure variation effects
Carotid sinus counterpressure as baroreceptor stimulus in intact dog, recording arterial pressure response in closed loop gain
FAD-7398051
Control parameters of the blood-pressure regulatory system. I - Heartbeat sensitivity.
Six day bed rest effect on external respiration and subcutaneous tissue oxygen metabolism, noting oxygen consumption decline

Prolonged bed rest induced muscular activity restriction effect on arterial and venous tone in different body areas

Disproportional changes in hematocrit, plasma volume, and proteins during exercise and bed rest

Calcium metabolism under stress and in response

Health condition changes in test subjects during strict bed rest in hypokinetic recumbent and antithoraxistic position subject to lower body negative pressure

Hemo-topiographic investigation of cerebral, pulmonary, and peripheral circulation during bed rest in antithoraxistic position

Cardiac output, hemodynamic and gas exchange variations as function of basal metabolism and antithoraxistic position

Opthalmoscopic, photocalibrometric and ophthalmodynamometric examinations of test subjects visual acuity during bed rest in hypokinetic antithoraxistic position

Otochinoarysoplastic organ response during hypokinetic antithoraxistic/bed rest for control, exercising and muscular electric-stimulated groups

Physical training as a prophylactic measure against the hypodynamic syndrome

Metabolic changes in healthy humans caused by prolonged bed rest in horizontal position, noting prevention by physical exercises and electric muscle stimulation

Cerebral blood filling reduction and blood vessel tone deterioration during 120 day clinostatic hypokinesia of healthy male subjects

Induction of hemodynamic deterioration by the hypovolemic state - An evaluation of mechanisms and prevention.

Efects of prolonged bed rest on physical work capacity, tilt-table tolerance, and urinary calcium excretion

Hazards of bed rest in therapeutic measure

BERRS

Magnetoreception and orientation in dancing bees

BENTLETS

Physiological and biological mechanisms responsible for anemoneptatic orientation in beetles and scorpions

BEHAVIOR

Magnetic orientation and behavior in a Kelvin model

ST DECOMPOSITION

Behavior concept formulation for visceral systems, considering digestive system data and extension from motor function concepts

Behavior alterations in pepper plant, Capsicum annum, in response to weightlessness, rotation, vibration, and acoustic stress

Behavior of computer generated visual system

BELL MILITARY AIRCRAFT

U MILITARY AIRCRAFT

BENDING MOMENTS

Human spine elastic deformation due to bending stresses, presenting statistical data on

A BIBLIOGRAPHY

Annotated bibliography and indexes on Aerospace medicine and biology - Oct. 1971

Annotated bibliography of radiation hazards

Annotated bibliography of water purification and decontamination including recycling of closed ecological systems for potability of water

Annotated bibliography of published articles on short term memory

Annotated bibliography of codes, standards, procedures, specifications, and reports relating to contamination control

Bibliography of basic reference to multivariate analysis using response surface methodology and application to human factors engineering

Annotated bibliography on noise pollution and associated effects on human performance

Bibliographies of research reports and publications in radiation biology

Bibliography concerning germ free animal research

Bibliographies on preserving biological materials for potability of water

Bibliography concerning effects of noise and weapon blast

Bibliography concerning germ free animal research

Bibliography on noise pollution and associated effects on human performance

BIBLIOGRAPHIES

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Bibliography of basic reference to multivariate analysis using response surface methodology and application to human factors engineering

Annotated bibliography on noise pollution and associated effects on human performance

Bibliographies of research reports and publications on biodynamics and biosignals

BIBLIOGRAPHIES
BIOASSAY

Biocatalytic eye function characteristics during isometric and anisometric vision

Deterioration of dynamic visual acuity with increasing speed of object under observation

Effects of abnormal binocular parallax cue on space perception judgment

Biocatalytic disparity tolerances of pilots viewing dynamic head-up displays

Depth judgements of Mach-Bronk phenomenon induced by cyclic, intermittent stimulation to assess eye coordination in binocular vision

BIOASSAY

Microbiological examination of space hardware, discussing viable organisms neutralization buried inside solid materials, sampling procedures and culture media

Nonsterile space flight hardware effects on planetary quarantine, evaluating contamination sources, design and mission parameters, cleanliness conditions and bioload

Free radicals participation in cell membrane biopotential generation mechanism, comparing properties of proteins molecules with semiconductors

Human sale gonadotropin secretion relation to sleep stages, using electrophysiologic recordings and radioimmunoassay techniques

Uric acid to uric nitrogen ratio as an assay for identification of avian tissue in verifying bird ingestion or impact as aircraft accident cause

A note on the biological activity of the noble gas compound xenon trioxide

Quantitation of serum proteins on whole blood-electroimmunoassay technique applicable to capillary blood

The presence of P700 in chloroplast fragments prepared by short time incubation with Triton X-100

Acrylamide polymerization - New method for determining the oxygen content in blood

Use of diameters in biological and clinical procedures

Prototype and production versions of grinders for biological assay

Sensitivity of Ge(Li) detectors in biological and environmental counting

Innervation of pulmonary oat cell cancer extracts to confirm bioassay results and development of antibodies to oxytocin and vasopressin

Method and criterion for evaluating ELF magnetic field interference effects on cardiac pacemaker function

Microbial analysis of television camera retrieved from Surveyor 3 spacecraft

Laser microscopic analysis of inorganic and metallic components and pigmentation mechanisms in insects and man

Fusid induced detrimental changes in human-environmental microflora during 90 day test of advanced regenerative life support system

Design of X ray detector for television radiograph used in biodynamic analysis

Space flight ecology and physiology, discussing atmospheric temperatures and radiation, biological effects of acceleration, deceleration and weightlessness and physiological stresses

Extraterrestrial life search, noting radio contact with civilizations, bioastronautics, Martian conditions and physicochemical experiments

Bioastronautics results of Apollo space flight biomedical operations, discussing weightlessness, sleep impairment, motion sickness, preventive medicine, etc

Medical requirements for manned space flight, discussing physiological data monitoring and transmission, equipment miniaturization, telediagnosis, spacecraft environment protection, etc


Effects of weightlessness on astronauts - A summary

Effects of weightlessness on astronauts - A summary

Effects of spacecraft environmental conditions on humans, and space biomedical problems

Conference on space biology related to Post-Apollo program, Paris, May 1971

Life support, aerospace medical, and environmental and research facility aspects of space stations and Skylab

Effects of weightlessness on reactions and physiological responses of animals and humans

Criteria for determining permissible doses of ionizing radiation for astronauts

Specific aspects of Apollo health and quarantine programs considered for potential application to broad program required for protection of life and health of astronauts in future manned space flight

BIOCHEMISTRY

Biochemical and physiological effects of Apollo flight diet, noting no significant variations in serum electrolytes, endocrine values, body fluids and hematologic parameters

Physical interpretations of physiological control, covering history, biochemical oscillator viewpoint of life and conferences

Respiratory system frequency response analysis for chemical regulation of breathing, using time domain method and step functions

Nonceptive chemical action in cat skin vessels, showing fiber types for impulse transmission

Soviet book on gravitation receptor covering evolution of structural, cytochemical and functional organization in vertebrates, /vestibular apparatus/
Intermittent movement control theory for prediction of visual correction applied to target aiming during illumination loss.

Carotid rete role in brain protection against extreme elevations of systemic blood pressure, presenting coat cerebral blood flow measurement procedure.

Control parameters of the blood-pressure regulatory system. I - Heart rate sensitivity.

Biological system transfer-function extraction using spectral-correlation techniques.

Hypothalamic control of the systemic and lung circulation and functional significance of this control.

Respiration control mechanism ensures adaptation to power requirements and chemical environment maintenance in tissues, considering brain stem location.

Control, by the visual cortex, of the posterior lateral thalamic group in the cat.

Biotechnical life support systems for resuscitation of vital substances needed by man on prolonged space flights.

Physiological and biological mechanisms responsible for nonmenotactic orientation in beetles and scorpions.

Multichannel bioelectric control system for simulating neuromuscular movements and treating motor function disturbances.

Regulatory mechanisms of acetil-CoA carboxylase activity in fatty acid biosynthesis.

Principles for controlling machines and living organisms by biopotentials of muscles.

Biodynamics

Mathematical models for man-machine control behavior in biodynamic environments including manual control performance and interface elements.

Biomechanics - Conference, Zindhornen, Netherlands, August 1969.

External biodynamic models for human mechanical response to various environmental forces, emphasizing injury mechanisms.

Aircraft ejection simulation by human thoraco-lumbar spine flexion dynamic model, using strength of materials theory and shear effects for curved elastic beams.

Dynamic response and functional state of human operator subjected to harmonic and random vibrational excitations, discussing biomechanical nonlinear oscillatory system model construction.

Mathematical model for semicircular canal dynamic response to angular acceleration, emphasizing role of perilymph over endolymph in capsule displacement.

Human biomechanical and behavioral response to whole body vibration, discussing subjective judgment of vibration intensity and effects on performance.

Optimum performance typewriter keyboard design, discussing biomechanical improvements in finger position, blood circulation, operator posture, muscular strain reduction, etc.

Crash helmet performance prediction through maximum strain criteria, using brain injury biomechanical model.

Biodynamics of air blast during accelerative and decelerative events.

Computer program for analyzing impact damage to skull-brain system models.

Effects of exposure to blast induced winds and pressure variations on biophysical parameters.

Biomechanical research and development at Army Medical Research Lab.

Biodynamic models of human response to various environmental forces.

Biodynamics of air blast during accelerative and decelerative events.

Proceedings of conference on animal orientation and navigation capabilities.

Analysis of arc performance subjected to external load during crank turning task.

Hearing, bioacoustics, and biomechanics for biomechanical models - conference.

Biodynamic models for determining suitability of energy absorber in protecting seated man from high acceleration aircraft impacts.

Three dimensional hand force and biomechanical models for simulating human hand strength in zero gravity.

Interfacing man machine control performance in biomechanical environment, including pilot/vehicle problems.

Biodynamic models used as simulation technique in design of Air Force emergency escape system.
BIOELECTRIC POTENTIAL

Biodynamic modelling of aircraft escape systems to determine human tolerances to aircraft ejections. [AD-700466] p0087 M72-29101
Biodynamic cerebellar model for mammals acceleration response. [AD-700457] p0025 M72-30074
Biomechanics in motor skeletal structures and determination of tolerances to external forces. [AD-700456] p0025 M72-30075
Theoretical static moment analysis of knee joint, quadriceps mechanics, and patella. [AD-700455] p0025 M72-30076
Mechanical and physiological response of human cervical vertebra column to severe impacts applied to torso. [AD-700462] p0025 M72-30088
Vessibility analysis for use of anthropomorphic dummies, animals, and man in biodynamic modelling and scaling for impact damage prediction. [AD-700463] p0025 M72-30089
Multi-degree, nonlinear mathematical models of whole-body kinetics for engineering design of protective systems for acceleration exposures of humans. [AD-700464] p0025 M72-30090
Bone atrophy caused by inactivity in guinea pigs. [AD-700468] p0025 M72-30091
Clinical and experimental data on treating malfunctions of human thoracic and lumbar back regions. [AD-700451] p0026 M72-3009a
Biodynamic models for describing changes in human cardiovascular system caused by impact shocks. [AD-700452] p0026 M72-30095
Biodynamic models for monitoring changes in human cardiovascular system caused by impact shocks. [AD-700453] p0026 M72-30098
Nonlinear mathematical models for determining human dynamic response to low frequency vibrations. [AD-700454] p0027 M72-30100
Human force models for aiding diagnostic and therapeutic monitoring of neurovascular diseases. [AD-700456] p0027 M72-30101
Mathematical models for impact studies including spinal and head injuries. [AD-700457] p0027 M72-30103
Design of manikins as complex bioengineering systems. [NASA-TT-F-14335] p0057 M72-33100
Experimental research on movements in large joints of arm. [AD-700463] p0057 M72-33106
Metering gripping force in artificial hand by operator. [AD-700465] p0057 M72-33109
Principles for controlling machines and living organisms by biopotentials of muscles. [AD-700466] p0057 M72-33113
Design of X-ray detector for television radiography used in biodynamic analysis. [AD-700467] p0057 M72-33122

BIODELCTRIC POTENTIAL

Multichannel topography of human scalp alpha EEG potential fields. [AD-700468] p0001 A72-10072
Computer simulation of evoked cortical and potential fields in animals and human, noting clinical application for hearing threshold measurements. [AD-700469] p0016 A72-11324
Post synaptic electric potential responses to click of auditory cortex neurons in cats. [AD-700470] p0020 A72-11757
Free radicals participation in cell membrane biopotential generation mechanism, comparing properties of protein molecules with semiconductors. [AD-700471] p0029 A72-12348
Ventricular nucleus bilhar complex evoked potentials under visceral and somatic nerves electric stimulation in anesthetized cats. [AD-700472] p0030 A72-12512
Human muscular electrical activity in various body positions, noting potentials during natural and unaccustomed postures. [AD-700473] p0055 A72-13990
Phylo-oncogene saturation of cortical aorta projections of visual cortex, using evoked potential measurements in rabbits. [AD-700474] p0108 M72-17736
Phase shifts of circadian rhythms of optic nerve potentials from isolated eye of sea hares in darkness. [AD-700475] p0157 M72-19538
Field and intracellular potentials in cat trochlear nucleus following vestibular nerve and nuclear stimulation for synaptic organization study of vestibulooculo-reflex. [AD-700476] p0157 A72-20501
Neuronal systems short-latency paired interactions detection method, obtaining histogram for action potentials. [AD-700477] p0169 A72-20628
Evoked cortical potentials changes from emotional visual word stimuli stress under amygdala anticholinesterase drug influence. [AD-700478] p0176 A72-21194
Cortical synthesis and information handling properties of evoked potential in human normal and pathological behavior. [AD-700479] p0181 M72-21840
Neurophysiological mechanism of sleep, studying sleep and wakefulness state evoked potentials relation to cortex and subcortical activity levels. [AD-700480] p0213 A72-22224
Phototransduced potentials of human visual cortex, determining retinal macular area involvement. [AD-700481] p0233 A72-26786
Average evoked potentials correlates of two flash percentual discrimination in cats, discussing parallel chances as function of interflash intervals and peripheral level. [AD-700482] p0236 A72-25748
Preacting conditioning-shock stimulation effect on cat visual cortex response to light stimuli, noting lateral gyrus photically evoked potential amplitude increase. [AD-700483] p0246 A72-25891
Transistorized amplifiable input elements design for biopotentials recording, avoiding aliasing noise at high input impedance. [AD-700484] p0270 A72-26468
Response latencies and correlation in single units and visual evoked potentials in cat striate cortex following monocular and binocular stimulations. [AD-700485] p0274 A72-27844
Cort auditory cortex neurons response to auditory and medial geniculate body electrical stimulation. [AD-700486] p0285 A72-27651
Neuron network's dynamic behavior in terms of linear differential equations for membrane potential changes and neuron threshold. [AD-700487] p0288 A72-27925
ECG P-wave-like deflections caused by strong diaphragmatic action potentials in obese woman with fever and erysipelas. [AD-700488] p0321 A72-28569
Deep brain structure biopotential correlations during man sleep development, using electrosensorycomputer. [AD-700489] p0327 A72-26771
Monovalent K and Na and bivalent Ca and Mg plasma ion ratio effect on thrombocyte electrokinetic potential. [AD-700490] p0329 A72-26834
Digital evoked brain potential detector using multichannel amplitude analyzers. [AD-700491] p0332 A72-28645
High threshold afferents role in dorsal surface potential formation in cat spinal cord. [AD-700492] p0339 A72-29237
Selective chromatic adaptation in cone photoreceptors of Calamosoma macqueenii, using late receptor potential as response index. [AD-700493] p0332 A72-29967
Nearsighted nerve fiber mathematical model for action potential transmission mechanisms analysis during relative refractory phases. [AD-700494] p0338 A72-30597
Electroretinographic illumination potentials dependence on extracellular chloride ion concentration in isolated frog retina. [AD-700495] p0368 A72-32491
Conditioned slow negative potential of human brain cortex dependence on motivation, emphasizing punishment avoidance conditions.
Biological activity study of cat and dog cerebral intercentral relations during various motor activities and poses

Cerebral neurons population electric stimulation effect on deep sleep duration in Parkinsonism patients

Cat respiratory center activity phase relation to arterial chemoreceptor afferent discharge oscillations effect on lung ventilation frequency

Sudden death in myocardial infarction, discussing heart electrical stability, neural control, arrhythmias and cardiac conduction disturbances

Marine gastropod mollusk synaptic transmission mechanisms, discussing various chemical transmitters, two phase potential, receivers, electrical interaction and electrophysiological conditioning

Sensor systems terminals location in cat colliculus anterior through electrical response, measurement to light and sound signals and skin stimulation

Electrical cardiac activity computer simulation model including biophysically faithful conduction system and electrocardiograms for high fidelity production

Stimulation transmission tracts, synaptic mechanisms and tonic activity of cat sympathetic ganglia

Motor neuron pool fraction determination in human somatosensory response of healthy and neuropathological subjects, comparing diagnostic methods

Comparative ECG characteristics of frontal and occipital human brain cortex, relating psychophysiological and neurophysiological factors

Hypothalamic single neuron unit discharge pattern response to acoustic, light and somatosensory stimulation in cats

Bulbar respiratory neuron discharge pattern response to nasal and tracheal receptors stimulation in cats, relating changes in neuronal activity and intrathoracic pressure

Cat retinas ganglion cell threshold and latent responses to separate stimulation of receptive field center and periphery

Physiology of sleep phases and dreams, discussing data on highly organized and interacting neurohumoral mechanisms exhibiting alternating, forms of brain bioelectric activity

Protein biosynthesis inhibitors retardation of noradrenaline and serotonin induced hyperpolarization of neuron membranes in cortical sensorimotor region of rabbits

German anguillous on Brander node steady state I-V characteristics transition range and control by altered external solutions and morphological effects on nerve fiber

Photically induced and spontaneously discharged neuron impulse propagation through direct pathways from superior colliculus to dorsal and ventral lateral geniculate nuclei in cats

Lacyseryt melanomelanotic neuron activity during Frank-Porter reflexes, noting inspiratory fibers firing inhibition and activation during lung inflation

Effector vestibular activity in response to horizontal plane rotary stimulation in frog, showing different relations between both ears

Optic tract and lateral geniculate nucleus cell maintained discharge rate, observed with encephalograph, noting effect of brain bioelectric activity circadian rhythms

Visual cortex neuron reactions to antidromic stimulation of cat pyramidal tract, noting axon activation increased discrimination in analysis

Dynamic bioelectric impedance level of tissue area between active electrocorticograph electrodes related to human skeletal muscle fatigue

Myelinated nerve fiber mathematical model for action potential transmission mechanisms analysis during relative refractory phases

Cerebral cortex electric shock stimulation effects on phrenic nerve discharges in bisacodylized and carizured cats

Cat bulbar respiratory neuron discharge modification by single electrical shock stimulation of cerebral cortex

Linear system theory for mathematical model of retinal image and ganglion cell excitation, calculating receptor layer luminance distributions for several stimulus patterns

Monkey retinal ganglion and lateral geniculate nucleus cell maintained discharge rate indication of receptive field organization for various light stimulus intensities

Bioelectric activity of the medulla oblongata during hypotension and bleeding

Synaptic patterns in the superficial layers of the superior colliculus of the monkey, Racca malatta, and Macacus aniyx

Influence of cooling of the mesencephalic region of the cerebral cortex on the neurons of the mesencephalic reticular formation

Changes in the overall electrical activity of the mesencephalic reticular formation, the hippocampus, and the cerebral cortex under the influence of hydrocortisone, and doxepin

Operative sensory mechanisms as visual system neuron chain,storage of stimuli from image recognition time measurements

Device for eliminating the artifact of electrical stimulation when recording evoked pulse activity of neurons

Morphological changes in spinal cord neurons of animals due to the decreased intensity of supraspinal stimulation

Neuronal organization of descending systems of the spinal cord

Intraelectrophysiological analysis of light visual spatial summation at different retinal nerve levels in frogs

Cortico-subcortical connections transaction effect on cat lateral geniculate body and visual cortex neurons spontaneous activity

Neuronal spike activity changes in rabbit visual and sensorimotor neocortex and hippocampus during EEG activation

Illustration code efficiency in impulse activity of neurons of outer geniculate body of cat visual system, emphasizing pulse per group technique

Single lateral geniculate neuron recording during receptive field-centered flashing spot variations for intensity response function comparison with optic neurons in cats

Hypothalamo sympathetic single neuron unit discharge pattern during EEG activation

Comparison with optic neurons in cats

Note: The text contains a mix of scientific and technical terms, and it appears to be a page from a scientific or medical publication.
Intracellular study of cerebrospinal neurons and of their synaptic activation during the stimulation of the sensorimotor cortical region.

Pyramidal control of the activity of interneurons related to various types of peripheral afferents.

Possible role of supraspinal formations in the fixation of trace alterations at the segmental apparatus level of the spinal cord.

Synchronization in the work of motor neurons during arbitrary motor activity of various types.

Role of afferent and efferent connections in the formation and reproduction of trace processes in man.

Patterns of spontaneous and reflexly-induced activity in phonic and intercostal afferent neurons.

Morphological and electrophysiological analysis of afferent receptor connections in cerebellar cortex, discussing fast-conducting diffuse, reticular and inferior olive fiber paths.

The effect of membrane parameters on the properties of the nerve impulse.

New modifications of manipulators for investigations using microelectrodes.

Dependence of inhibitory areas of inferior colliculus neurons on the time characteristics of acoustic stimuli.

Effect of a polarizing current on the activity of neurons of the respiratory center.

Dynamics of the electrical activity of various regions of the cortex during the sleep-wakefulness cycle.

The effect of electrical stimulation of the olfactory bulbs on the behavior of cats and on the electrical activity of the neo- and archencephalon.

The electrical activity of the isolated frog retina in buffered chloride-deficient Pnaq's solution.

Nervous mechanisms of the acoustic stimulus reaction.

Changes in the impulse activity of cortical neurons during selective reinforcement of a chosen range of their interaural intervals.

Classification of neurons in the lissencephalic section of the spinal cord according to their discharge during evoked localization.

Preprocessing of nerve pulse sequences for analysis by digital computer.

Elaboration of steady changes in the firing rate of cortical neuron populations.

Cat hypothalamus regions neurons background activity characterized by single monorhythmic spikes with large interaural intervals, noting frequency of discharge bursts.

Pulse activity of neurons in the thermal regulation center of the anterior hypothalamus during chill shivering.

Functional organization of the periphery effect in retinal ganglion cells.

First-breath response of modulatory respiratory neurons to the mechanical loading of inspiration.

Control of the visual cortex, of the posterior lateral thalamic group in the cat.

Temperature-sensitive neurons in the brainstem - their responses to brain temperature at different ambient temperatures.

Stochastic model of neuron firings based on two recurrent time sequences of stimuli.

Mathematical model for determining nature of electrosensory mechanism and its sensitivity in fish.

Bioelectric and histochemical changes in brain of albino rats. (NASA-TP-P-619)

Effects of lower body decompression on cardiac electric activity in humans.

Bioelectric system for control of muscular activity. (NRC-TP-1551)

Multichannel bioelectric control system for simulating neuromotoric movements and treating motor function disturbances.

Effect of vibration on relationship of bioelectric activity and oxygen demand in cerebrum of rats. (NASA-TP-P-14570)

Medical equipment advancements through NASA-sponsored aerospace research program, describing prosthetic urethral valve, ear oximeter, radiation dosimeter and electroencephalographic muscle trainer.

Moving visual stimulus apparatus with independent control over size, shape, background intensity, orientation and velocity of motion, describing cat neuronal sensitivity studies.

Hybrid computer simulation of cardiovascular system in biomedical engineering education.

Electrode system for ventricular defibrillation, noting current density role and rounded edge effectiveness.

Lumped parameter nonlinear R.C circuit lump model for positive pressure respirator design.

Electrode design and implantation method for chronic experiments, discussing information loss factor elimination.

Apparatus for programmed oral administration of drugs to large primates in altered environments.

Device for eliminating the artifact of electrical stimulation when recording evoked pulse activity of neurons.

Quantitative determination of fluorescence within the eye without disrupting the integity of the eyelid.

Bioengineering models of energy and mass exchange of algae under varying ambient conditions, noting mass cultivation possibility for oxygen regeneration in closed environments.
BIOGENESIS

Facility design for development and evaluation of thermal protective clothing in reproducible, aircraft fuel fire environment

Principles of construction of complexes for continuous control of human subjects and automatic normalization of body states [AD-734053]

Biodynamic and bioengineering applications to operational problems, resulting in crew injuries

Operators reference manual for B10800 computer graphics system

Optical control algorithms for on-line closed loop blood pressure regulation

Aerospace technology transfer and utilization in biomedical systems [NASA-CR-126400]

Design of optical couplers for use in III-VIIRs hard ware mode

Testing preliminary design of respiratory measurement element of B-4 IIABLS

Design of manipulators as complex bioengineering systems [NASA-TP-14335]

BIOGENESIS

BIOLOGICAL EVOLUTION

Biocenosis of volcanic island of Surtsey after 1967 lava eruption, discussing terrestrial and marine littoral and sublittoral biomes

BIOGEOCHEMISTRY

Molecular paleontology of fossil organic remains in Nolluscan shell proteins

BIOLOGICAL EFFECTS

Chlorella algae size distribution curves by combining device for counting electrical conductivity pulses with discriminator for gamma scintillation spectrometry

Parachuting and aerial towing physiological and force data FM telemetry for biomedical response assessment leading to human engineered equipment improvement and aidal retrieval system development

Electrical thermometer mounted on breathing mask for electrononogram, measuring temperature change in respiration air flow

Multichannel IC spike height discriminator for separating electrical activity of neural units recorded with microelectrode

Noninvasive ultrasonic technique to measure wall displacement and pulsatile changes in thoracic aorta [AD-739809]

Biomedical transducers for NASA space program, discussing spray-on electrodes and telemeasuring for ECG respiration and body temperature

Battery powered dc integrated circuit for temperature regulation in small experimental animals, using thermistor probes and heating pads

Mathematical, physical and engineering aspects of electro- and magnetocardiography, noting heart field cardinal properties and heart vector determination difficulties

Semiautomatic measurement of human oxygen uptake, discussing apparatus and accuracy

Electronic and hemostatic devices to investigate cardiovascular system functions including blood coagulation process, pressure and flow

Pneumatic thermistor transducer to measure steep ejection time interval between cardiac valve closure and mitral valve opening occurrence

BIOLOGICAL ACTIVITY

Nose installed thermistor device for in-flight monitoring of pilot respiration and pulse rate

Considerations in the design of an automatic visual field tester

Hand tremor measurement methods, discussing pickup system selection for given tasks

New modifications of manipulators for investigations using microelectrodes

Biological instrumentation for the Viking 1975 mission to Mars

A critical assessment of an open circuit technique for measuring oxygen consumption

Digital automatic data reduction techniques used for physiological data obtained in 1000-Flight biomedical study

Efficiency of biodecorporation of detection and type of bacteria found in spacecraft components [NASA-CR-125819]

Development and characteristics of electrodes for measuring EKG, ECG, and temperature of laboratory animals

Simplified manufacturing techniques for ultraminiature capacitive pressure transducers for physiological measurements [FB-201916]

Pressure ramp programmer for automatic blood pressure measurements [NASA-CR-1155803]

Aerospace technology transfer and utilization in biomedical systems [NASA-CR-126404]

Aerospace technology application and transfer programs to biomedical areas

Design improvements and applications of transducers for noninvasive methods of patient monitoring

Sweat sensor for monitoring perspiration response during motion sickness [AD-739822]

Electronic equipment and systems used to track wild animals in order to determine migratory and navigational behavior

Heart rate monitor for indicating physical fitness level in individuals [AD-739882]

Testing preliminary design of respiratory measurement element of B-4 IIABLS [NASA-CR-115718]

Plethysmograph for measuring human body impedance changes during space flight [AD-740664]

Ultrasoundic biomedical system for measuring and recording movements of organs such as heart valves during motion sickness [NASA-CAS-120597-1]

Bioinstrumentation for improving Apollo biomedical ground monitoring system [NASA-CR-125836]

BIOLOGICAL ANALYSIS

U ACTIVITY (BIOLOGY)

U BIOASSAY

U BIOCHEMICAL SPECIES

U BIOLOGICAL EFFECTS
interactions with environment and philosophical concepts

Extraterrestrial life origin and development possibilities from earth chemical and biological evolution description, noting external conditions requirements

Genetic organization emergence, considering pretranslational evolution in nontranslational protein synthesis, nucleic acid evolution and gene origin

Cellular evolution investigation using molecular biology, microbial physiology and ecology

Respiratory function control and physiological adaptation mechanism evolution during changing earth atmosphere oxygen content, noting hypoxia sensitivity development

Energetic motor activity rule hypothesis for energetic mechanisms of certain ontogenesis patterns, suggesting motor activity as excess anabolism induction factor

Biological experiments of Viking Marslander 1975 mission regarding Oparin-Haldane evolution hypothesis

Evolutionary significance of primary amino acid or nucleotide base sequences of DNAs within various phylogenetic groups

Liver and muscle type isozymes of DFP-linked glycerol-3-P dehydrogenase in chickens in terms of tissue distribution, ontology and amino evolution

Coherent brain model for evolution mechanisms of biological resonance in neuron network signal flow

Phylogenic origin of cytoplasmids from Cyanophycean algae involved in endosymbiosis with colorless Cryptophytes

Evolutionary clock - Nonconstancy of rate in different species.

Comparative studies of the respiratory functions of mammalian blood.

Empirical support for a stochastic model of evolution.

Amino acid substitution correlation with genetic code in human, bovine, ovine, porcine and salmon different species.

Aerospaces environment effects (noting weightlessness and biocycle) on planets, cells, and from observed in Gemini and Biosatellite experiments (NASA-TM-X-67505)

Production of complex organic compounds in vicinity of volcanoes as precursors of significant biological products and relation to genesis of life

Evolution of target recognition and echo location mechanism in Vespertilionidae bats

A-55
BIOLOGISTICS

Medical and biological research conducted on Soviet spacecrafts and satellites

[D-727940] p0094 A72-11081

Biostatistical procedures for analyzing ecological and environmental problems

[NSWH-SA-3797-REV] p0198 A72-17037

Tables and bibliographies on preserving biological materials

[NASA-CR-1144221] p0241 A72-18080

Device for irradiating biological materials with light at wavelengths between 250 and 650 nm

[RSL-1972-1] p0383 A72-26077

Biological resources of Chesapeake Bay and measurement of chemical, physical, and meteorological features to improve resources management

p0437 A72-26278

BIOLOGICSNEC

Adrenergic innervation of internal carotid arteries in extra- and intracranial regions in dogs, using luminosity method

p0186 A72-22184

Temperature effects on blood electroluminescence, relating luminance peaks to protein and lipid molecular structure changes

p0225 A72-23694

Determination of bacterial ATP as measure of urinary tract infection using enzymatic bioluminescent assay technique


Bacteria detection of urine using bioluminescent reaction of ATP with luciferin and luciferase

p0405 A72-25800

Effect of various magnesium salts on luminous intensity and duration in phosphorescent bacteria

[NASA-TR-P-14031] p0563 A72-32112

BIOCHEMISTRY

0 BIOCHEMISTS

BIOCHEMICAL DATA

Computer controlled scintiscanning for pulmonary blood flow distribution, discussing real time data monitoring, contour plots and three-dimensional and wall reflection maps

p0012 A72-11038

Thermovisors /recording IR detectors/ development, discussing application to biomedical investigations and disease diagnostics

p0015 A72-11923

Computers in biomedicine - Conference, University of Hawaii, January 1972

p0152 A72-19306

Biotelemetry applications in medicine, animal experiments and ecology, including parametric, internal bleeding detection, fetal monitoring, animal brain implantation, animal movement tracking, etc

p0160 A72-19916

Biologic ECG and EEG signal analysis using hybrid computer techniques and parameter optimization for autocorrelation function modeling

p0165 A72-20333

Diurnal and beat-to-beat variation factors in vectorcardiograms, noting respiratory movements, electrode location shift, skin-electrode impedance and heart electrical center mobility

p0182 A72-21849

Hybrid computer simulation of cardiovascular system in biomedical engineering education

p0216 A72-22455

Multichannel oscillograph for real time biomedical studies of LF physiological processes

p0216 A72-22801

Multichannel automatic data acquisition and processing in ergonomic measurements of radar control work from ECG, EOG, EMG and respiration

p0219 A72-23136

On-line analog display system for cardiovascular functions and beat-by-beat cardiac output derived from single aortic blood flow measurement

p0220 A72-26375

Digital computer technique for computation of pulmonary mechanics parameters, using phasor method and Fourier series analysis of respiratory flow signals

p0272 A72-26620

Left ventricular volume time course for assessing computer processing of video angiocardiographic data based on X ray densitometry measurements

p0272 A72-26627

Random sample comparison of computer program for ECG diagnosis and physicians readings

p0272 A72-26975

Arterial pressure data recording technique using magnetic tape recorder and automatic conversion to digital form

p0284 A72-27469

Bioastronautic results of Apollo space flight biomedical investigations, discussing weightlessness, sleep impairment, motion sickness, preventive medicine, etc

p0366 A72-31827

Left ventricle intracavity volume measurements based on biplane angiographic data

p0368 A72-32497

Medical requirements for manned space flight, discussing physiological data monitoring and transmission, equipment miniaturization, telediagnosis, spacecraft environment protection, etc

p0376 A72-33562

A system for the mass examination of electrocardiograms

p0451 A72-37853

Probability threshold of data element similarity as separation criterion for automatic multiparameter biomedical data classification

p0458 A72-38937

Application of sample quantiles to the comparison of telemetric transmission and statistical processing of medical information

p0509 A72-42221

Cosmos 369 weightlessness experiments on microorganisms, insects, animal cells, vegetable tissue, and needs for biomedical control of long manned space flights

[NASA-TP-P-14064] p0501 A72-12023

Data management techniques and designs for integrating OPE with TBLBS for manned space flight


Design of digital low pass and bandpass filters for analyzing biomedical data for diagnostic purposes

[CONF-710217-11] p0128 A72-16119

Biomedical data from manned space flights [Gemini/Apollo] and medical program for Skylab [NASA-TR-E-67504]

p0192 A72-16031

Equipment specifications for general purpose biocomputer for use in Integrated Medical, Behavioral, and Laboratory Measurement Systems


Applications of computer programming in biomedicine

[ISS-71/1] p0404 A72-28001

Computer program arrangement for recording psychiatric data

[ISS-71/2] p0384 A72-26082

Proceedings of conference on medical aspects of spatial disorientation and effects on safe aircraft operation

[AGARD-CP-95-P5-11] p0392 A72-25031

Factors contributing to attrition from active airman status, particularly biological and medical characteristics

[FAA-AM-72-13] p0427 A72-37854

BIOCHEMICAL DATA

Biomedical data reports on human acclimation to polar regions and psychophysiology

[IPPS-56252] p0333 A72-26060

Identification of payload research requirements, equipment, and subsystems for conducting biomedical research projects during space missions - Vol. 2


Detailed design information on equipment, subsystems, and payload required for conducting biomedical research during space mission - appendix

[NASA-CR-123737] p0475 A72-28089

Miniature biotelemeter for sensing and transmitting multiple channels of biomedical data over radio link

p0480 A72-29056

Accomplishments and activities of biomedical team concerned with application and utilization of NASA technology


Mathematical methods for treating biomedical problems in chemotherapy, radiotherapy, and
mental health

Biomedical problems of space flight based on experiences in stress physiology and stress psychology

Data systems for studying hyperbaric physiology of human and animal subjects

Bioluminiscence for improving Apollo biomedical ground monitoring system

Optimal vascular pressure measurements with transducers located outside body with rigid and elastic tube couplings

A method for spirometric display of functional residual capacity and other lung volumes

Electrically sensed changes in chest and abdomen diameter for tidal volume, respiratory frequency and minute ventilation measurements

Biological system transfer-function extraction

Spatio-temporal scalp napping localization of ty microscopic system for on-line measurement of filled glass micropipette used in

Biological cell sorting by differential filtration using swept-frequency and correlation techniques.

Quantitative decision criteria for identification of visual evoked responses obtained during

Biocirculatory rivalry.

In automatic measuring and recording system for clinical electro-oceiography.

Optical vascular pressure measurements with transducers located outside body with rigid and elastic tube couplings

A method for spirometric display of functional residual capacity and other lung volumes

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Biological cell sorting by differential filtration using swept-frequency and correlation techniques.

Quantitative decision criteria for identification of visual evoked responses obtained during

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A method for spirometric display of functional residual capacity and other lung volumes

Electrically sensed changes in chest and abdomen diameter for tidal volume, respiratory frequency and minute ventilation measurements

Biological system transfer-function extraction

Spatio-temporal scalp napping localization of ty microscopic system for on-line measurement of filled glass micropipette used in

Biological cell sorting by differential filtration using swept-frequency and correlation techniques.

Quantitative decision criteria for identification of visual evoked responses obtained during

Biocirculatory rivalry.
atmospheric conditions

Two compartment analog model of thermoregulation during rest and exercise, considering temperature, heat conduction, sweat rate and oxygen uptake

Hill model for myocardial activity, taking into account contractile state variations and characteristic force-velocity curve

Chaotic leather mechanical response, comparing stress relaxation and stress response characteristics to human skin for applications in anthropometric dummy construction

Crash helmet performance prediction through maximum strain criteria, using brain injury biomechanical model

Parameter estimation in dynamic biological control systems based on multicompartmental input-output behavior

Nonlinear theory of pulmonary ventilation, distribution in two compartment model of human lungs

Computerized angiographic heart geometry analysis for three dimensional ventricular models of man and dog, using Ta markers

Simulation of the human cardiovascular system - a model with normal responses to change of posture, blood loss, transfusion, and autonomic blockade

A new model for estimating space proton dose to body organs

Mathematical model for flow limitation in collapsible tube in relation to pressure in pulmonary and circulatory system

Digital computer technique for ballistocardiography simulation, using distributed parameters for vessel segments in a circulatory system model

Two-axis system as human body dynamic model in ballistocardiography, outlining transfer function parameter computation procedure

A stochastic bioburden model for spacecraft sterilization

A model of fluctuating alveolar gas exchange during the respiratory cycle

Model to account for visual responses to light flashes of dark adapted eye, discussing perceived brightness variation with intensity

Digital computer simulation of human systemic arterial pulse wave transmission - A nonlinear model

A human left ventricular control system model for cardiac diagnosis

Object code storage in the static portion of a short-time memory

Models of neurons reacting to input signal, alteration in space and time

Neurons mathematical model synthesis from algorithms to construct neural networks and single, threshold element in network

Computerized statistical simulation of automaton of spontaneously active smooth muscle strip, neglecting individual cell spontaneous activity

Automatically controlled delay in self-excited pulsating systems based on artificial muscles

Russian book - Problems of the stability of biological system.

Therodynamics properties and mathematical modeling of complex biological systems, considering energy and mass exchange in photosynthesizing organisms for photosynthesis biochemical reaction of complex biological systems, considering energy and mass exchange in photosynthesizing organisms for photosynthesis

An electronic model of visual receptive fields

Man movements directed at reaching a preset goal

Threshold detection model for visual viewing by human observers using naked eye

Crystalline lens optical structure in human eye, representing on and off axis imaging characteristics by mathematical model

Unsteady state description of living corneal mass transport modes, elucidating cornea thickness control mechanism

A mathematical model of the chemoreflex control of ventilation

A model for analysing the coordination of manual movements

The design of a nonlinear multi-parameter model for the human operator

The functional organization of object directed human intended-movement and the forming of a mathematical model

The effect of membrane parameters on the properties of the nerve impulse

Control parameters of the blood-pressure regulatory system, II - Open-loop gain, reference pressure and basal heart rate

Mutual relations between different physiological functions in circadian rhythms in man

A large-scale model of the human cardiovascular system and its application to ballistocardiography

A rapid assay of dipolar and extradipolar content in the human electrocardiogram

Information aspects in visual perimetry, obtaining memory requirement for control computer in automated perimetry

Relative position of the rib within the chest and its determination on living subjects with the aid of a computer program

Modification of cardiovascular mathematical models for application to lower body negative pressure response

Bibliographies of research reports and publications on biodynamics and bionics

Bionic research projects in USSR

BIONIC - interactive computer graphic system for modeling continuous biological systems

Operators reference manual for BIONIC computer graphics system

Medical research abstracts on limbic visual system, electronic neuron model development, and auditory adaptation in horseshoe crab

Animal-environment model, based on compliance of organisms to ecology

Applications of hydrodynamic characteristics of biological systems to mechanical systems

Problems in neurobiology of creating technical devices to behave like human brain

Operational characteristics of dolphin hydrolocator system
decelerative events
Effects of exposure to blast-induced winds and pressure variations on biophysical parameters
Fluid mechanical model for thorax response to air blast and impact shock

BLEEDING
Consenlual photopupil responses to light flashes recorded in full dark adaptation, noting bleaching and background effects
Dark adaptation studies of bleach-induced visual threshold rise and subsequent return to chodocep level
Isolated retina receptor potential amplitude relation to visual pigment bleaching kinetics, indicating excitation-inhibition receptor response generation mechanism
The photopigment bleaching hypothesis of complementary after-images - a psychological test.

BLEED-OFF
0 PRESSURE REDUCTION
BLENDING
Suppression effects of hyperoxic breathing gases on red blood cell and erythropoietin hormone production following blood loss
Effects of long periods of clinical death from drowning or lethal blood loss on higher nervous activity in poisoned dogs
Bioelectric activity of the medulla oblongata during hypoxia and bloodletting

BLINDNESS
MT FLASH BLINDNESS
Neural substrates of sensory tactile vision substitution for information mediation in blind subjects, using TV cameras

BLOOD
MT ERYTHROCYTES
MT LYMPHOCYTES
MT ERYTHROPOIESIS
MT ERYTHROCYTES
MT THROMBOPLASTIN
MT WHITE BLOOD CELLS
CO hemoglobin concentration measurement in blood of smokers, nonsmokers and deceased crewmembers of crashed aircraft

Chronie microwave irradiation effects on experimental animal blood forming system. examining peripheral blood count changes and nuclei and aetion abnormalities in erythroblastic and lymphoid cells
Biological dosimetry in acute human irradiation - from cyrogene study of peripheral blood and bone marrow
Organisation blood volume and losses determination by measuring human body electrical resistance, noting unsatisfactory results
Temperature effects on blood electrophoros, relating luminance spectra to protein and lipid molecular structure changes
Continuous and interssegmental exercise effects on human muscle intracellular and capillary blood pH
Human oxygen intake and blood lactate acid removal kinetics during recovery from mild steady work on bicycle ergometer
Light absorption and scattering factors in whole blood related to hemoglobin concentration, discussing oxygen saturation, cardiac output and pathological conditions

BLIGHTS
Numerical analysis of ability of birds to find bearings and navigate based on parameters of solar elevation and azimuth
Ecology of biting insects, birds, and mammals with their associated pathogens
Kjeldahl semimicro and macro spectrophotometric method for studying atmospheric nitrogen assimilating ability of quail embryo
Radar and visual tracking of migratory birds to determine correlation of flight altitude and wind direction on direction of migration
Radar observations of birds migrating in quiescent cloud cover to determine effects wind and meteorological conditions
Orientation of nocturnally migrating birds based on reference to stellar positions and sky rotation
Analysis of pattern recognition capability of migratory birds and manner of orientation with stellar presentations
Analysis of cues used by migratory birds for navigation and orientation
Effects of clock shift on orientation of migratory birds and deviations in initial orientation produced by varying amounts of clock shift
Environmental and endogenous timing factors as stimuli for bird migration
Use of magnetic cues to select migratory direction by European robins

BIOFEEDING
Nonmammalian vertebrate retinal receptor rods and cones birefringence as function of fixation, temperature and insuring medium

BIRTH
Nonspecific placental extracts introduced into pregnant and nonpregnant women for studying repeated spontaneous abortions (NASA-TT-F-14602)
BIZMUTH COMPOUNDS
Solar activity effects on bismuth chloride hydrosolysis tests from statistical results following solar flares

BLACKOUT (PHYSIOLOGY)
Acclimation vehicle acceleration effects on human performance, noting visual, motor and intellectual impairments related to physiological tolerance limits
High carbohydrate diet-induced hypoglycemia as potential cause of pilot unconsciousness during flight acceleration

BLACKOUT (PROPAGATION)
MT ELECTROMAGNETIC NOISE
Painting prevention in flying personnel, discussing constitutional susceptibility, health irregularities, alcohol, heavy smoking, lack of sleep, emotions and medical histories
Bed rest and positive radial acceleration effect on peripheral visual response time, considering blackout or quay rotation prediction possibilities

BLADDER
Roentgenologic studies of the effects of rapid decompression and hypoxia on the call bladder in cats.

BLAST LOADS
Biodynamics of air blast during accelerative and
BLOOD COAGULATION


Control of the circulation blood mass in the case of a functional detachment of various amounts of pulmonary tissue p0507 A72-41825

Analysis of femoral venous blood during maximum muscular exercise. p0515 A72-42742

Hypothalamic control of the systemic and lung circulation and functional significance of this control p0520 A72-43168

Optic functions and retinal circulation in humans exposed to combined centripetal and Coriolia accelerations p0078 W72-11998

Analysis of histologic substrate of atherosclerosis transpiring without symptoms in young human subjects p0204 W72-17073

Metabolic, respiratory, and circulatory measurements during exercise and rest, including low concentration study of CO2 (NASA-CR-115362) p0239 W72-18059

Flow of Casson fluid under periodic pressure in rigid tube, and quasi-steady solutions applicable to blood flow (AD-731267) p0242 W72-18099

Whole body plethysmograph system for use in measuring airway resistance under ambient hypobranchial conditions for normal breathing patterns (AD-735662) p0317 W72-21001

Behavior analysis of mechanical model of systemic circuit of human cardiovascular system (AD-738058) p0479 W72-28119

Biodynamic models for monitoring changes in human cardiovascular system caused by impact shocks (AD-730593) p0526 W72-30998

Effects of hydrostatic pressure on viscosity of whole blood systems (AD-740053) p0531 W72-31099

BLOOD FLOW

Human coagulating and anticoagulating blood system changes due to emotional stress during parachute jumps, noting plasma recalcification time increase p0071 A72-15233

Microcircular study of intravascular erythrocyte aggregation /blood sludge/ in rats p0196 A72-19686

Dietetic lipid effect on platelet adhesion and aggregation, blood coagulation and fibrinolysis, and relation to atherosclerosis and thrombosis (NASA-CP-21543) p078 W72-21543

Thromboelastographic study of renin and angiotensin effect on blood clotting system of anesthetized and unanesthetized dogs p0186 A72-22095

Increased atmospheric pressure influence on blood coagulation in rabbits, showing post-decompression hypercoagulation followed by hypocoagulation p0225 A72-23597

Ascorbic acid influence on blood coagulation and anticoagulation systems in dogs with acute hypoxia, discussing plasma recalcification time and heparin tolerance p0290 A72-28217

Thromboelastographic and coagulographic studies of gravitational effects on blood coagulation in rats under acceleration stress p0326 A72-25309

Blood coagulation changes at high altitude predisposing to pulmonary hypertension p0407 A72-34222

Hypoxic hypoxia effects on blood coagulation and fibrinolysis p0452 A72-37880

Blood coagulation behavior in rats under fall induced intense trauma, attributing phenomena increase in extrinsic thromboplastin from damaged tissue p0501 A72-41194

Influence of flow conditions on thrombus formation in fresh blood (NASA-CR-19381) p0013 W72-15026

SUBJECT INDEX

Effects of prolonged exposure to hyperoxia on coagulation processes of blood [JPPS-55553] p0312 W72-21040

BLOOD FLOW

Computer controlled scintiscanning for pulmonary blood flow distribution, discussing real time data monitoring, contour plots and three dimensional and well reflection maps p0012 A72-11038

Computer aided biplane computerized videometry system for dynamic circulatory structure studies including blood flow and heart volume determination p0013 A72-11040

Oxygen distribution in human brain under countercurrent capillary blood flow conditions, presenting mathematical simulation for transport in Krogh system p0029 A72-12027

Implanted telemetry development for cardiovascular research, discussing blood pressure, flow and hydraulic impedance relationships p0028 A72-12140

Epinephrine and norepinephrine effects on cerebral blood circulation volume and oxygen tension in tissues p0351 A72-12517

Human arm arterial pressure and flow pulsations numerical analysis, constructing electrical analog circuit from mathematical model p0009 A72-12951

Ballistocardiographic measurement of net cranial blood inflow during cardiac ejection p0501 A72-13181

Ison 133 myocardial clearance method accuracy and reliability in determining high and low left coronary artery blood flow under different hemodynamic conditions p0502 A72-13181

Myocardial blood flow measurement by I33 clearance method after direct application of isotope into subendocardial and subepicardial layers of left ventricle p0502 A72-13181

Holographic measurement of red blood cell rotation in orifice flow, transforming orientation into form distribution data p0508 A72-15140

Analytical model for living biological tissue transient heat transfer, taking into account conduction, storage, generation, convection and blood flow effects [JHEM PAPER 71-WA/MT-36] p0095 A72-15887

Anemometer numerical method for calculating flow profiles in arteries from local pressure measurements, taking into account Navier-Stokes nonlinear terms (AD-751751) p0096 A72-15948

In vivo investigation of dogs natural mitral valve flow dynamics, developing cardioblastic system physical model for data analysis and electrical analog simulation [JHEM PAPER 71-WA/HBP-21] p0096 A72-15949

Light scattering time dependence, erythrocyte aggregation rates and hydrodynamic characteristics in os, pig and horse blood stream p0908 A72-16230

Cardiac muscle level dependence on blood stress Reynolds number, tracing cardiac noise origin to blood turbulence p0106 A72-17476

Blood flow mathematical formulation, considering tissue constitutive equations, geometrical configurations, arterial wave propagation, etc p0111 A72-17959

Hyponatremia effect on kidney blood flow in erythropoietic properties in rabbits, noting inhibiting effect on erythroblast cells mitotic activity in bone marrow culture p0112 A72-18061

Reciprocal temperature changes in dogs during constant metabolic condition for coronary sinus blood flow measurement p0113 A72-18197

Microcirculation study of intravascular erythrocyte aggregation /blood sludge/ in rats p0158 A72-19686

Fluid mechanics of blood and saline flow in microcirculation, considering plasma layer p0558 A72-21196
BLOOD PLASMA CONTENT

Neurodynamic and blood oxygen parameter changes: comparison in dogs during hypoxia at rest and muscle activity in various oxygen concentrations: p0069 A72-15214

Conversion of angiotensin to angiotensin II in dog pulmonary circulation, studying peptide levels: p0071 A72-15232

Conversion of angiotensin to angiotensin II in dog pulmonary circulation, studying peptide levels: p0071 A72-15232

Plasma erythropoietin concentration in men and mice during altitude acclimatization: p0150 A72-19340

Acid base balance in arterialized capillary blood in men after maximal short duration exercise: p0150 A72-19441

Thermal stability variations in blood serum protein after electrical stimulation of rabbit hypothalamic structures: p0158 A72-19649

Effect of intravascular effect on plasma carbon dioxide gradients near pulmonary capillary wall, discussing free energy requirements: p0172 A72-20890

Light-dark cycle and physiological stress will effects on circadian rhythms in rat blood serum serotonin levels: p0174 A72-21081

Dose dependent hyperglycemia and hyperlipemia response to postembryonic sodium injection in rats from plasma glucose and fatty acid analysis: p0175 A72-21107

Lipid metabolism abnormality relation to hypothyroidism leading to atherosclerosis, noting thyroid parenchyma atrophy from autoimmune thyroiditis: p0178 A72-21544

Blood lipid levels and dietary habits in atherosclerotic and healthy subjects, showing lipid and glucose metabolism disturbance increase in coronary cases: p0179 A72-21546

Cortisol content in blood plasma, cerebral cortex and skeletal muscles during hypoxia adaptation in rats: p0185 A72-22083

Inhibitive effect of immobilization on urinary catecholamine excretion and blood plasma thyroxine level in rats: p0216 A72-22648

Blood serum proteins thermal stability in patients with vegetative vascular and neuroendocrine syndromes, discussing ATP effects: p0217 A72-22877

Human blood serum 11-oxycorticosteroid content after maximal stress exercise, noting heart rate and blood pressure changes: p0217 A72-22878

Prolonged water immersion effects on renal function and plasma volume in trained and untrained subjects, noting deleterious effect on orthostatic tolerance and work capacity: p0227 A72-23738

Urine and plasma protein and creatinine measurements in acclimatized and unacclimatized men before, during and after high altitude ascent: p0232 A72-24902

Serum petidase activity determination as enzymatic diagnostic test for myocardial infarction: p0266 A72-25051

Myocardial infarction stress effect on serum cortisol, plasma free fatty acid and urinary catecholamine levels: p0270 A72-26787

Bed rest and centrifuging effects on human plasma thyroid hormone levels, discussing total protein, albumin and thyroxin binding globulin concentrations: p0281 A72-27077

Multihour immersion effects on blood plasma protein and electrolyte concentration in trained and untrained subjects: p0282 A72-27080

Bed cell mass plasma volume decrease in Apollo mission crews, indicating erythrocyte inhibition: p0291 A72-28266

Plasma protein concentration, volume and hematocrit changes during exercise, bed rest and high forward acceleration: p0295 A72-28296

Nonivalent K and Na and bivalent Ca and Mg plasma ion ratio effect on thrombocyte electrostatic interaction: p0322 A72-28635

Mechanical vibration induced physiological changes in rats, determining plasma Ca, K and inorganic phosphate concentration and xanthine oxidase activity response to frequency and g levels: p0350 A72-29560

Hypokinesia effect on fluid and electrolyte metabolism change patterns in rabbits from blood plasma studies: p0336 A72-30389

Effects of in vivo injection of 1000 ergonovine at reduced pressure on serum and red cell lipids: p0340 A72-29553

Disproportional changes in hematocrit, plasma volume, and proteins during exercise and bed rest: p0361 A72-35966

Algorithms for selected blood acid-base and blood gas calculations: p0362 A72-35973

Fluid transfer between blood and tissues during exercise: p0365 A72-36560

Hypoxia theory for atherosclerosis formation, noting blood plasma protein concentration effects on oxygen diffusion: p0380 A72-37030

The effect of chronic erythrocyte polyethylen and high altitude upon plasma and blood volumes: p0453 A72-38028

Effect of beta-adrenergic blockade on plasma volume in human subjects: p0453 A72-38029

Variation of the acetylcholine content and of the cholinesterase activity in the blood under muscular strain: p0458 A72-38934

Hemopoiesis in the pig-tailed monkey Macaca nemestrina during chronic altitude exposure: p0463 A72-39344

Kneural and humoral stimulation and hypoxia effects on erythropoietin control, studying human blood serum additions to bone marrow cultures: p0497 A72-60762

Blood serum enzymes activity changes in polytraumatized humans injured in automobile accidents: p0500 A72-61186

Human plasma free fatty acids relation to lactic acid concentration and maximum aerobic power, noting carbohydrate availability as exercise capacity limiter: p0505 A72-81520

Effect of hypoxia and physical activity on plasma enzyme levels in man: p0505 A72-81522

Changes in blood serum proteins under the effect of hypoxia in intact rats with thyroid gland dysfunction: p0510 A72-82283

Effects of the space flight environment on man's immune system. I - Serum proteins and immunoglobulins: p0511 A72-82493

Quantitation of serum proteins on whole blood-electroimmunoassay technique applicable to capillary blood: p0511 A72-82495

Metabolism of angiotensin II in sodium depletion and hypertension in man: p0535 A72-83998

Human blood monocytes - Stimulators of granulocyte and mononuclear colony formation in vitro: p0556 A72-45374

Simultaneous determination of blood plasma volume and corpuscle mass by chromium 51 tagged erythrocytes and iodine 131 labeled human serum albumin: p0581 A72-12021

Chemical changes in blood plasma due to stress: p0597 A72-17028

Effect of 6 MeV X ray irradiation on blood plasma reducing substances in primates: p0624 A72-18087
Effects of muscular stress on biochemical changes in nerve enzyme activity
PH dependent inhibition and reactivation of angiotensin 2 A and angiotensin 2 B and EP II angiotensin inhibition in amide cleaving enzymes of human blood plasma

BLOOD PRESSURE
RT DIASTOLIC PRESSURE
RT HYPERTENSION
RT HYSTONISION
RT SYSTOLIC PRESSURE

Right heart ventricle intracardiac phonocardiograms, recording pulmonary early diastolic click simultaneous with artery pressure curve dicrotic wave
Prenatal arterial blood pressure third order waves onset mechanism in narcotized dogs, noting changed blood and respiration dynamics
Implanted telemetry development for cardiovascular research, discussing blood pressure, flow and hydraulic impedance relationships
Human arm arterial pressure and flow pulsations numerical analysis, constructing electrical analog circuit from mathematical model
Spinal mesenteric vascular reflexes of vasoconstriction effect of pressure drop in coeliac artery relation to Fein nutritional hepatic reflex
Splanchnic vasoconstriction in hyperthermic man independent of falling blood pressure
Cat mean renal nerve activity modification by hypothalamic stimulation and baroreceptor reflex interactions, discussing mean aortic pressure variation effects
Dog mesenteric terminal venous microvesSEL distensibility characteristics from response to arterial and venous pressure changes
Cardiac minus counterpressure as baroreceptor stimulus in intact dog, recording arterial pressure response in closed loop oaks
Intravascular pressure and extravascular structure effects on radial and longitudinal distensibility of arterial microvessels in dog mesentery
Improperly controlled learning processes, 'relationship to hypertonic blood pressure', irregularities pathogenesis in rats, investigating negative emotional reactions effects
Sex differences of chronic effect of environmental stress on blood pressure and information processing in rats, observing neurotic, hypertonic blood pressure irregularity
Autonomic blockade effects on reflex bradycardia due to phenylephrine induced arterial pressure in man during rest and supine exercise
Splanchnic vascular bed role in human blood pressure regulation from lower body negative pressure tests, measuring blood flow from hepatic dye removal rates
Cardiovascular analog computer circuits with outputs for left ventricular pressure maximum outputs, cardiac stroke volume and atrioventricular conduction time
Pulmonary blood pressure and ECG in squirrel monkeys, considering catheter electromeasure system and implanted arterial cannulas long stability
Digital simulation of human cardiovascular system, noting blood pressure control by physiological reflexes

Pulmonary capillary bed filling as function of arterial pressure in perfused frozen dog lungs
Open collapsaries control mechanism of pulmonary diffusion capacity, presenting mathematical interpretation of hemoral and hydraulic blood pressure control
Mathematical model for arterial system pressure, blood flow and dimensional changes, examining cardiac ejection dynamics and vasculature mechanical properties and viscoelasticity
Electronic and hematocrit devices to investigate cardiovascular system functions including blood coagulation process, pressure and flow
Sheet flow theory for pulmonary alveolar blood flow, discussing blood pressure effects, mesacrine tension, blood volume and transit time distribution
Left ventricular dynamic function in terms of internal diameter, pressure and flow in dogs at rest and during isoproterenol and ketamin infusions
Arterial pressure data recording technique using magnetic tape recorder and automatic conversion to digital form
Single linear measure of systolic pressure gradient for calculation of aortic valve area in stenosis severity assessment
Piezoelectric transducer for indirect on-wrist blood pressure measurements for clinical environment
Arterial blood gas tensions, using sequential phase dilution for pilot oxygen delivery
Human acceleration stress tolerance monitoring techniques for temporal, brachial and radial arterial blood flow and indirect systolic and diastolic blood pressure measurements
Prevention of weightlessness effects on blood hydrostatic pressure, musculoskeletal force and sensorimotor performance, discussing space flight training and space environment simulation tests
Automated constant cuff-pressure system to measure average systolic and diastolic blood pressure in man.
Hemodynamic changes in man during immersion with the head above water.
Mathematical models for flow ejection and aorta pressures based on displacement ballistocardiography and time dependent incompressible flow theories respectively
Effects of vacuum and increased blood pressure on the incidence of decompression-induced pulmonary barocontrast.
Systemic haemodynamics in borderline arterial hypertension - Responses to static exercise before and under the influence of propanolol.
Determination of systolic time intervals using the apex cardiogram and its first derivative.
Implatable blood pressure telemetry system.
Relationship of pulmonary artery to left ventricular diastolic pressures in acute myocardial infarction.
An indirect method for evaluation of left ventricular function in acute myocardial infarction.
Separation of central effects of CO2 and nicotine on ventilation and blood pressure.
Tilt table tests for orthostatic tolerance, measuring heart rate, blood pressure and responses of fainters and nonfainters.  
Effect of fasting on tolerance to moderate hypoxia.  
Carotid rete role in brain protection against extreme elevations of systemic blood pressure, presenting goat cerebral blood flow measurement procedure.  
Spinal cord heating and cooling effects on body temperature, respiratory and heart rates and arterial blood pressure, investigating feeding and drinking behaviors.  
Control parameters of the blood-pressure regulatory system. I - Beatrate sensitivity.  
Control parameters of the blood-pressure regulatory system. II - Open-loop gains, reference pressure and basal heartrate.  
Lower-body negative pressure as a method of preventing shifts associated with changes in the hydrostatic pressure of blood.  
Use of implantable telemetry systems for study of cardiovascular phenomena.  
Increased fluid turnover and the activity of the renin-angiotensin system under various experimental conditions.  
Carotid displacement pulse first time derivative recording as noninvasive technique for heart function assessment.  
General index for the assessment of cardiac function.  
Injected histamine effects on intracranial pressure and systemic blood pressure in Macaca mulatta monkeys.  
Electronic circuits for measuring left ventricular processes and providing time signals for computer monitoring of cardiovascular system [NASA-TN-35501].  
Pressure ramp programmer for automatic blood pressure measurements [NASA-CR-15508].  
Optical control algorithms for on-line closed loop blood pressure regulation [NASA-CR-12750].  
Hypertension effects on cardiac arrhythmias, arterial pressure, and respiration in dogs and electrocardiographic effectiveness in diagnosing threatening onset.  
Ramped arterial blood pressure levels in aircrrew members.  
Effect of vibration on blood flow and pressure in major arteries of dogs.  
Effects of hydrostatic pressure on viscosity of whole blood systems [AD-780083].  
Design and operation of systems for monitoring systolic and diastolic blood pressures on beat by beat basis [AD-780032].  
Framingham indicators for detecting potential coronary heart disease susceptibility in third class airman population [NASA-AD-72-26].  
Blood vessels.  
Viscosity and constraints effects on wave dispersion and dissipation in blood vessels, comparing theory with experiments on dogs.  
Teflon diffusion membrane for in vivo blood and intracardiac tissue gas tension measurement by mass spectrometry without chemically bonded heparin surface.  
Ultrasonic Doppler flowmeter for instantaneous measurement of blood vessel flow velocity by averaging frequency shift over received signal power density spectrum.  
TV microscopostic system for on-line measurement of cutaneous microvessels diameter relative to heart action.  
Irreversibility mechanism in postpartum ductus arteriosus closure in guinea pigs, studying vessel cellular changes and smooth muscle response to oxygen pressure.  
Platelet aggregates role in intracardiac vessel circulation impedance in patients dying suddenly of coronary artery disease.  
Mathematical model for flow limitation in collapsible tube in relation to pressure in pulmonary and circulatory systems.  
Coronary collateral circulation and myocardial blood flow reserve.  
Blood vessel reactions to natural defense and conditioned reflexes from plethysmography and blood pressure measurements, discussing cortical effects mechanisms.  
Unresponsiveness of pial precapillary vessels to catecholamines and sympathetic nerve stimulation.  
Effect of vibration on the permeability of the blood-brain barrier.  
Resistance and capacitance vessels of the skin in permanent and temporary residents at high altitude.  
Photoelastic analysis of cardiovascular-magnitude stress pattern produced by flow through gelatin-agar walled channels for analysis of mechanical stresses on blood vessel walls.  
Animal vessel adaptation to gravitational overloads in head-pelvis direction [PB-200183-7].  
Angiographic study of hamsters in relation to decompression sickness.  
Blood vessel flow velocity measurement with ultrasonic Doppler technique [TH-71-E-20].  
Cheek-back acceleration effects on rabbit telecephalic vessels.  
Cheek-back acceleration effects on rabbit menencephalic and mesencephalic blood vessels.  
Acceleration training effects on compensatory reactions of rabbit retinal vessels.  
Increased density and reticular fiber formation in rat spleens as compensatory reaction to acceleration training.  
Degenerative changes in bronchial vessels of rabbits caused by hypodynamia and hypokinemia [NASA-CR-15508].  
Elastic thin shell theories for explaining dynamic behavior of prestressed blood vessel walls.  
Blue green algae.  
Slow green algae.  
Anacystis nidulans photorecovery after Co 60 gamma radiation exposures, using white and red light.
Phylogetic origin of cytoplastids from Cyanophycean algae involved in endosymbiosis with colorless Cryptophyceae

Blue green alga Anacystis nidulans UV light-sensitive mutants photorecovery capacity following irradiation

Effect of space flight on changes in blood composition and body functions

Effectiveness of restraint equipment in experimental investigation of an astronaut

Body fluids NT BLOOD NT CHRYSOPHYALOID FLUID NT ERYTHROCYTES NT LIPOPHILIC NT LYMFIGS NT LYMPHOCYTES NT LEUKOCYTES NT LYMPHOTYTES NT LUMEA NT SALIVAE NT SWEAT NT THROMBOPLASTIN NT URINE

NT WHITE BLOOD CELLS

Water immersion tests to study body fluid balance disturbances during weightlessness, observing diuretic reflex control of blood volume

Functional exercise adaptations in skeletal muscles during continuous positive pressure breathing in dogs

Body fluids NT BLOOD NT CHROMOPHYLALOID FLUID NT ERYTHROCYTES NT LIPIDOPHILIC NT LYMFIGS NT LYMPHOCYTES NT LEUKOCYTES NT LYMPHOTYTES NT LUMEA NT SALIVAE NT SWEAT NT THROMBOPLASTIN NT URINE

Body kinematics numerical analysis, obtaining space-time resolution by photogrammetric restitution and electronic data processing of photographic recordings

Human leg muscle reflex excitability changes during angular acceleration, suggesting vestibular apparatus as a control mechanism.

Two-mass system as human body dynamic model in ballistocardiography, outlining transfer function parameter computation procedure

Water immersion tests to study body fluid balance disturbances during weightlessness, observing diuretic reflex control of blood volume

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Human body kinematics numerical analysis, obtaining space-time resolution by photogrammetric restitution and electronic data processing of photographic recordings

Human body movements basic kinematics, measuring static force, angle and tangential acceleration of horizontal arm swings

Human and animal controlled self rotating maneuverers during free fall, comparing theoretical motion analysis with photographs of falling cats.
BODY SIZE (BIOLOGY)

Body measurements and statistical analysis in

designing control cabins p0127 A72-14115

Biotelometry measurement of rhythms in

gastrointestinal system of animals and human

beings p0191 A72-16021

Biomedical system for measuring volume and volume

variations of human body under zero gravity conditions

[NASA-CASE-MSC-13972-1] p0193 A72-16043

Body size (biology)

Dimensional analysis and similarity theories

application to biological organisms

relationships between body size and metabolism

p0268 A72-26074

BODY SWAY TEST

Quantitative model to describe vestibular

detection of body sway motion in postural

response mode p0330 A72-29376

Effects of visual cues on the standing body sway

of males and females. p0628 A72-36918

Vertical posture control mechanisms in man

p0453 A72-37992

Otolith organ response of bursal vision people and

persons with severe bilateral labyrinthine

function loss exposed to prolonged tilt

[NASA-Cb-127034] p0433 A72-26058

BODY TEMPERATURE

Body cooling effect on human vigilance in hot

environments, testing reaction time to visual

stimuli and auditory signal detection rate

p0015 A72-11290

Optimum muscle work conditions experimented with

rabbits, correlating total work performance and

power output with muscle temperature variations

p0023 A72-12013

Skin and hypothalamic temperature effects on human

thermoregulatory responses, developing control

mechanisms for peripheral effects on skin sensors

p0024 A72-12041

Chronic centrifugation effects on rat deep body

temperature by implant biotelemetry, comparing

with body mass and food consumption changes

p0028 A72-12089

Heat exposure effect on Slajan avoidance

performance in rats, discussing organism

thermoregulatory capacity disruption and shock

and body temperature regulation

p0031 A72-12525

Thermoregulatory hypothalamic and body sites for

behavioral temperature regulation in squirrel

monkey p0050 A72-13072

Biological tissue heat transport dimensional

parameters for steady state and transient

analysis of homeotherm thermoregulation

p0064 A72-14866

Heat acclimatization, work habituation and

exercise effects on body thermoregulation,

measuring transtemporal, sweat rate and oxygen

intake p0068 A72-14896

Peripheral modifications to exercise induced

central drive for sweating, determining rates as

functions of internal temperature

p0069 A72-15212

Potassium cyanide effect on phospholipid exchange

in rat brain and liver during histotoxic hypoxia

as function of body temperature p0090 A72-15357

Heat production increase by muscular contractions

due to noradrenaline in cold adapted rats

p0010 A72-17215

Body thermal stress, local heating and artificial

occlusion effects on sweat electrolyte content

p0153 A72-19937

Circadian rhythms variations for sleep, ECG,

temperature and activity in monkeys, indicating

acrophase, amplitude and level regulation

p0156 A72-19528

Weak LF electric field influence on circadian

rhythms of human rectal temperature and activity

p0156 A72-19531

Spectral photosensitivities for phase shifting of

circadian body temperature rhythms in pocket nice

SUBJECT INDEX

p0157 A72-19535

Biomedical transducers for NASA space program,

discussing spray-on electrodes and telemetry

for ECG respiration and body temperature

p0160 A72-19917

Eastbound and westbound transmeridian flights

effect on body temperature and psychomotor and

visual performance circadian rhythms, discussing

readjustment times [ANBL-TR-71-89] p0162 A72-20176

Human temperature regulation during upright and

supine exercise, showing nonlinear relationships

between perspiration and skin and core

temperatures p0165 A72-20275

Various work-rest cycles and environmental

temperature effects on body temperature,

determining external auditory canal and core

temperature relationship p0171 A72-20886

Convective heat transfer from human form, using

cylindrical model and aluminous statue physical

replica in oven and wind tunnel air flow studies

p0172 A72-20892

Peripheral thermoregulation in arctic canines,

showing subzero bath-immersed foot temperature

maintenance above tissue freezing point

p0184 A72-22019

Mathematical model of skin contact cooling tube

device for human body thermoneutrality

maintenance in various environments

p0217 A72-22621

Calorimetric measurements of human body

temperature and of hot saline solution drinking

effects on sweating rate

p0223 A72-23400

Oxygen consumption and body temperature in

anesthetized, paralyzed and artificially

ventilated dogs cooled in water bath at 34 C,

measuring hypercapnia and beta-adrenergic

blockade effects [AD-740991] p0227 A72-23735

Human body calorimetry with water cooled varnish

device for dynamic and continuous recording of heat

dissipation from surface over extended time

p0233 A72-24865

Assessment of regional myocardial temperature

calorimetry effect on blood flow measurements by

heated cross-thermocouples in dogs

p0235 A72-25071

German papers on human body energy balance and

temperature control covering energy conversion

processes, chemical secretions, muscle activity,

etc p0269 A72-26071

Human body thermoregulatory processes under

varying environmental conditions and metabolic

rates, discussing role of body circulation,

sweating, nervous stimuli, hormones, etc

p0268 A72-26073

Thermodynamic analysis of heat of evaporation of

sweat, considering ambient temperature and

humidity effects, body heat storage and presence

of moultes p0270 A72-26610

Forearm skin and muscle blood flow change

measurements during whole body heating, using

plethysmography, isotopic labeling and blood

sampling techniques p0271 A72-26617

Cusulative sleep deficit, preceding sleep or

wakesfulness period duration and body temperature

effects on reaction time in multiple choice

visual task p0274 A72-26690

Biorhythms of increased core temperature in

eranian monkey to mechanical vibration,

noting implications for pilot performance during

prolonged buffeting p0292 A72-28268

Ear site body temperature measurement relation to

radiant heating of scalp and upper face

p0299 A72-28333

Cardiovascular system functional state elevation

during controlled cooling, studying hemodynamic

changes p0336 A72-30386

Sweating relation to body temperature after

exeruasive exercise for various oxygen uptakes
and ambient temperatures

Water cooled suits efficiency and effectiveness
for heat removal, noting importance of head area

Cardiac output and body temperature response to
prolonged intermittent exercise

Heat, noise and vibration stress combined effects
on skin and rectal temperature, heart rate, weight loss and biochemical-urinalysis

Thermal neutral temperature of rats in
water-cooled garments

Effect of direct application of K, Ca, Hg, and Ba
ions on body temperature and sweat secretion

Heat acclimatization by exercise-induced-elevation

Heat and noise and vibration stress combined effects

Circadian rhythms in physiological and
Clinical thermography with Thermovision camera

Heat loss and biochemical analysis
for heat removal; noting importance of head area

Hyperoxia effects on rat body weight, oxygen
consumption and ischemic cardiopathy-probability from ECG, anthropometry and lipid and glucid metabolism studies

Triacylglycerolaemia relation to age, relative weight
and ischemic cardiopathy probability from ECG, anthropometry and lipid and glucid metabolism studies

Temperature transmission from biopotential
radiotelemetry transmitters

Temperature balance in man during 24 hours in a
controlled environment

Evidence for a metabolic limitation of survival in
hypothermic hamsters

Role of the dorso-medial area of the posterior
hypothalamus in thermal regulation and its
functional relationships with the anterior
hypothalamus

Analysis of changes in thermal regulation after
destruction of the medial preoptic area of the
hypothalamus

Pulse activity of neurons in the thermal
regulation center of the anterior hypothalamus
during chill shivering

Temperature-sensitive neurons in the brain stem:
Their response to brain temperature at
different ambient temperatures

Physiological response of body temperature to
localized ventilation

Protection of aircrews from high temperatures and
water-cooled garments for heat balance studies in man

Selected articles on mathematical or simulation
models of human thermoregulation

Relationship between steady-state flow and
temperature regulation mechanisms during exposure
to heat

Response of ventilation parameters, pulse rate,
oxygen uptake, and body temperature in man under
acute and severe hypoxia

Pulse modulated biotelemetry system for
determining energy budgets in free-ranging
vertebrates from heart rate and body temperature
measurement

Effect of direct application of K, Ca, Na, and Ba
ions on body temperature and sweat secretion

Influence of sesquicarbonate on rabbit body
temperature

Design and operation of completely implantable
three channel temperature biotelemetry system

Body temperature regulation

Body weight

Theoretical considerations on numerical
relationships of morphometric and physionetric
organization in mammals, using allostatic growth
equations and body weight correlations

Weight loss due to respiratory tract evaporative
water loss during exercise, from humidity
change, ventilatory exchange and oxygen uptake
data

Blood circulation systome and peripheral
resistance changes during human landing
process, accounting for body weight

Biological similarity theory for numerical
relationships of morphometric and physionetric
organization in mammals, using allostatic growth
equations and body weight correlations

Body weight decreases in some proton exposed
primates.

Effect of hyperoxia media on the stability of rats
during acute carbon monoxide exposure

Hyperoxia effects on rat body weight, oxygen
consumption, and tolerance to carbon monoxide
exposure

Boeing Military Aircraft

Boeing 707 aircraft

Boeing 707 cockpit acceleration and vibration
measurement in Boeing 707 notching pilot performance

Boron (Samplees)

Boron

Boron nitride
Bone marrow

Chronic microwave irradiation effects on experimental arterial blood forming systems, examining peripheral blood count changes and nuclei and mitosis abnormalities in erythroblastic and lymphoid cells. 

Radiobiological effects of nonsurvivors body irradiation, discussing regeneration process stimulation by partially shielded bone marrow. 

Biological dosimetry in acute human irradiation from cytotoxic study of peripheral blood and bone marrow. 

Proliferative blood forming tissue under chronic gamma ray irradiation in guinea pigs by quantitative methods, showing myeloid and reticular disturbances of bone marrow. 

Hypoxia effect on diurnal autonomic activity of norm of marrow regeneration system of guinea pig in pressure chamber. 

Supercellular regulators of triggering mechanism of regenerative reaction in stem norm erythroblastic bone marrow tissue. 

Nervous and humoral stimulation and hypoxia effects on erythropoesis control, studying human bone norm additions to bone marrow cultures. 

Pyrogenal injection test for hematopoietic tissue function in dogs, describing responses to transient leukemia followed by pronounced leukocytosis due to bone norm granulocytic extinction. 

Estimating individual bone marrow radiation doses in leukemia patients. 

Effectiveness of lead screens in protecting bone marrow quantity necessary for survival of pigs gamma irradiated with Co-60. 

DOWNS

NT CEIREDHNN
NT CRANN
NT PEMUB
NT INTRACRANIAL CAVITY
NT PELYIS
NT SCIFIC REGION
NT SKULL
NT STEHNN
NT TIBTA
NT ULSA
NT VERTEBAE

Hydroxyapatite isotropic and anisotropic elastic properties compared with experimentally observed anisotropic behavior of bone. 

Aseptic bone necrosis pathology from radiographic studies in dogs with decompression sickness noting articular cartilage erosion and joint droplasia and exostosis. 

Calcium metabolism perturbations in astronauts under weightlessness conditions and in immobilized test subjects, noting bone tissue renewal cycle modification, calcarea variations and bone calcification. 

Skeletal bones ash content in man and primates, involving differences due to adaptive physiological function. 

Calcium and phosphorus excretion relation to bone density changes in immobilized Macaca nemestrina monkeys. 

Comparative study of two direct methods of bone mineral measurement. 

Radiographic study of bone demineralization in Gemini crewmembers. 

Hypodynamia and thyroid hormone effects on calcium metabolism of rat bones.
Thyroid and adrenocortical hormonal state effect during separate chilling and steady hibernation temperature maintenance of skin and brain

Coherent brain model for evolution mechanisms of biological resonance in neuron network signal flow

Digital evoked brain potential detector using multichannel amplitude analyzers

Adaptation period to inverted work-rest cycle observed with encephalocardiograph, noting effect of brain bioelectric activity circadian rhythm stability

Electric stimulation of rabbit brain limbic formations /claustrum, amygdala, hippocampus/, showing effect on emotional response motor and vegetative components

Human brain sensorotor region EEG dependence on proprionic acid influence, instruction for active movement and preparation passive movement of hand

Biochemical analysis of cat brain regions for gamma-aminobutyric, aspartic and glutamic acids, glycoces and phosphatidylserine concentrations during paradoxical sleep deprivation

Bioelectric activity of the medulla oblongata during hypothermia and bloodletting

Sperry neuronal specificity hypothesis for nerve cell connections formation between eye and brain during embryonic development, proposing systems matching theory

Russian book - Intracranial blood circulation under conditions of accelerations and weightlessness

Language and speech capacity of the right hemisphere.

Sympathetic patterns is the superficial layers of the superior colliculi of the monkey, Macaca mulatta.

Proteins activity in different regions of the brain during development and inhibition of a conditioned passive-avoidance reflex

Effects of free amino acid doses and of amino acid metabolizm cofactors on the distribution of regional free amino acid resources in the brain and blood of animals

Negative /painful/ stimuli cessation relation to emotionally positive zone activation in rat brain during self stimulation experiments

Localisation and structural-functional organization of the system of vague nerve nuclei constituting the 'cardiac center' of the medulla oblongata

New modifications of manipulators for investigations using microelectrodes

Modulating effect of limbic brain formations on the blood system

Suprarenal influences on hypoxic ventilatory control.

Dependence of inhibitory areas of inferior colliculus neurons on the time characteristics of acoustic stimuli

Mechanism of adaptation to hypoxic hypoxia

Influence of elevated partial oxygen pressure on the sympathetic-adrenergic and acetylcholine systems

Electromagnetic fields an isolated stimuli for brain

Bioelectric and biochemical changes in brain of hibernating animals

Hologram data treatment comparison to human brain function, discussing recognition signals, Pavlovian qualities and intelligence function

Factor analysis of frontal and occipital brain regions EEG indices interzonal variability, relating autoregulation function parameters to neuron ensembles force level

BHA content changes in ground squirrel brain during active and hibernation states

Hat brain acetylated and unacetylated coenzyme A

Ventral lateral geniculate nuclei in cats pathways from superior colliculus to dorsal and lobe

Brain structures role in fixation of temporal relationship in information sensory function of central nervous system

Physiology of sleep phases and dreams, discussing data on highly organized and interacting neurodynamic mechanisms exhibiting alternating forms of brain bioelectric activity

Breathing regulation characteristics showing reflex control of respiratory functions in normal environment and brain tissue receptor control under hypoxia

Stepwise adaptation to high mountain conditions effect on brain and sernal muscle oxidation processes in rats

Soiit book on psychic phenomena and brain, covering cybernetics, dialectical materialism implications, consciousness, psychophysiology and cerebral neurodynamic structures

Photically induced and spontaneously discharged neuron impulse propagation through direct pathway from superior colliculus to dorsal and ventral lateral geniculate nuclei in cats

Review of biology and biochemistry of memory, suggesting molecular level mechanisms of cerebral information processing

Mathematical model of extracellular pH in brain tissue from blood and cerebrospinal fluid acid-base parameters for respiration central chemosensitive mechanism study

Respiration control by extracellular pH in medullary tissue, studying chemoreceptor response to hydrogen ion concentration in cat cerebral fluid

Vascular-capsular study of age related telencephalic features of human brain optic lobe

Thyroid and adrenocortical hormonal state effect on cell number and functional maturation of brain, discussing neurogenesis in infants

Electrophysioloqy for auditory temporal masking mechanism study of cat cochlear nucleus and inferior colliculus single neurons
BRAIN CIRCULATION

- Concepts analyzed by construction of model of cerebral vascular disorder biochemical analysis, cerebral blood filling reduction and blood vessel comparative study of regional hemodynamics during studies of the influence of theophylline on the human cerebral hemodynamic changes during arousal.

- Human cerebral hemodynamic changes during arousal and orienting reactions to auditory stimuli.

- High altitude natives cerebral arterial-venous oxygen difference measurement during ambient air and oxygen breathing, showing chronic hypoxia effect on cerebral blood flow.

- Book on experimental brain hypoxia covering changes in hemodynamics, energy metabolisms, electrolyte and water movement and cerebral and peripheral venous blood serum proteins.

- Hydrogen peroxide formation relationship to lipid peroxidation and seizures in brain during high pressure oxygen exposure.

- Destructive changes in rabbit brain and eyes under pulsed laser beam irradiation.

- Human and animal central nervous system repair processes for brain damage caused motor function disturbances.

- Brain trauma in irradiated monkeys.

- Reflex and conditional movement observation of central nervous system function restitution in Macaca mulatta monkeys with cortical lesions, studying pathological forced grasping.

- Language and speech capacity of the right hemisphere.

- Neurosurgical cases and delayed-alternation performance of frontal monkeys.

- Higher nervous activity of monkeys two years after the extirpation of the dorsolateral frontal cortex.

- Role of the reticular formation of the midbrain in the storage and recreation of a system of conditioned reflexes.

- Impact parameter effects on severity of human cranioencephalographic traumatic brain injuries in aircraft accidents.

- Correlation between electrographic trace phenomena and conditioned reflexes in the storage and recreation of a system of the extirpation of the dorsolateral frontal cortex.

- Chest-back acceleration effects on rabbit telencephalic vessels.

- Chest-back acceleration effects on rabbit mesencephalic and mesocerebellous blood vessels.

- Computer program for analyzing impact damage to skull-brain system models.

- Use of mathematical model for evaluation of head injury severity index criteria.

- Mathematical models for testing effectiveness of multilayered viscoelastic and elastic-plastic brain protection systems during impact shock.

- Effects of external impulsive head loads on human brain behavior.

BRAIN DAMAGE

- High energy proton irradiation late pathological effects on rabbit brains, discussing brain lesions and radiation dosages.

- Frontal lobe damage effect on conditional motor reflexes, communication capabilities and emotional behavior in bison bees.

- Human cranioencephalographic trauma dependence on impact conditions, giving case histories.

- Cerebral vascular disorder biochemical analysis, noting retinal vascular change relation to coronary arteriosclerosis and asoxia and flight stress effect on serum lipid and cholesterol.

SUBJECT INDEX

- Book on experimental brain hypoxia covering changes in hemodynamics, energy metabolisms, electrolyte and water movement and cerebral and peripheral venous blood serum proteins.

- Testosterone corebellum microstructure and leaflets strength in study of chronic and acute hypoxia injury to fetus during pregnancy and in infant cerebral blood filling reduction and blood vessel comparative study of regional hemodynamics during studies of the influence of theophylline on the human cerebral hemodynamic changes during arousal.

- Hydrogen peroxide formation relationship to lipid peroxidation and seizures in brain during high pressure oxygen exposure.

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- Human and animal central nervous system repair processes for brain damage caused motor function disturbances.

- Crash helmet performance prediction through various strain criteria, using brain injury biodynamic model.

- Brain trauma in irradiated monkeys.

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- Effects of external impulsive head loads on human brain behavior.
The effects of simultaneous and successive contrast on perceived brightness...

Automated visual sensitivity tester for determining visual field sensitivity and blind spot size

BREATHTHESE

Public biocarbons for skeletal fixation of limb prosthetic devices, noting load bearing applications dependence on brittle characteristics

BROKEN CLOUDS

U CLOUDS (METEOROLOGY)

BROKING COMPOUNDS

Biosocial effects on air crews of chemical fire suppression agent Halon 1301

Bromotrifluoromethane/ during simulated aircraft cabin fires

BROCHIAL TUBE

Mathematical model for flow limitation in collapsible tube in relation to pressure in pulmonary and circulatory system

BUBBLES

Ultrasonic transducer monitoring of decompression-caused gas bubbles in rat thigh muscle tissue for decompression sickness time course development studies

Get

Dynamics of dissolution of gas bubbles or pockets in tissues.

Precordial monitoring for pulmonary gas embolism and decompression bubbles.

Bubble growth during decompression and allowable gas tension in human body

BUFFETING

Biothermal response of increased core temperature in rhinos moose to mechanical vibration, noting implications for pilot performance during prolonged buffeting

BUCKS, (INJURIES)

Heat transfer through fabrics by convection, conduction, radiation and vaporization, related to skin temperature and thermal injury

Epithelial follicle and mast cell role in peroxidase activity of thyroid gland during experimental burn development

BUFFETTIC ACID

Rapid eye movement sleep deprivation and hypobaric oxygenation influence on gamma-aminobutyric acid levels in mice brains

Suggesting protective mechanism against nerve cell oxime intoxication

C-130 AIRCRAFT

Development and evaluation of C-130 aircraft training program based on systems approach

CABIN ATMOSPHERES

U SPACECRAFT CABIN ATMOSPHERES

CO contamination of cabin and hazard to pilots, discussing concentrations, avoidance, control and analysis

Investigations concerning the problem of virtual contours in visual perception
Sealed cabin air reclamation by means of potassium superoxide, noting weight and space criteria.

Insecticide dichlorvos vapor toxicity in aircraft cabin atmosphere at 8000 ft, studying plasma cholinesterase activity, erythrocytes, dark adaptation and bronchial resistance.

Environmental, medical and acoustic investigations with underwater laboratory, discussing cabin atmosphere control, depressurization, health conditions and sonar operation.

Sampling of transport aircraft atmosphere to determine health hazards of cigarette smoking to passengers.

Sanitary and chemical evaluation of water reconditioned from atmospheric condensate by extraction with ames and alkyl phosphonic acids.

Toxicology and flammability hazards of insecticide vapors in aircraft cabin environment.

Effects of very low calcium diets on human calcium metabolism and osteoporosis development.

Effects of excess calcium imbalance on human body functions.

Calcium metabolism conditions in calcified tissues of rats during a lasting hypodynamia and thyrocliclamin administration.

Effects of oxygen and TCT produced hypocalcemia and hypophosphatemia in rats.

Calcium metabolism conditions in calcified tissues of rats during a lasting hypodynamia and thyrocliclamin administration.

Calcium phosphates:

- Process for preparing calcium phosphate salts for tooth repair.
- Ocean-oriented industry in Florida and Southern California.
- Evaluation of cardiopulmonary function and work performance in man during caloric restriction.
- Vestibular system tests using optokinetic, caloric, positional and rotational stimuli.
- Influence of thermal, osmotic, and chemical stimulations on food and water intake.
- Influence of vestibular stimulation on sensory reflex changes in spinal cord.

Calcium compounds:

- Isomolar sodium salts for tooth repair.
- Bistable interocular admixture for use in telephotography.

Calcium metabolism:

- Isomolar hypercalcemia, discussing treatment by diet-induced extracellular volume depletion and possible pathophysiologic mechanisms of intercompartmental fluid and electrolyte shift.
- Isomolar calcium perturbations in astronauts under weightlessness conditions and in immobilized test subjects, noting bone tissue renewal cycle modification, calcification variations and bone calcification.
- Isomolar calcium metabolism conditions in calcified tissues of rats during a lasting hypodynamia and thyrocliclamin administration.
- Isomolar metabolism, discussing hypercalcemia, discussing treatment by diet-induced extracellular volume depletion and possible pathophysiologic mechanisms of intercompartmental fluid and electrolyte shift.
- Calcium metabolism perturbations in astronauts under weightlessness conditions and in immobilized test subjects, noting bone tissue renewal cycle modification, calcification variations and bone calcification.
- Isomolar stress effect on excretory products in unrestrained chimpanzees, suggesting Ca to P excretion ratio as physiological stress indicator.
- Calcium and phosphorus excretion related to bone density changes in immobilized Macaca nemestrina monkeys.

Physiological evaluation of diastole mechanisms in rat hypertrophy myocardium as function of heart rate, Ca ion concentrations and temperature.

Temperature and extracellular Ca levels, effects on mammalian ventricular myocardium force-frequency relationships, determining contractile tension, velocity and shape duration.

Weightlessness effects on calcium and electrolyte metabolism from measurements during Gemini IV flight, using dietary control and excreta collection techniques.

Comparative study of two direct methods of bone mineral measurement.

Calcium metabolism conditions in calcified tissues of rats during a lasting hypodynamia and thyrocliclamin administration.

Calcium metabolism: under stress and in space.

Effects of very low calcium diets on human calcium metabolism and osteoporosis development.

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Effects of very low calcium diets on human calcium metabolism and osteoporosis development.

Effects of oxygen and TCT produced hypocalcemia and hypophosphatemia in rats.

Calcium metabolism: under stress and in space.

Effects of very low calcium diets on human calcium metabolism and osteoporosis development.

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Calcium metabolism: under stress and in space.

Effects of very low calcium diets on human calcium metabolism and osteoporosis development.

Effects of oxygen and TCT produced hypocalcemia and hypophosphatemia in rats.
Cardiocirculatory adaptation to chronic hypoxia. II - Comparative study of myocardial metabolism of glucose, lactate, pyruvate and free fatty acids between sea level and high altitude residents.

Evidence for a metabolic limitation of survival in hypoxic hamsters.

Localization and dynamic changes of glycoenzymes from retina adapted to darkness or light. I, II.

Effects of atmospheric composition on intestinal glucose metabolism in rats.

Low frequency pulsed electromagnetic field effects on carbohydrate energy and nitrogen metabolism of living organisms.

Effect of continuous noise and vibration on carbohydrate, fat, and protein metabolism in white rats on hypobaric chamber in outer space.

Synthetic carbohydrates toxicity effects on rat liver lysosomes application to astronaut potential food sources.

Human plasma free fatty acids relation to lactic acid concentration and maximum aerobic power, noting carbohydrate availability as exercise capacity limiter.

Toxicological evaluation of synthetic carbohydrates in liver lysosomes of white rats.

Synthetic carbohydrates toxicity effects on rat liver lysosomes application to astronaut potential food sources.

Human plasma free fatty acids relation to lactic acid concentration and maximum aerobic power, noting carbohydrate availability as exercise capacity limiter.

Carbon ion selection accumulation model of carbohydrates diffusing through artificial polymer membranes, relating prebiological systems to catalytic microsystems.

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CABBOB DIOXIDE TBSSIOB
CABBOB ISOTOPES
• Electrochemical CO₂ concentrator
• Breathing control during speech, noting carbon
BT HYPOCAPNIA •
BT HIPO2PHIA
• Carbon dioxide- and thermal-control in
Determination of oxygen consumption by use of the
• ALVEOLAR CARBON DIOXIDE
• Respiratory mass spectrometer
• Expiration air as a source of spacecraft environment
• Experimental studies on the alkali-acid equilibria in the blood gases under the chronic action of low concentrations of lead.
• Respiration and disease in normal young men
• Respiratory function and blood gas tension effects of CO contamination of cabin and hazard to pilots.
• Biophysical responses to low CO concentrations in exercising humans.
• Effect of acute CO intoxication on psychomotor performance
• Effects of low CO concentrations on learned behavior patterns using human subjects.
• Stabilization of carbon monoxide metabolism in man.
• Effects of acute CO intoxication on psychomotor performance
• Hemoglobin concentration measurement in blood
• Human blood carboxyhemoglobin saturation relation to inspired air oxygen and CO concentrations from small closed rebreathing system tests.
Human left ventricular volume determined by peripheral venous scintillation angiocardio graphic isotope method, comparing with T ray method

Beta-adrenergic and vagal blockage altered autonomous control effects on left ventricular function in conscious dogs, noting heart rate, stroke volume and end-diastolic and end-systolic diameters

Idiopathic hypertrophic subaortic stenosis ballistocardiography measuring ventricular function by angiography

Exercise ECG correlation to morphological patterns of selective cinecoronar angiography and ventriculography, revealing significant information on occlusion and stenosis

Ballistocardiographic and angiographic correlations of ventricular function in patients with idiopathic hypertrophic subaortic stenosis

Facial cardioadipose detection by electrocardiography noting arrhythmias, ventricular hyperactivity, abnormal Q waves and intraventricular conduction defects

 Doppler cardiometry determination of human cardiovascular velocities in patients with heart diseases, discussing impaired left ventricular function detection

Asymmetrical hypertrophic cardiomyopathy symptoms showing combination with hemoglobin without significant molecular volume increase

Ventricular function determination by computer graphic techniques for increasing speed, accuracy, reliability and scope of angiocardiographic analyses determining human heart dimensions

Idiopathic subvalvular aortic stenosis characterized by muscular or membranous obstruction in left ventricular infundibulum, discussing diagnostic importance for pilots

Continuous transducer measurement of left ventricular wall thickness in open chest dogs, adapting mutual inductance coil technique

Vectorcardiographic and ECG diagnosis of left anterior hemiblock combined with complete right bundle branch block, discussing coexisting myocardial infarction influence

Ventricular myocardium contractile function disorder diagnosis by phase coordinate method with intracardiac hemodynamics application

Ventricular and supraventricular arrhythmias incidence during maximal treadmill exercise in normal man, noting age factor and cardiovascular disease presence effects

Intraventricular conduction defects incidence and mortality in acute myocardial infarction, noting left anterior hemiblock dominance

Clinical effects on atrio-ventricular pacing systems of electromagnetic weapon detector system used for air passenger screening at airports in air hijacking prevention efforts

Human left ventricle measurements, modeling, control and simulation for heart mapping purposes, describing muscle performance mathematical model and stress effect prediction control system

Left ventricular volume time course from computer processing of video angiocardiographic data based on X ray densitometry measurements

Electrode system for ventricular defibrillation, noting current density role and rounded edge effectiveness
Left ventricular dynamic function in terms of interventricular diameter, pressure and flow in dogs at rest and during isoproterenol and metaraminol infusions. p0272 A72-26628

Fluid mechanics of left ventricle model with mitral and aortic valves, showing ring vortex relation to diastole and closure. p0277 A72-26773

High altitude hypoxia pre-adaptation effects on left ventricle myocardium nondredamine concentration in rats with experimental vitium cordis. p0286 A72-37648

Dynamic electrocardiography with analog computer program to detect, count and classify atypical ventricular depolarization complexes. p0293 A72-28281

Heart enzyme activity under experimental avascular ischemia in rabbits determined for blood, left and right ventricles and atrium. p0321 A72-28463

Pilot age evaluation from ECG during hypoxia, considering right intraventricular conduction and ventricular repolarization anomalies. p0332 A72-29857

Contractile responses of Guinea pig, rat and human isolated ventricular avascular to increased stimulation frequency. p0334 A72-30040

Temperature and extracellular Ca level effects on mammalian ventricular myocardium force-frequency relationships, determining contractile tension, velocity and phase duration. p0336 A72-30045

Quantitative angiography of abnormal left ventricular function and contractile spectrum in ischemic heart disease patients. p0342 A72-30568

Radiocardiography method for ventricular volume measurements, recording subclavian vein-infected radioisotope passage through cardiac cavities. p0368 A72-32495

Indicator dilution methods for ventricular volume measurements from washout curve, discussing intraventricular blood mixing, uniformity. p0368 A72-32496

Left ventricle intracavity volume measurement based on biplane angiographic data. p0368 A72-32497

Baboon heart endocardial structure dynamic behavior, comparing left ventricle septum and epicardium contractile force and intramyocardial pressure changes. p0371 A72-32748

Computerized angiographic heart geometry analysis for three dimensional ventricle models of man and dog, using Ta markers. p0373 A72-33428

Influence of hyperosmolality on left ventricular stiffness. p0381 A72-34727

Induction of ventricular arrhythmias by elevation of arterial free fatty acids in experimental myocardial infarction. p0384 A72-34997

Acquired complete right bundle branch block without overt cardiac disease - Clinical and hemodynamic study of 37 patients. p0419 A72-35821

A human left ventricular control system model for cardiac diagnosis. p0419 A72-35821

Left ventricular dynamics during handgrip. p0429 A72-37029

Analysis of left ventricular wall motion by reflected ultrasound - Application to assessment of myocardial function. p0450 A72-37697

Evaluation of left ventricular function by echocardiography. p0460 A72-37899

Determination of systolic time intervals using the apex cardiogram and its first derivative. p0465 A72-38817

Echocardiographic determination of left ventricular dimensions, volumes and performance. p0465 A72-38817

Cardiographic determination of the elastic modulus of the left-ventricle myocardium with the aid of X-ray tomography. p0457 A72-38819

The mitral apparatus - Functional anatomy of mitral regurgitation. p0458 A72-38940

Relationship of pulmonary artery to left ventricular diastolic pressures in acute myocardial infarction. p0464 A72-39460

An indirect method for evaluation of left ventricular function in acute myocardial infarction. p0464 A72-39462

Cardiac hypertrophy, capillary and muscle fiber density, muscle fiber diameter, capillary radius and diffusion distance in the myocardium of growing rats adapted to a simulated altitude of 3500 m. p0506 A72-41624

The standard 12-lead scalar electrocardiogram - An assessment of left ventricular performance. p0542 A72-43812

Comparison of the vectors of the ventricular depolarization and repolarization of man during immersion in a standing position. p0552 A72-44924

H-V intervals in left bundle-branch block - Clinical and electrocardiographic correlations. p0558 A72-45690

Clinical and anatomic implications of intraventricular conduction blocks in acute myocardial infarction. p0558 A72-45691

Image processing of diagnostic echocardiograms by ultrahigh speed analog to digital converter interfacing digital computer. p0153 A72-19312

Computerized osccardiograms for left auricle mechanical activity examination, comparing with catheterization technique. p0168 A72-20608

A rapid assay of dipolar and extradipolar content in the human electrocardiogram. p0542 A72-43811

The standard 12-lead scalar electrocardiogram - An assessment of left ventricular performance. p0542 A72-43812

Automatic volume control for recording cardiac signals with broad frequency band on ultrasonic Doppler cardiograms. p0708 A72-12007

Application of magnetometer for measuring magnetic signature of human heart and development of magnetocardiogram [PB-201939]. p0196 A72-16061

Left ventricular volume determined by isotope method, comparing with x-ray method. p0017 A72-11475

Radiotelemetric cardiorespiratory determinations during submaximal dynamic exercise. p0029 A72-12134

Computerized polycardiographic data processing covering 23 cardiac and respiratory characteristics, using rabbits data. p0148 A72-18860

Electrophysiological responses to maximal exercise in healthy humans from polycardiographic display of heart vector changes. p0148 A72-18891

Ventricular function determination by computer graphic techniques for increasing speed, accuracy, reliability and scope of angiocardiographic analyses determining human heart dimensions. p0152 A72-19308

Cardiographic interpretation of computerized apoeo-carotid diagrs, using heart-pressor pump comparison. p0168 A72-20607
Local and cardiac complications of selective percutaneous transluminal coronary arteriography, noting hemorrhages thromboses, embolism, myocardial infarction, and ventricular fibrillation.

Human left ventricular measurements, modeling, control and simulation for heart monitoring purposes, describing muscle performance of mathematical model and stress effect prediction control system.

Echocardiography for noninvasive cardiac performance measurements during physical activities, exercise tests, flight conditions and for critical patients long-term monitoring.

Left ventricular volume time course from computer processing of video angiographic data based on X-ray densitometry measurements.

Human cardiovascular function change as indication of hypoxic circulatory stress, using noninvasive cardiographic measurements of cardiac electromechanical time intervals.

Medical monitoring system for enclosed men, using ultrasonic Doppler-cardiography for heart rate determination.

Quantitative angiocardiology of abnormal left ventricular function and contractile spectra in ischemic heart disease patients.

Calibrated LP acceleration vibrocardiography to examine hemodynamics indices telocyanin to main wave amplitudes.

Apexcardiograms and carotid pulse measurements as indicators of cardiac function and myocardial contractility.

Radioangiography method for ventricular volume measurements, recording subclavian vein-injected radioisotope passage through cardiac cavities.

Computerized angiographic heart geometry analysis for three-dimensional ventricular models of man and dog, using Ta markers.

Non-invasive assessment of prosthetic mitral paravalvular and intravalvular regurgitation.

Changes of the mitral echocardiogram with aging and the influence of atherosclerotic risk factors.

Analysis of left ventricular wall motion by reflected ultrasound - application to assessment of myocardial function.

Evaluation of left ventricular function by echocardiography.

Echocardiography in the diagnosis of congenital mitral stenosis and in evaluation of the results of mitral valvotomy.

Determination of systolic time intervals using the apex cardiograms and its first derivative.

Echocardiographic determination of left ventricular dimensions, volumes and performance.

Echocardiographic investigation of heart rate, sex and normal aging effects on mitral valve leaflet movement in healthy subjects.

Effects of coronary arteriography on myocardial blood flow.

Clinicopathographic correlations in cancers pectoris with and without myocardial infarction.

General index for the assessment of cardiac function.

Development of system for processing of cardiac performance data from analog to digital form for direct entry into computer.
Chronic altitude sickness pathology based on anatomical and histological findings in abnormal mountain inhabitants autopsies, comparing with cardiovascular system morphology in normal people.

Cardiovascular system venous part responsiveness to central-oncous and hormonal influences.

Nervous-emotional stress as a problem of modern work physiology.

Studies on weightlessness in a primate in the Biosatellite 3 experiment.

A large-scale model of the human cardiovascular system and its application to ballistocardiography.

Photoelastic analysis of cardiovascular-arterial stress pattern produced by flow through gelatia-agar walled channels for analysis of mechanical stresses on vessel walls.

Use of implantable telemetry systems for study of cardiovascular phenomena.

A special vitamin complex for prophylaxis of atherosclerosis in aviation personnel.

Experimental development of a method for long-term implantation of plastic catheters in different sections of the cardiovascular system.

Longevity and cardiovascular mortality among former college athletes.

Effects of true and simulated weightlessness on human cardiovascular system.

Effects of carbon monoxide on coronary hemodynamics and left ventricular function in conscious dog.

Modification of cardiovascular mathematical models for application to lower body negative pressure response.

Methods for conditioning cardiovascular system during prolonged weightlessness.

Effects of pulsatile venous pressure cuffs in cardiovascular conditioning to postflight orthostatic intolerance produced by water immersion.

Response of spacecrew cardiovascular systems to calibrated workloads during long duration space flight.

Cardiac conditions as factor in evaluating flight fitness of Air Force personnel.

Analysis of somatoxytic effects of noise on task performance, cardiovascular system, and general health of human subjects.

Electronic circuits for measuring left ventricular processes and providing time signals for computer monitoring of cardiovascular system.

Application of magnetometer for measuring magnetic signature of human heart and development of magnetocardiogram.

Design of specialized analog computer for on-line monitoring of cardiac stroke volume by means of modified version of pressure pulse contour method.

Characteristics of heart rate information during sleep, and extracting sleep information from heart rate data.

Portable equipment for detecting myocardial activity.

Baroreceptors as pressure transducers in cardiovascular system.

Effects of lower body decompression on cardiac electric activity in human.

Subzero cooling method for increasing functional capacity of human cardiovascular systems.

Comparing effects of positive G acceleration on cardiovascular and respiratory functions in dogs under normal respiration in air, and when totally immersed in oxygenated fluorocarbon.

Effects of bromotrifluoromethane inhalation and epinephrine challenge on cardiovascular system.

Hybrid real time simulated mathematical models of human cardiovascular system.

Computer analysis of cerebrovascular system response during exercise, atrial pacing, and drug injections.

Behavior analysis of mechanical model of systemic circuit of human cardiovascular system.

Biodynamic models for monitoring changes in human cardiovascular system caused by impact shocks.

Effect of vibration on blood flow and pressure in major arteries of dogs.

Effects of prolonged bed rest on physical work capacity, tilt-table tolerance, and urinary calcium excretion.

Framingham indicators for detecting potential coronary heart disease susceptibility in third class airman population.

Evaluation of programmed instructions for visual aircraft recognition training of personnel.

Carcinoid sinus reflex.

Carcinoid sinus counterpressure as baroreceptor.

Stimulation of intact dog, recording arterial pressure response in closed loop gain.

Case report of pilot near-orthostatic episode with bradycardia due to hyperactive right carotid sinus reflex.

Pressure chamber training effects on rate chain motor reflexes hypoxia adaptation, omitting carotid sinus receptor importance in compensatory-adaptive reactions.

Venous responses to stimulation of carotid chemoreceptors by hypoxia and hypercapnia.

Hemodynamic reflexes during acceleration stresses, considering vessel walls, cardiac rhythm, blood distribution and sinus carotis receptors.

Carcinoid rate role in brain protection against extreme elevations of systemic blood pressure, presenting goat cerebral blood flow measurement procedure.

Carrier mobility.

Airtronics (Fluid dynamics).

Space devices.

Case report on compensated hemolytic anemia associated with Gilbert syndrome, discussing implication in aviation.

Case history of student aviator with psychosomatic Lymphogranuloma venereum related to vestibular apparatus.

SUBJECT INDEX
Fainting prevention in flying personnel, discussing constitutional susceptibility, health irregularities, alcohol, heavy smoking, lack of sleep, emotions and medical histories

ECG, physical exercise and drug use in diagnosis and aero-medical evaluation of suprarenal archythsms, presenting case histories of pilots with cardiac heart attack (AD-709087)

Case report of fighter pilot disorientation episode during night flying exercise, suggesting psychological stress factor

Case report of pilot near-syncopal episode with bradycardia due to hyperactive right carotid sinus reflex

Case report on dive decompression induced postcava barotrauma due to sinus pressure buildup caused by oxygen blockage

CATALOLISH

Oxidative catalysis of pyruvate to acetyl coenzyme A in yeast cells

CATALAS

Erythrocytes catalase activity and number content relationship in human and albino rats blood, discussing compensatory effects.

CATALYSTS

Bosch carbon dioxide reduction process for mensed spacecraft oxygen recovery, analyzing carbon and water forming reactions with iron as catalyst

CATALYSIS

Catalytic effect of cobalt powder on sodium chlorate candles as source of oxygen

CATHOLIC

Catecholamine levels, catecholamine excretion, and urine flow

CATHOLIC ACTIVITY

Catalytic oxidation of ipsooxides products formed during thermal treatment of human waste, considering hoppelale, Cu-Cr, Cu-Co, Pt and Pd

CATHETERS

Cataractogenesis from microwave radiation, discussing constitutional susceptibility, health disorders, noting application to flight emotional stress detection

CATHETERIZATION

Cardiac catheterization practice review, discussing pediatric and adult cardiology, risk reduction, diagnostic aids, relationship to radiology and laboratory equipment complexity

Pulmatus blood pressure and ECG in squirrel monkeys, considering catheter electromanometer system and implanted arterial cannulae long stability

Local and cardiac complications of selective percutaneous transfemoral coronary arteriography, noting hemorrhages thromboses, embolisms, myocardial infarction, bradycardia and ventricular fibrillation

Space medical urological problems from experience with Biosatellite 3 monkeys, discussing closed catheter control system, urinary catheter changes in immobilized animals and urinary diuresis

Analysis of intracavitary electrocardiograms through a saline bridge in the diagnosis of cardiac archythsms

CATERPILLAR

Experimental development of a method for long-term implantation of plastic catheters in different sections of the cardiovascular system

CATCHES

CATHODE CATHODES

CATHETER

Exchange diffusion process contribution to human red blood cell transmembrane cation movement from sodium tracer inflex studies

Effect of direct application of K, Ca, Mg, and Ba ions on body temperature and sweat secretion

CATE

Gain control of cat retina rapid light adaptation process to attenuate signals reaching retinal ganglion cells from photoreceptors

Dynamics of cortico- and retrocorticatof of cats during sleep, awakening, and wakefulness

Electrophysiological excitability changes in visual system of anesthetized cats in response to flash signals

Responses of anesthetized cats to acoustical stimuli imposed on auditory cortex

Quantitative characteristics of auditory cortex response in anesthetized cats to sound from different directions

Gravitational stress effects on neurons in autonomic nervous ganglia of cats

Visual evoked potential changes of chloralose anesthetized cats in hyperbaric atmospheres

Hypothermia in cats during physical restraint and accompanying decrease in heat production and increase in heat loss

CAYTATION

CAYTATION FLOW

Ultrasoundically produced caytation events - correlation to acoustic cell number decrease under 1 HHz irradiation

CAYTATION RESONATORS

Cochlea enclosed two dimensional cavity potential

Unresponsiveness of pial precapillary vessels to catecholamines and sympathetic nerve stimulation

Prediction of vegetative reactions to external actions on the organism

The effect of hypoxia on the coronary blood flow in reperfused dogs
Computerized statistical simulation of spontaneous activity of spontaneously active smooth muscle strip, reflecting individual cell spontaneous activity in situ, life search and origin [AD-72-376829]

Adaptability limits on protein-nuclein-water life under endothermic-extraterrestrial conditions, considering macromolecules, extraterrestrial life search and origin [AD-72-39858]

Effect of weightlessness and spacecraft environment on spontaneous and radiation induced mutagenesis in mammalian somatic cells and organisms [AD-71-45231]

Biological rhythms origin and mechanisms, discussing 24-hour cycle, subcellular biological clock and rhythm disruption effects in speleologists, astronauts and pilots [AD-72-41985]

Effects of simulated space vacuo on bacterial cells [AD-72-43395]

Intracellular potassium in cells of the distal tubule [AD-72-45374]

Human blood monocytes - Stimulators of granulocyte and mononuclear colony formation in vitro [AD-72-45374]

Hypoxic and illuminative effects on diurnal rhythms of erythropoietic mitosis in bone marrow of guinea pigs [AD-72-14669]

Physiological photosensitivity effect in pigmented epithelial eye cell during action of visible light [AD-72-15048]

Aerospace environment effects (noting weightlessness and bioevolution) on planets, cells, and crows observed in Geomi and Biosatellite experiments [NASA-TM-X-75705]

Adaptation of cells to aerospace environments noting cell renewal, regulation, and limitations [AD-72-16302]

Effects of weightlessness on cellular systems [AD-72-16302]

Differentiation of cultivated mosquito cells [AD-72-16304]

Development of algae, nerve cells, and amphibian eggs applied to space flight [AD-72-16307]

Effects of cosmic rays on cells and action of heavy ions on cerebral cortex [AD-72-16309]

Human blood cell dose-response relationship to total body irradiation [AD-72-16361]

Effects of high energy protons on erythropoietic stem cells and radioprotection by chemicals determined with laboratory mice [AD-72-16768]

Reaction of some epidermal cells to heavy particle radiation using helium, lithium, and carbon ions [AD-72-17686]

Classification of two fungal strains as Aphanothece Sokul or Animiopsis Hansen [NASA-TT-F-16092]

Automated bistable comparability testing of cells [NASA-CR-125550]

Experiments with invertebrates, plants, and cellular systems on Biosatellite 2 Flight [NASA-SP-204]

Effect of weightlessness and spacecraft environment on spontaneous and radiation induced somatic mutation rates and cytologic changes in Tradescantia [ESP-P-111]

Weightlessness effects on single cell, amoeba Polyspora carolinensis [ESP-P-10351]

Effects of high altitude on cellular and energy metabolism in rats [AD-734933]

Electrophysiology of embryonic rat surface cells stimulated by protein fraction of fetal calf serum [AD-72-21064]
CENTRAL NERVOUS SYSTEM STIMULANTS

by drowning

Central nervous system symptoms and simple bends
in gas decompression sickness caused by centrifugal force
operational flying

Protons irradiation effects on monkey central nervous system, showing inflammatory reaction and neuromediatory astrocyte gliocytone accumulation

Human and animal central nervous system repair processes for brain damage caused motor function disturbances

Effect of a magnetic field on the monkeys exposed to body-alone X-radiation

Neuropathological evaluation of monkeys exposed to body-alone radiation

Manipulation of projected afterimages by means of the physiological theory imposed on the observer

Reflex and conditional movement observation of central nervous system function restoration in Macaca mulatta monkeys with cortical lesions, studying pathological forced grasping

Possible role of supraspinal formations in the fixation of trace alterations at the segmental apparatus level of the spinal cord

Participation of supraspinal structures in the formation and control of a system of contrast cyclic motions of man

Breathing rate response to oral instructions in participation of supraspinal structures in the formation and control of a system of contrast cyclic motions of man

Electrophysiological analysis of defense reflex and unconditioned reaction and conditioned signal analyzers in modal mechanisms of functional system /afferent synthesis, decision making, correction, etc

Effect of vibration on the permeability of the blood-brain barrier

Cardiovascular system venous part responsiveness to central nervous and humoral influences

Studies on weightlessness in a primate in the Biosatellite 3 experiment

Effect of exposure to extremely low frequency magnetic fields on central nervous system of squirrel monkeys

Effects of long term ELF magnetic field exposure on central nervous system of squirrel monkeys

Heterostatic theory for brain functions and artificial adaptive systems

Low level microwave radiation effects on central nervous system and vestibular apparatus

Effects of sleep deprivation and work-rest cycles on human performance and automatic and central nervous system

Role of higher sections of central nervous system in motion sickness

CENTRAL NERVOUS SYSTEM STIMULANTS

The simultaneous action of stimulants and tranquilizers on the efficiency of a human operator

CENTRAL PROCESSING UNITS

Control center relation to process control computers in production engineering, discussing information flow and communication in man machine systems

CENTRIFUGAL FORCE

Measurement of visual reaction time in positive and transverse centrifugal force effects (NASA TP-14000)

CENTRIFUGES

HT HUMAN CENTRIFUGES

Construction of animal centrifuge, and relationship between discriminability of q differences and location along effective weight center line

Human and animal central nervous system repair processes for brain damage caused motor function disturbances

Effect of a magnetic field on the nervous system

Reflex and conditional movement observation of central nervous system function restoration in Macaca mulatta monkeys with cortical lesions, studying pathological forced grasping

Positive acceleration effects on human cardiovascular system during centrifuge tests, studying ECG changes in terms of cardiac rhythms, heart rate and wave parameters

Pulmonary atelectasis and arterial-venous shunting and heart displacement prevention during centrifuging of dogs breathing oxygenated liquid fluorocarbon in water immersion respirator

Bed rest and centrifuging effects on human plasma cortisol, growth hormone, plasma protein, albumin and thyroxin binding globulin concentrations

Centrifugation tolerance reduction after 16 days bed rest with moderate exercise, determining rehydration effects

Neck proprioception effects and otolith organ activity is perceived visual target elevation under centrifuging stress

Organism response to extreme overload factors, discussing centrifuging and vibration stress effects on mean swimming time and post-irradiation survival time in mice

Effects of combined 0-9 simulation and hypergravity on oes of the nesstode, Ascaris suum.

Stress and adaptation responses to repeated acute acceleration

Hypothalamic and resistance of mice to lethal exposures to high gravitational forces

CENTRIFUGAL FORCE

Participation of cholinergic structures in the development of disturbances of the functional state of the cerebellum under the action of centripetal accelerations

CENTRAL EXCRACIONS

HT MIDDLE EAR EXCERACIONS

Effects of loud noise on ear drum and hearing organ sensitivity

CENTRAL NERVOUS SYSTEM STIMULANTS

The simultaneous action of stimulants and tranquilizers on the efficiency of a human operator

CENTRAL PROCESSING UNITS

Control center relation to process control computers in production engineering, discussing information flow and communication in man machine systems
Cerebral Cortex

- Evoked cortical potentials changes from emotional visual word stimuli stress under amytal anticholinesterase drug influence
- Neonatal barbiturate effects on afferent signals transmission and thalamocortical level of somatosensory system
- Comparative EEG characteristics of frontal and occipital human brain cortex, relating psychophysiological and neurophysiological factors
- Cortical synethesis and information handling properties of evoked potential in human normal and pathological behavior
- Corticosterone content in blood plasma, cerebral cortex and skeletal muscles during hypoxia adaptation in rats
- Protein biosynthesis inhibitors retardation of noradrenaline and serotonin induced hyperpolarization of neuron membranes in cortical sensorimotor region of rabbits
- Neurophysiological mechanisms of sleep, studying sleep and wakefulness state evoked potentials relation to cortex and subcortical activity levels
- Negative and positive emotional states influence on blood cholesterol and arterial pressure levels in dogs, suggesting common subcortical genesis of atherosclerosis and hypertension
- Functional organization of monkey cortical different zones in distal forearm muscle control from intracortical microstimulation studies, showing stimulation thresholds distribution
- Peripheral afferent input to monkey cortical different zones of distal forearm muscle control, using single microelectrode for intracranial stimulation and cellular discharge recording
- Visual evoked cortical responses in objective refraction related to retinal image clarity for clinical applications
- Lenticular conditioning-shock stimulation effect on cat visual cortex response to light stimuli, noting lateral geniculate nucleus electrically evoked potential amplitude increase
- Response latencies and correlation in single units and visual evoked potentials in cat striate cortex following monocular and binocular stimulations
- Extrageniculostriate vision in monkey, discussing circle vs triangle and red vs green discrimination
- Interhemispheric effects on choice reaction times to single and multiple letter displays, analyzing cerebral dominance and visual information transmission compared with verbal response
- Visual cortex neuronal background activity in unanesthetized rabbits under stimulation and depression of lateral geniculate body and mesencephalic reticular formation, considering synaptic organization
- Cat and rat cardiac and cardiovascular reflexes response to electric pulse stimulation of sensorimotor cerebral cortex
- Cat auditory cortex neurons response to auditory and medial geniculate body electrical stimulation
- Cortico-subcortical connections transaction effect on cat lateral geniculate body and visual cortex neurons spontaneous activity
- Deep brain structure biopotential correlations during sleep development, using electrosubcorticograms

Human visual system selective adaptability to cholinergic structures in the development of disturbance of the functional state of the cerebellum under the action of centrifugal accelerations
- Influence of a preceding afferent stimulation on the pyramidal activation of spinal motor neurons
- Analysis of the activity evoked in the cerebellum cortex by stimulation of the visual pathways.
- Morphological and electrophysiological analysis of afferent receptor connections in cerebellar cortex, discussing fast conducting, diffuse reticular and inferior olive fiber paths
- Morphology of cerebral vascular system of dogs subjected to transverse acceleration
- Postsynaptic electric potential responses to click of auditory cortex neurons in cats
- Pyramidal tract neuron reactions to antidromic and afferent stimuli in cats, determining somatosensor cortical neurons responses by intra- and extracellular potential outputs
- Brain auditory cortex electrical responses to ultrasonic stimuli, determining maximum sensitivity frequency range
- Visual responses to monocularly and dichotically presented flashed patterns, discussing physiological mechanisms based on cortical visual field concept
- Cortical responses to visually displayed word and nonsense syllable stimuli, using EEG and computer techniques
- Cerebral neurons population electric stimulation effect on deep sleep duration in Parkinsonism patients
- Human visual system selective adaptability to speed, size and orientation, suggesting motion analysis by visual cortex neural subsystems
- Cerebral cortex striate area relation to visual field in various animals
- Phalo-ostogenetic maturation of corticopetal projections of visual cortex, using evoked potential measurements in rabbits
- Short-term memory and electrographic effective and trace processes relationship from visual and Rolandic cortical regions activity and Tarkhanov alvanoscutaneous reaction
- EEG study of cortical aftereffects to peripheral stimulation in cats
- Hypothalamic stimulation conditioned negative fear reflex in cats before after neurocortex isolation
- Human cortical auditory evoked response to speech and sound effects, relating EEG interhemispheric wave amplitude asymmetry to stimulus meaningfulness

Index

Cat cerebellum cortex evoked response impulses interaction during stimulation of hypothalamus and peripheral nerves
- Participation of cholinergic structures in the development of disturbances of the functional state of the cerebellum under the action of centrifugal accelerations
- Influence of a preceding afferent stimulation on the pyramidal activation of spinal motor neurons
- Analysis of the activity evoked in the cerebellum cortex by stimulation of the visual pathways.
- Morphological and electrophysiological analysis of afferent receptor connections in cerebellar cortex, discussing fast conducting, diffuse reticular and inferior olive fiber paths
- Morphology of cerebral vascular system of dogs subjected to transverse acceleration
CEREBRAL CORTEX COSTF

Role of efferent influences of temporal-chinencephalic cerebral structures in pre-activation alterations of spinal motor neuron excitability

Russian book - Cortico-visceral-interrelations in vegetative changes

Morpho-physiological structures thalamic efferent switching mechanisms of visceral analyzers in motor, premotor, frontal and limbic cerebral sections

Polysynaptic sympatho-reticular and somatic efferent visceral links between internal organs and cerebellum in interoceptive reflex fields

Pathology of the cardiovascular system in terms of the theory of cortico-visceral interactions

Blood vessel reactions to natural defense and conditioned reflexes from plethysmography and blood pressure measurements, discussing cortical effects mechanisms

Cortical effects mechanisms in animal vegetative systems, noting biological oxidation and organic phosphorus compound studies

Evoked potentials of the primary auditory cortex zone produced by positive and inhibitive conditioned stimuli

Some structural and functional characteristics of a retina projection onto the visual cortex of cats

Visual experience as a determinant of the response characteristics of cortical receptive fields in cats

Morphological and electrophysiological analysis of efferent receptor connections in the thalamic cortex, discussing fast conducting, diffuse reticular and inferior olive fiber paths

Reactions of auditory cortex neurons to geniculocortical fiber stimulation

Cerebral auditory system acoustic information processing, discussing, thalamus and cochlea: neurophysiological functions in response to efferent stimulations

Dynamics of the electrical activity of various regions of the neocortex during the sleep-wakefulness cycle

The effect of electrical stimulation of the olfactory bulb on the behavior of cats and the electrical activity of the neo- and archicortex

Electrophysiological investigation of the excitation and inhibition processes in the auditory cortex

Limbic-neocortical, cardiovascular and hormonal system reactive shifts associated with emotional behavior responses, presenting neurogenic stress model for animals

Changes in the impulse activity of cortical neurons during selective reinforcement of a chosen range of their interpulse intervals
Visual search model from perceptual theory, animal studies and search data, discussing selection, inspection and naming single cued letters, in visual array. p0225 A72-23647

Character recognition experiments to determine attention control and temporal-spatial capacity limitation during visual information processing. p0278 A72-27074

Alphanumeric characters for small TV type raster displays, describing legibility experiment for character height optimization. p0331 A72-29821

Visual and acoustic image processing rates during letter sequencing tasks, suggesting implicit verbal control involvement. p0371 A72-32764

Visual half-field differences in the recognition of bilaterally presented single letters and vertically spelled words. p0427 A72-36908

Novelty, recency and frequency effects on visual recognition and pseudo-recognition thresholds. p0427 A72-36909

Proximity and direction of arrangement in numeric displays. p0899 A72-41017

Interactions of signal and background variables in visual processing. p0518 A72-42931

Visual perception psychology of character recognition. p0934 N72-10079

Effect of reproduction scale on probability of image recognition. (AD-729457) p0946 N72-11096

Development of automatic pictorial pattern recognition schemes for use in control of remote legged devices. (AD-728214) p0987 N72-13085

CHARACTERS

U SYMBOLS

CHARGE SEPARATION

CHARGE SEPARATION (CHARGE SEPARATION)

CHARGED PARTICLES

MT ALPHA PARTICLES

MT BETA PARTICLES

MT CATIONS

MT METAL IONS

MT PLASMAS (PHYSICS)

MT RADIATION BELTS

MT SOLAR PROTONS

MT SOLAR WIND

CHARTS

MT CHARTS (CHARTS)

Ishihara charts readings in artificial daylight at low color temperatures, low light intensity and limited exposure time by normal and color defective subjects. p0056 A72-13939

Recently published protein sequences. I. p0581 A72-43570

CHECKOUT

Checkout of space station environmental control and life support aspects. (NASA-CP-115260) p0087 N72-13074

CHECKOUT EQUIPMENT

U TEST EQUIPMENT

CHEMICAL ANALYSIS

MT GAS ANALYSIS

MT MICROANALYSIS

MT IONIZATION ACTIVATION ANALYSIS

MT QUANTITATIVE ANALYSIS

MT SPEetroSCOPIC ANALYSIS

MT NUCLEONICS

MT VOLUMETRIC ANALYSIS

Toxicological control and chemical analysis of onoaging products from nonmetallics in high temperature oxygen atmosphere, investigating use within LA crew compartment. p0089 A72-10171

Stabilized human plasma protein solution analysis, noting albumin presence. p0055 A72-13855

Methods for analyzing base composition of DNA and DNA hydrolysates with emphasis on gas-liquid chromatography method. (NASA-CP-125593) p0239 N72-18066

CHEMICAL BONDS

Qualitative microscopic model for biologic post synaptic membrane with tunneling chemical bonds, noting selective ionic conductivity as function of electric field. p0324 A72-28769

The influence of molecular binding on the stopping power of alpha particles in hydrocarbons. p0430 A72-37193

Investigations of bonding, structure, and quantitative analysis in biological systems by means of X ray photoelectron spectroscopy. (LBL-306) p0253 N72-19103

CHEMICAL CLEANING

Chemical liquids, chemical gasses, and mechanical methods for microbial decontamination of spacecraft. (NASA-CR-125688) p0252 N72-19094

CHEMICAL COMPOSITION

MT CARBON DIOXIDE CONCENTRATION

CHEMICAL ELEMENTS

MT ALUMINUM

MT ARGON

MT ARSENIC

MT CADMIUM

MT CALCIUM

MT CARBON

MT CARBON ISOTOPES

MT CADMIUM

MT PISMIRINE

MT GALLIUM ISOTOPES

MT HALOGENS

MT HYDROGEN

MT IODES TOXICOSIS

MT IRON

MT LEAD (METAL)

MT LITHIUM

MT MAGNESIUM

MT NITROGEN

MT NITROGEN

MT HALOGENS

MT PLATINUM

MT RARE GASES

MT SILICON

MT SILICIDES

MT TITANIUM

MT TRACE ELEMENTS

MT ZINC

Compilation of raw data on elemental concentrations in normal and diseased human organs. (OCHL-5017-PE-1-REV-1) p0306 N72-20081

CHEMICAL ENERGY

Biological energy transformation origins and evolution, discussing inorganic pyrophosphates precursor to adenosine phosphates as energy carriers. p0264 A72-14798

Physical and chemical identification methods for biochemical reactions and energy balance of muscular contraction and shaking. p0505 A72-81469

Chemical energy transformation to mechanical energy and heat in muscles during exercise, considering energy sources for contraction, oxidation, glycolysis and elastic assercbic mechanism. p0505 A72-81470

CHEMICAL EQUILIBRIUM

MT ACID BASE EQUILIBRIUM

Effects of excess calcium imbalance on human body functions. (NASA-ST-F-14155) p0189 N72-16007

CHEMICAL EXTINGUISHERS

MT FIRE EXTINGUISHERS

CHEMICAL FUELS

MT JET ENGINE FUELS

CHEMICAL INDICATORS

MT INDICATOR DILUTION METHODS, FOR VENTRICULAR VOLUME MEASUREMENTS FROM WASHOUT CURVES, DISCUSSING INTRAVENTRICULAR BLOOD MIXING UNIFORMITY. p0368 A72-32496

CHEMICAL KINETICS

MT REACTION KINETICS

CHEMICAL LASERS

Histopathology of argon, ruby, calcium arsenide,
S C H E M E R E T H E R A P Y

Arterial chemoreceptor deactivation influence on rat respiratory response to hypoxic and hypercapnic gas mixture breathing p0185 A72-22076

Breathing regulation characteristics showing reflex control of respiratory function in normal environment and brain tissue receptor control under hypoxia p0185 A72-22078

Olfactory receptor models sensitivity, discussing threshold dependence on adsorbed odoriferous agent amount and exposure time p0269 A72-26453

Mathematical model of extracellular pH in brain tissue from blood and cerebrospinal fluid - acid-base parameters for respiration central chemosensitive mechanism study p0273 A72-26660

Respiration control by extracellular pH in medullary tissue, studying chemoreceptor response to hydrogen ion concentration in cat cerebrospinal fluid p0273 A72-26661

Mountain sickness relation to ventilation response to hypoxia, noting response intensity dependence on peripheral chemoreceptor sensitivity p0282 A72-27481

Acute hypoxia effects on dog coronary blood flow and cardiac function from cardiac beta-adrenergic and hemodynamics study p0282 A72-27482

Native highlander and lowlander chemoreceptors ventilatory response to transient carbon dioxide inhalation at low and high altitudes p0282 A72-27728

Cerebrospinal fluid pH change effects on cat respiratory response before and after vagotomy, showing vagal activity relation to central chemical control of respiration p0286 A72-27025

Ventilatory peripheral chemoreflex response to hypoxia during physical exercise in native highlanders and altitude-acclimated lowlanders p0504 A72-34345

Venous responses to stimulation of carotid chemoreceptors by hypoxia and hypercapnia. p0622 A72-36025

A mathematical model of the chemoreflex control of ventilation. p0698 A72-40917

The carotid body in animals at high altitude p0513 A72-42599

Genetic aspects of the blinded chemoreceptor ventilatory response to hypoxia in high altitude adaptation. p0513 A72-42591

Comparison of three methods for quantitating respiratory response to hypoxia in man. p0552 A72-44960

Water-soluble insulin receptors from human lymphocytes. p0556 A72-45375

Effect of chemical stimuli on orientation behavior of fish p0398 A72-25090

Factors affecting migratory habits and orientation of sea turtles p0398 A72-25091

C H E M I C A L S H I F T

U C H E M I C A L E Q U I L I B R I U M

CHEMICAL STERILIZATION

Space flight hardware sterilization, considering dry heat and chemical destruction p0010 A72-10822

PCB cold-sterilization of nutrient media p0468 A72-28042

CHEMICAL TESTS

WT CHEMICAL ANALYSIS

WT GAS ANALYSIS

WT MICROANALYSIS

WT NEUTRON ACTIVATION ANALYSIS

WT QUANTITATIVE ANALYSIS

WT SPECTROSCOPIC ANALYSIS

WT URINALYSIS

WT VOLUMETRIC ANALYSIS

Solar activity effects on sodium chloride hydrolysis tests from statistical results following solar flares p0269 A72-28021

CHEMICAL WEAR:

Comparison of physical, biophysical and physiological methods of evaluating the thermal stress associated with wearing protective clothing. p0465 A72-39808

CHEMICOSENSIBILITY

Possibility of chemosensitiveness method for monitoring sterility of reclaimed water mains p0251 A72-19093

CHEMORECEPTORS

Cat respiratory center activity phase relation to arterial chemoreceptor afferent discharge oscillations effect on lung ventilation frequency p0103 A72-16789

Respiration rate reduction mechanisms from Parin mountain aborigines oxygen breathing reaction studies p0068 A72-16782

Civil aeronautics environment relation to psychologists and chemical psychologists treatment of air navigation personnel discussing chemotherapeutic and psychotherapeutic treatment administration problems p0098 A72-16358
Clinical response to nitrolycerin therapy/ correlation with coronary angiography as diagnostic test for coronary artery disease in patients with chest pains

Hypnotic drug use effect on pilot performance and flight safety, using aluthetidine, flurazepam and placebo in double blind study

Myocardial infarction effects on drug tolerance and hemodynamic changes due to digitalis doses, discussing toxic arrhythmias

Hyperlipidemia progressive increase among flying personnel, showing Clofibrate treatment effect on lowering rate

Diets and pharmacological treatment of atherogenic hyperlipidemias from lipid-near balance and drug efficacy studies

Propranolol as adrenergic beta receptor inhibiting agent for hyperthyroidism symptoms amelioration

ECG, physical exercise and drug use in diagnosis and acroecosmoanal evaluation of supraventricular arrhythmias, presenting case histories of pilots with wandering cardiac pacemakers

Left ventricular dynamic function in terms of internal diameter, pressure and flow in dogs at rest and during isoproterenol and metaraminol infusions

Clofibrate treatment for atherosclerotic cardiovascular disease prevention among Sabena flying personnel

Amitryptiline/biological protectant/ effect on natural immuno status of dogs exposed to chronic gamma irradiation stimulating space flight environment

Succinate and glutathione as protectives agents against chronic effects of hyperbaric oxygen toxicity in rats

Exchangeable potassium in heart disease - Long-term effects of potassium supplements and amiloride.

Studies of the influence of theophylline on the vasodilatation action of different medications on the cerebral and coronary circulation of man

Apparatus for programmed oral administration of drugs to large primates in altered environments.

Effect of beta-adrenergic blockade on plasma volume in human subjects.

Calcium metabolism conditions in calcified tissues of rats during a lasting hypothyroidism and thyrocorticosteron administration

Ocular and induced visual effects of systemic and topical drugs in terms of eye neuroanatomy and pharmacology, stressing clonioscopic therapy

The simultaneous action of stimulants and tranquillisers on the efficiency of a human operator

Effectiveness of benztropine hydrochloride and other anti-motion sickness drugs combined with scopolamine

If subendocardial chest wall vibration recording, discussing external, epicardial surface and intraventricular pressure precordial displacement tracings

Body temperature and spirometer ventilation measurements from chest and abdomen movements during carbon dioxide inhalation

Effect of helium-oxygen atmosphere on developing chicken embryo and growth rate of chicken after X rays

Biological effects of exposing chickens to single acute doses of either 2.2 Gw photons or 250 KVP X-rays

Statistical analysis of erythrocyte acid phosphatase inheritance in French families based on test gel electrophoresis of hemolysates


Chlorothiazide and glutathione as protective agents against chronic effects of hyperbaric oxygen toxicity in rats

Sleep cycles in unrestrained chimpanzee, investigating circadian rhythm patterns of EEG activity during sleep wake and sleep cycles in unrestrained chimpanzees

Cholinesterase-heart syndrome from partial parachute failure, with close reference to atrial endocardial and myocardial lacerations

Catalytic effect of cobalt powder on sodium chloride candles as source of oxygen

Chlorella algae size distribution curves by combining device for counting electrical conductivity pulses with discriminator for gamma scintillation/spectrometry

Chlorella growth rate model, presenting specific photosynthetistic and area and carbon dioxide utilization rates

Gibberelic acid effects on Chlorella algae growth rates, using algal suspensions optical density as measuring technique

Space flight effects on chlorella cell survival and metabolism in French automatic stations

Space flight effects on chlorella cell survival and metabolism in Soviet automatic stations

Chlorella population age structure and cell requirements correlation with nutrient medium and notability in Zbnd automatic stations

Human -immunobiochemical status during prolonged maintenance in bioregenerative life support system, discussing possible allergic reaction to chlorella glycoses metabolites

Carbon monoxide dynamics in chlorella reactor closed environment and in ana-chlorella system at relatively constant level

Man, chlorella and wheat plant in life-supporting biological system, showing compatibility relative to gas and water exchange

Space flight effects on chlorella cell survival and metabolism in Soviet automatic stations
Soyuz 5 satellite vehicle space flight factors effect on chlorella cells, investigating survival rates and mutability.

Mathematical model of two-component alga-bacteria biogenesis.

Effects of space flight on cell morphology and photosynthetic activity of chlorella culture during Cosmos-368 artificial earth satellite flight.

Stabilization of carbon monoxide metabolism in non-Chlorella system.

Mathematical model for algal-bacterial community forming during moniter sterile cultivation of Chlorella.

Chlorides

Chloroformic acid

Potassium chlorides

Sodium chlorides

Electroretinographic illumination potentials dependence on extracellular chloride ion concentration in isolated retina.

Respiratory effects of hypochlorous acid and potassium depletion in the dog.

Air pollution tests of plants exposed to gaseous hydrogen chloride.

Effects on animals of continuous exposure to dichloromethane vapors.

Partially purified thyrrocaltcinemia causing increased urinary sodium and chloride excretion in man.

Chlorohydrin compounds

Chlorates

Chlorides

Chlorine fluorides

Chloroformic acid

Potassium chlorides

Sodium chlorides

Chlorine fluorides

Suit for personnel handling liquid rocket propellants for protection from chlorine trifluoride, and elemental fluorine.

Chlorophylls

Acid base equilibrations effects on chlorophyll, primary photosynthetic regulating mechanisms, considering electron transfer to NADP and ATP formation.

Structural-lipids role in accumulating lipid energy during prebiological evolution, using conductance studies in lipid-chlorophyll-water system.

Fittest system and primary photosynthesis evolution, using comparative analysis of bacteriochlorophyll, bacteriostirvindin and chlorophyll.

Plants participation in lipid systems formation, considering chlorophyll photochemical activity in surface active agents.

Chloroplasts

Molecular aspects of structural and functional circadian rhythms in chloroplasts of unicellular alga, emphasizing protein synthesis role.

Photos trapping in photosystem II of photosynthesis. The fluorescence rise curve in the presence of 3',1',4-dichlorophenyl-1,1-dimethylurea.

The presence of P700 in chloroplast fragments prepared by short time incubation with Triton X-100.

Chloroperoxidase

Chloroperoxidase tranquillizer influence on squirrel.
CHRONIC CONDITIONS

p0158 A72-19542

CHRONIC CONDITIONS

p0158 A72-19542

Desynchronizing effects on sleep alteration and circadian rhythms in monkeys

desynchronizing effects on sleep alteration and circadian rhythms in monkeys

p0035 A72-13071

Fat central nervous system oxygen toxicity seizure susceptibility related to circadian rhythms

p0064 A72-14867

Hypoxia effect on diurnal motor activity rhythm of Narrow erythrocytopoiesis system of quinoa pigs in pressure chamber

p0099 A72-16631

Optimum duration of human circadian cycle with respect to energy cost during work hours, relating normal cycle change to prolonged space mission stresses

p0600 A72-16639

Transmeridian flight psychological effects on aircrews, discussing anxiety, stress, circadian rhythm, disruption and sleep loss effects on performance deterioration

p0108 A72-17816

Circadian rhythms of activity-sleep time in free running birds and man in isolation

p1555 A72-19527

Circadian rhythms variations for sleep, EEG, temperature and activity in monkeys, indicating acrophase, amplitude and level regulation

p1556 A72-19528

Phase resetting behavior of circadian rhythms of poppy elicitation in fruit fly populations

p1556 A72-19529

Mathematical model physical structures, effectiveness and limitations for circadian rhythms, discussing Princeton and modified biochemical models

p1556 A72-19530

Weak I & electric field influence on circadian rhythms of human rectal temperature and activity

p1556 A72-19531

Circadian periodicity of resistance to ionizing radiation in pocket mice at high and low metabolic rate

p1556 A72-19532

Circadiand model tests of photoperiodic time measurement relation to circadian system in both Pentinophora quinquellijil, using induction by skeleton photoperiods and light cycles

p1557 A72-19533

Phase shifts of circadian rhythms of optic nerve potentials from isolated eye of sea hare in darkness

p1557 A72-19534

Spectral photosensitivities for phase shifting of circadian body temperature rhythms in pocket mice

p1557 A72-19535

Phase shifting effect of light on circadian rhythm and photoreceptive pigment location in Drosophila in pupation stages

p1557 A72-19536

Body core harmonic control of Drosophila circadian rhythms and synchronizing mechanisms, discussing light stimulation and neurohormone secretion

p1557 A72-19537

Metabolic control of temperature compensation in circadian rhythm of Euglena gracilis stain

p1557 A72-19538

Euglena cell division timing control by endogenous circadian rhythm, showing direct entrainment by low frequency dark-light cycles

p1557 A72-19539

Molecular aspects of structural and functional circadian rhythm in chloroplasts of unicellular alga Acetabularia, emphasizing protein synthesis role

p1558 A72-19540

DNA-RNA molecular hybridization testing of chronon theory of circadian timekeeping in protozoa cells

p1558 A72-19562

Eastbound and westbound transmeridian flights effect on body temperature and psychomotor and visual performance circadian rhythms, discussing readjustment times

p1561 A72-20176

Isolation stress effects on micturition circadian rhythms and diuresis occurrence in unrestrained chimpanzees under entrained and free running conditions

p1562 A72-20176

Isolation stress effects on circadian rhythmic patterns of EEG activity during sleep-wake and
Bhythmostasis as fundamental life characteristic

Day/night workers sleep patterns in terms of Circadian adrenal periodicity of plasma corticosteroid levels in restrained chimpanzees

Hunan performance dependence on time of day, diurnal rhythm and loss of sleep effects on human efficiency - Conference, Strasbourg, July 1970

Diurnal rhythms and sleep effects on human efficiency

Human performance dependence on time of day, discussing circadian and physiological rhythms relation and environmental change effects

Sleep deprivation effects relation to work duration, time of day, circadian rhythm, memory function, task performance, environmental factors, drug use and age

EEG measurement of sleep behavior patterns, discussing sleep stages, temporal patterns, circadian rhythm, intrasleep process stability and age factor

Time displacement effects on human physiological and psychological functions, discussing circadian rhythm phase shift and performance deficits

Cumulative partial sleep deprivation effects on human performance in auditory vigilance, routine addition and running digit span tests, observing circadian rhythms

Sleep, lack of sleep and circadian rhythm effects on psychometric test performance

Sleep interruption, sleep deprivation and continuous darkness effects on circadian rhythms in human performance

Sleep-wakefulness cycle variations effect on reaction time and spontaneous tempo during time isolation experiment, showing tendency toward circadian rhythm

Human functional level performance characteristics, noting relationship between spontaneous rhythms diurnal variations in psychic and physical performance

Sleep deprivation effect on circadian rhythm in human performance, psychological fatigue, ratings, catecholamine excretion and urine flow

Circadian rhythm effects on introverts and extroverts biochemistry, physiology and performance, suggesting arousal mechanism differences

Transcranial air travel as cause of psychological and physiological rhythm change effects on pilot performance

Project Pegasus vigilance tasks for mental performance aspects of time zone change effects on human circadian rhythm

Time zone transition induced circadian rhythm disturbance effect on military personnel mental and physiological performance

Metabolic and hormonal response adaptation to prolonged hypodynamics in water immersion /head out/, noting diurnal and nocturnal rhythmic variations in circadian rhythm

Circadian rhythms of visual accommodation responses and physiological correlations during target tracking, recording monocular focus state by IS optometer

Latent desynchronism caused by disturbances in circadian rhythms, noting rapid eye movement state

Adaptation period to inverted work-rest cycle observed with encephalograph, noting effect of brain bioelectric activity circadian rhythms stability

Pulse rate studies of human adaptation to 16 hour work-rest cycle, showing persistence of 24 hour cycle

Heart rate change regularities during inverted work-rest cycle of isolated man, noting relation to circadian rhythm

Diurnal changes in gas exchange and metabolic rate under normal and inverted day-night schedule conditions, studying human adaptation to shifted schedule

EEG diurnal rhythms during 72 hour insomnia, considering adaptation to altered work-rest cycle in subjects with stable and unstable brain activity rhythms

Sleep deprivation effects on diurnal urine potassium excretion, showing individual circadian rhythm variations

Illusion intensity effects on circadian periodicity and behavioral thresholds in rhesus monkey, demonstrating exception to Aschoff rule

Work capacity evaluation from fatigue, biological rhythms, tissue respiration and oxygen consumption studies, discussing pharmacological stimulation effects

Human respiratory rate diurnal rhythms adjustments during inverted work-rest cycles in isolation chamber with controlled comfortable atmosphere

Heart rate diurnal rhythm adaptation to work-rest cycle change, using recumbent and sitting position data parameters

Noise and vibration stress combined effects on human mental performance as function of time of day, taking into account circadian rhythm factor

Increased tolerance of leukemic mice to arabinosyl cytosine with schedule adjusted to circadian system

Circadian rhythms contd

EEG investigation of circadian variations in qualitative and quantitative RNA content in human leukocytes, noting changes during sleep

Circadian rhythms in physiological and psychological functions related to jet travel, studying body temperature variations and psychomotor performance during isolation and varying light-dark cycle conditions

Human tryptophan and tyrosine metabolism - Effects of acute exposure to cold stress

Biological rhythms origin and mechanisms, discussing 24-hour cycle, subcellular biological clock and rhythm disruption effects in speleologists, astronauts and pilots

Thermal balance in man during 24 hours in a controlled environment

Time series analysis of meteoropathological disturbances of human regulation mechanisms, investigating annual variations of diurnal rhythms
Analogy between reversible follow-up system and cardiovascular phenomena.

Factors modifying biosynthesis of unsaturated fatty acids in hepatic endoplasmic reticulum:

Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks.

Coordination of circadian rhythm with human respiratory rate during inversed work-rest cycle.

Environment and endogenous timing factors as stimuli for bird migration.

Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks.

Analysis of circadian rhythms of arterial and venous oxygen intake and cardiac output measurements in exercise, assessing cardiac output at 80 percent maximum aerobic power.

Physical conditioning effect on central and peripheral circulatory responses to acute work, measuring cardiac output at 80 percent maximum aerobic power.

Control system modeling human left ventricle and circulatory system mechanics, and regulation by central nervous system.

Oxygen intake and cardiac output measurements during various treadmill and bicycle ergometer exercises, relating exercise type to heart rate.

Subject Index

Circadian rhythms related to space missions both endogenous rhythms.

Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks.


Coordination of circadian rhythms with human respiratory rate during inversed work-rest cycle.

Effects of clock shift on orientation of migratory birds and deviations in initial orientation produced by varying amounts of clock shift.

Environmental and endogenous timing factors as stimuli for bird migration.

Factors modifying biosynthesis of unsaturated fatty acids in hepatic endoplasmic reticulum.

Circadian rhythms related to space missions both endogenous rhythms.

Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks.

Coordination of circadian rhythm with human respiratory rate during inversed work-rest cycle.

Environment and endogenous timing factors as stimuli for bird migration.

Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks.

Coordination of circadian rhythm with human respiratory rate during inversed work-rest cycle.

Environment and endogenous timing factors as stimuli for bird migration.

Factors modifying biosynthesis of unsaturated fatty acids in hepatic endoplasmic reticulum.

Circadian rhythms related to space missions both endogenous rhythms.

Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks.

Coordination of circadian rhythm with human respiratory rate during inversed work-rest cycle.

Environment and endogenous timing factors as stimuli for bird migration.

Factors modifying biosynthesis of unsaturated fatty acids in hepatic endoplasmic reticulum.

Circadian rhythms related to space missions both endogenous rhythms.

Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks.

Coordination of circadian rhythm with human respiratory rate during inversed work-rest cycle.

Environment and endogenous timing factors as stimuli for bird migration.

Factors modifying biosynthesis of unsaturated fatty acids in hepatic endoplasmic reticulum.

Circadian rhythms related to space missions both endogenous rhythms.

Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks.

Coordination of circadian rhythm with human respiratory rate during inversed work-rest cycle.

Environment and endogenous timing factors as stimuli for bird migration.

Factors modifying biosynthesis of unsaturated fatty acids in hepatic endoplasmic reticulum.

Circadian rhythms related to space missions both endogenous rhythms.

Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks.

Coordination of circadian rhythm with human respiratory rate during inversed work-rest cycle.

Environment and endogenous timing factors as stimuli for bird migration.

Factors modifying biosynthesis of unsaturated fatty acids in hepatic endoplasmic reticulum.

Circadian rhythms related to space missions both endogenous rhythms.

Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks.

Coordination of circadian rhythm with human respiratory rate during inversed work-rest cycle.

Environment and endogenous timing factors as stimuli for bird migration.
Classification of two fungus strains as \textit{Phakopsora} zizalii or \textit{Aniopsis} Hansenii \[NWA-TT-P-16893\] \[NWA-12023\]

Medical atlas of radionuclides used in medicine, biology, industry, and agriculture \[SB-9006\] \[NWA-14039\]

\section*{Classifying}

Biological cell sorting by differential fluorescence generated electric signals via laser beam illuminated liquid stress \[P222 A72-23403\]

\section*{Clean Rooms}

Planetary quarantine microbial contamination control, concentrating clean room concept and microbiologic barrier techniques \[P0010 A72-10821\]

Results of development tests performed on portable clean room for controlling surgically induced infections \[P0078 N72-12012\] \[NWA-CR-126419\]

Portable clean room, ventilation system, human factors, electrical subsystem, and material compatibility test procedures for experimental system for control of surgically induced infections \[P0087 N72-13075\] \[NWA-CR-126462\]

Conference on application of clean room technology to surgery suites \[P0467 N72-28034\] \[NWA-CR-127641\]

Operating and maintenance instructions for use with experimental system for control of surgically induced infections \[P0867 N72-28035\] \[NWA-CR-127449\]

Design, fabrication, and evaluation of prototype experimental system for controlling surgically induced infections \[P0867 N72-28036\] \[NWA-CR-127449\]

\section*{Clinical Medicine}

\subsection*{Flight personnel statistical survey of clinical, physical and psychic causes of temporary and permanent flight service unfitness}

\subsection*{Reliability of electroencephalography as a diagnostic method from specialists}

\subsection*{Interpretation of curve morphological features, discussing normal and pathological record evaluation}

\subsection*{Dietary and pharmacological treatment of atherosclerotic hyperlipidemias from lipid-sugar balance and drug efficacy studies}

\subsection*{Clinical death period and resuscitation concepts, noting erroneous interpretations of irreversible histological alterations, revival attempt period and organ is own self resuscitation potential}

\subsection*{Physiological and clinical effects of drug distance flight in pressurized commercial planes with simulated altitudes over 1500 meters}

\subsection*{Clinical diagnosis of ST/T depression in resting ECG, noting coronary heart disease and left ventricular hypertrophy}

\subsection*{Frontal sinus hematoma incidence in flying personnel and amputees, discussing diagnosis and clinical treatment}

\subsection*{Annual clinical and physiological evaluation of test pilots physical performance over ten year period from body composition, pulmonary function and work capacity measurements}

\subsection*{Coronary heart disease discriminatory factors from comparison with healthy controls, noting diastolic hypotension significance}

\subsection*{Diagnostic errors in draft age patients, noting doctor, examination methods, disease type and patient factors and psychosomatic disturbance detection}

\subsection*{Clinical observations as a research method in physiology}

\subsection*{Clinical IR thermography with Therametric camera for body temperature discontinuity detection, discussing image resolution}

\subsection*{A system for the mass examination of electrocardiograms}

\subsection*{A model corporate pilot physical program}

\subsection*{The Macruz index and its clinical evaluation in electrocardiography with regard to the selection and control of air crews}

\subsection*{Clinical investigations of cancer prevention, infectious diseases, body fluids, and electrophoresis}

\subsection*{Utilization of aerospace technology in medical field \[NWA-CR-126416\] \[P0078 N72-12011\]}

\subsection*{Utilization of aerospace medical techniques to public health particularly hypokinesia \[NWA-TT-P-14068\] \[P0860 N72-12014\]}

\subsection*{Clinical causes for permanent grounding of British air fleet crews}

\subsection*{Clinical causes for permanent grounding of German armed forces flying personnel}

Design of digital low pass and bandpass filters for analyzing biomedical data for diagnostic purposes \[COMP-10213\] \[P0120 N72-14119\]

Use of dometers in biological and clinical procedures \[RNO-3510-18\] \[P0190 N72-12014\]

Analysis of histologic substrate of atherosclerosis transpiring without symptoms in young human subjects \[P0217 N72-17073\]

Effects of radio waves on human body \[NWA-TT-1519\] \[P0240 N72-18073\]
Acoustic impedance bridge for clinical evaluation of encephalitic tube function

Effects of partial and whole body radiation on biochemistry and physiology in humans

Clinical observation of massive injury causing serum enzyme activity in man after crash accidents

Production and use of aerosols in treating respiratory tract disorders

Experimental and clinical studies in treating digitalis caused cardiac arrhythmias with sodium

citrate using heart patients and dogs

Clinical analysis of hypokinesia caused changes in nervous systems and effects of pharmacological preparations on hypokinesia disorders

Clinical treatment of vibration induced disorders in construction workers

Clinical observation of vertebral injuries caused by vertical acceleration of spine

Clinical tandem walking test for evaluating ataxial battery test performance in detecting vestibular problems

Clinical determination of human physical performance and effect of drug stimulants on performance

Automatic system for measuring and monitoring cystolic and diastolic blood pressure in humans

Biological models for clinical analysis of pulmonary circulation during simulated abdominal pathological or environmental conditions

Naval research on laser caused visual acuity decrement in monkeys and ocular injury in humans

Clinical evaluation of human physiological acclimatization processes in Antarctica

Standardized treatment of decompression sickness occurring while diving under pressure

Multichannel biologic control system for simulating neuromuscular movements and treating motor function disturbances

Possibility of using pepsinogen and amylase present in parotid as diagnostic tool

Role of stress in human life

Clinical analysis of coronary heart disease susceptibility in air traffic controller populations

Clinical and experimental data on treating malignant of human breast and lumbar back regions

Human forearm models for aiding diagnostic and process for preparing calcium phosphate salts for clinical use

Lymphoblastic transformation test for studying immunity of pregnant women

Process for preparing calcium phosphate salt for tooth repair

Development of Si(Li) and Ge(Li) detectors for clinical diagnosis

Human blood carboxyhemoglobin saturation relation to inspired oxygen and CO concentrations from small closed rebreathing systems tests

Closed loop life support systems, discussing manned ninety day tests in space station simulator, Soviet experiments and water and oxygen regeneration

Human immunobiological status during prolonged maintenance in bioregenerative life support systems, discussing possible allergic reaction to chlorella gaseous metabolites

Vapor-liquid equilibrium analysis of water soluble volatile organic compounds in closed airtight systems by gas chromatography

Carbon monoxide dynamics in chlorella reactor closed environment and in man-chlorella system at relatively constant level

Pesticide residues and chlorella and wheat plant in life-supporting biological system, showing compatibility

Thermodynamic properties and mathematical modeling of complex biological systems, considering energy and mass exchange in photosynthesizing organisms for eubiotic life support systems

Space station atmospheric revitalization system design, covering temperature, humidity, CO2, oxygen, nitrogen, and composition control and vehicle configuration

Functional reliability of the biological component of a life support system

Expired air as a source of spacecraft environment carbon monoxide contamination

The problem of decontaminating and preserving drinking water in spacecraft water supply systems

Regeneration of oxygen from carbon dioxide and water

Spacecraft food synthesis, using Carbon dioxide and water from chemically reconditioned human metabolic and waste products

Aerobiological bibliography of water purification and decontamination including recycling of closed ecological systems for potability of water

Toxicological characteristics of artificial atmosphere of closed ecological systems in spacecraft and submarines

Biotechnical life support systems for regeneration of vital substances needed by man on prolonged space flights

Development in space hydrobiology research and application to creating closed ecological system for support of space crew

Stabilization of carbon monoxide metabolism in man-chlorella system

Decreased resistance to infections respiratory system in closed ecological systems

Plant cultivation in closed ecological system in space flight

Design of auxiliary survival shelter as portable life support system in trains

Influence of closed microbial ecology on modification of natural intestinal flora of ferrets in closed environmental systems

Toxic effects of volatile components from synthetic materials used in closed ecological systems

Reliability of microbial cultivation in chlorella reactor closed environment and in man-chlorella system

Research on growth and metabolism of green algae, emphasizing Chlorella sorokiniana for closed ecological systems
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>CODING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peatland induced detrimental changes in human-environmental microflora during 90 day test of advanced regenerative life support system [NASA-CR-112018]</td>
<td>p0063 N72-32115</td>
</tr>
<tr>
<td>CLOSED LOOP SYSTEMS</td>
<td>U FEEDBACK CONTROL</td>
</tr>
<tr>
<td>CLOTHING</td>
<td>COBALT60 NUTRIUM</td>
</tr>
<tr>
<td>Thermoelastic tissue phosphate isomerase in psychrophilic Clostridium at moderate temperatures</td>
<td>p0233 A72-24750</td>
</tr>
<tr>
<td>CLOTHES</td>
<td>COAGULATION</td>
</tr>
<tr>
<td>Fragmentation and closure in afterimages of bright flash stimuli</td>
<td>p0056 A72-13938</td>
</tr>
<tr>
<td>CLOTHES</td>
<td>CLOTHES BG</td>
</tr>
<tr>
<td>CLOTHES (BACTERIOLOGICAL)</td>
<td>CLOTHES</td>
</tr>
<tr>
<td>HT SHOES</td>
<td>HT SHOES</td>
</tr>
<tr>
<td>HT GLOVES</td>
<td>HT GLOVES</td>
</tr>
<tr>
<td>HT HATS</td>
<td>HT HATS</td>
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<tr>
<td>HT SPACE SUITS</td>
<td>HT SPACE SUITS</td>
</tr>
<tr>
<td>HT SUITS</td>
<td>HT SUITS</td>
</tr>
<tr>
<td>Russian book - Climatic conditions and the thermal state of man.</td>
<td>p0492 A72-40458</td>
</tr>
<tr>
<td>Computer analysis of clothing and human acclimatization to Antarctic Region [AD-734071]</td>
<td>p0133 N72-21055</td>
</tr>
<tr>
<td>CLOTHING</td>
<td>CLOTHING</td>
</tr>
<tr>
<td>Effect of flight stress on blood clotting in fighter pilots [NASA-TT-F-14455]</td>
<td>p0062 N72-32109</td>
</tr>
<tr>
<td>CLOUD STREETS</td>
<td>CLOUD STREETS</td>
</tr>
<tr>
<td>U CLOUDS (METEOROLOGY)</td>
<td>CLOUDS</td>
</tr>
<tr>
<td>CLOUDS (METEOROLOGY)</td>
<td>CLOUDS (METEOROLOGY)</td>
</tr>
<tr>
<td>Clone observations of birds migrating in opaque cloud cover to determine effects of wind and meteorological conditions</td>
<td>p0396 N72-25073</td>
</tr>
<tr>
<td>CLUTCHES</td>
<td>MANIPULATORS WITH PERMANENT MAGNET CLUTCHES FOR SAFETY IN HANDLING DANGEROUS MATERIALS</td>
</tr>
<tr>
<td>CLUTTER</td>
<td>TIME-COMPRESSED DISPLAYS FOR TARGET DETECTION</td>
</tr>
<tr>
<td>COAGULATION</td>
<td>COAGULATION</td>
</tr>
<tr>
<td>Electronic and hemoratic devices to investigate cardiovascular system functions including blood coagulation process, pressure and flow</td>
<td>p0269 A72-26464</td>
</tr>
<tr>
<td>COASTAL ECOLOGY</td>
<td>COASTAL ECOLOGY</td>
</tr>
<tr>
<td>Biological resources of Chesapeake Bay and measurement of chemical, physical, and meteorological features to improve resources' management</td>
<td>p0437 N72-26278</td>
</tr>
<tr>
<td>COBALT</td>
<td>COBALT</td>
</tr>
<tr>
<td>Simultaneous neutron-activation analyses of scandium, cobalt, iron, and zinc in biological objects with the aid of a total-absorption gamma spectrometer</td>
<td>p0053 N72-83347</td>
</tr>
<tr>
<td>COBALT COMPOUNDS</td>
<td>EFFECT OF COPPER, COBALT AND MANGANESE SALTS ON CERTAIN MORPHOLOGICAL-BIOCHEMICAL COMPONENTS OF THE BLOOD IN YOUNG SHEEP OF THE HISSAR BREED</td>
</tr>
<tr>
<td>COBALT 60</td>
<td>BLUE GREEN SLIME ANACYSTIS nidulans photo-recovery after Co 60 gamma radiation exposures, using white and red light</td>
</tr>
<tr>
<td>ATP injection protection against Co 60 or Cs 137 gamma radiation in albinos mice, guineas pigs and dogs</td>
<td>p0073 A72-15516</td>
</tr>
<tr>
<td>Effect of flight conditions and prolonged ground storage on viability and radio-sensitivity of hydroa bacteria cells</td>
<td>p0202 N72-17061</td>
</tr>
<tr>
<td>Effectiveness of lead screens in protecting bone marrow quantity necessary for survival of pigs gamma irradiated with Co 60</td>
<td>p0305 N72-20078</td>
</tr>
<tr>
<td>CLOTHES</td>
<td>CLOTHES</td>
</tr>
<tr>
<td>CLOTHES (BACTERIOLOGICAL)</td>
<td>CLOTHES</td>
</tr>
<tr>
<td>Neurophysiological hearing mechanisms of inner ear in peripheral auditory pattern recognition</td>
<td>p0006 A72-10481</td>
</tr>
<tr>
<td>Neurophysiology of auditory pattern recognition of simple and complex noises, using cats data on cochlear nerve neural mechanisms</td>
<td>p0007 A72-10482</td>
</tr>
<tr>
<td>Cats cochlea and cochlear nucleus neural responses in auditory masking of low frequency tones, showing phase locked cells progressive desynchronization with intensity</td>
<td>p0072 A72-15251</td>
</tr>
<tr>
<td>Electrophysiology for auditory temporal masking mechanism study of cat cochlear nucleus and inferior colliculus single neurons</td>
<td>p0104 A72-17175</td>
</tr>
<tr>
<td>Field and intracellular potentials in cat troclear nucleus following vestibular nerve and nuclei stimulation for synaptic organization study of vestibulo-ocular reflex</td>
<td>p0167 A72-20501</td>
</tr>
<tr>
<td>Cochleas enclosed two dimensional cavity potential flow model for fluid mechanical theory of hearing</td>
<td>p0230 A72-24295</td>
</tr>
<tr>
<td>Hybrid computer simulation of cochlea mathematical model, noting nonlinear damping</td>
<td>p0078 A72-33971</td>
</tr>
<tr>
<td>CLOTHING</td>
<td>CLOTHING</td>
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<tr>
<td>EFFECTIVE OF FLIGHT STRESS ON BLOOD CLOTTING IN FIGHTER PILOTS</td>
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<tr>
<td>CLOTHING</td>
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<tr>
<td>ON-BOARD DIAGNOSIS</td>
<td></td>
</tr>
<tr>
<td>Integrated cockpit research procedure used to identify control and display requirements for advanced aircraft</td>
<td>p0102 A72-16749</td>
</tr>
<tr>
<td>Assessment of design, aircraft cockpit layout, and display/control system</td>
<td>p0355 A72-22625</td>
</tr>
<tr>
<td>CLOTHES</td>
<td>CLOTHES</td>
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<td>CLOTHES (BACTERIOLOGICAL)</td>
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<td>EFFECTIVE OF FLIGHT STRESS ON BLOOD CLOTTING IN FIGHTER PILOTS</td>
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<td>Integrated cockpit research procedure used to identify control and display requirements for advanced aircraft</td>
<td>p0102 A72-16749</td>
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<td>Assessment of design, aircraft cockpit layout, and display/control system</td>
<td>p0355 A72-22625</td>
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<td>Integrated cockpit research procedure used to identify control and display requirements for advanced aircraft</td>
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<td>p0355 A72-22625</td>
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<td>p0355 A72-22625</td>
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<td>p0102 A72-16749</td>
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<td>p0355 A72-22625</td>
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<td>p0102 A72-16749</td>
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<td>p0355 A72-22625</td>
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<td>ON-BORD DIAGNOSIS</td>
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<tr>
<td>Integrated cockpit research procedure used to identify control and display requirements for advanced aircraft</td>
<td>p0102 A72-16749</td>
</tr>
<tr>
<td>Assessment of design, aircraft cockpit layout, and display/control system</td>
<td>p0355 A72-22625</td>
</tr>
</tbody>
</table>
COEFFICIENTS

- Visual system, emphasizing pulse per group technique
  p0325 A72-28780

- Meaningful shape coding for aircraft switch knobs.
  p0420 A72-35904

- Error search reading tasks to investigate practical applicability of blinking display coding techniques, not tested reading speed reduction compared to steady display.
  p0499 A72-41018

COEFFICIENTS

- VT CORRELATION COEFFICIENTS
- VT DIFFUSION COEFFICIENT

COHERENCE

- VT CYTOCHROMES
- VT GLUTATHIONE
- VT Brain acetylated and unacetylated coenzyme A
  abberation in marginally hyperoxic space capsule environments
  p0110 A72-17875

- Oxidative catalysis of pyruvate to acetyl coenzyme A in yeast cells
  (NASA-TT-F-1598)
  p0568 A72-33077

COGNITION

- Some effects of cognitive similarity on proactive
  and retrospective interference in short-term memory.
  p0512 A72-82548

- Utilization of comprehension principles in living organisms to connect cognitive systems
  (AD-727795)
  p0040 A72-10115

- Teaching and trained innovations and technological improvements for augmenting human
cognition
  (AD-726756)
  p0041 A72-10124

- Human cognitive processes involving artificial intelligence and a machine systems for problem
  solving and learning
  (AD-729070)
  p0087 A72-13089

COHERENT ELECTROMAGNETIC RADIATION

- VT COHERENT LIGHT

- Human eye relative luminous efficiency for near IR and UV coherent light, using ruby laser pumped
  tunable dye laser primary and second harmonic outputs
  p0363 A72-31380

COHERENT RADIATION

- VT COHERENT LIGHT

- Rhine monkey retina ultrastructural alteration and damage in rod and cone produced by Q
  switched ruby laser coherent radiation
  p0417 A72-35396

- Effects of laser radiation on tissues and organs of animals and measures for protection from
  effects of laser radiation
  (AD-730194)
  p0139 A72-15084

- COHERENT SOURCES
- VT COHERENT RADIATION

COLD ACCLIMATIZATION

- Heat production increase by muscular contractions
  due to noradrenaline in cold adapted rate
  p0104 A72-17215

- Heat and cold acclimatization in hamsters, relating thermoregulatory response to
  helium-cold hypothermia induction
  p0175 A72-21085

- Cold adaptation effects on rat skeletal muscle
  tissue Van't Hoff coefficient, considering
  phosphorylation and oxidation rate, P/O and
  mitochondrial ATP-ase activity
  p0323 A72-28639

- Modifications of the rate of renewal of
  norepinephrine in various peripheral organs of the
  rat during exposure and acclimatization to cold
  p0547 A72-62437

- Measuring thermoregulatory responses to cold
  immersion stimuli in summer and winter for
  study of metabolic cold acclimatization
  (AD-726467)
  p0038 A72-10101

- Computer analysis of clothing and human
  acclimatization to Antarctic, Region
  (AD-730471)
  p003 A72-21055

- Biological data reports on human acclimatization
  to polar regions and psychophysiology
  (JPHS-56252)
  p0423 A72-26060

COLD ACCLIMATIZATION during stay in polar regions
  (JPHS-56225)
  p0433 A72-26062

COLD PHYSIOLOGICAL REACTIONS AND PATHOLOGY IN
antarctic acclimatization
  p0433 A72-26063

CLINICAL EVALUATION OF HUMAN PHYSIOLOGICAL
ACCLIMATIZATION PROCESSES IN ANTARCTIC
  p0433 A72-26064

PHYSIOLOGICAL CHARACTERISTICS OF HUMAN COLD
ACCLIMATIZATION IN ANTARCTICA
  p0433 A72-26065

PSYCHOPHYSIOLOGICAL FACTORS OF HUMAN ADAPTATION TO
ANTARCTIC LIFE
  p0434 A72-26066

SLEEP PATTERNS OF HUMAN ADAPTATION TO ANTARCTIC LIFE
  p0434 A72-26067

POLAR LIGHT REGIME EFFECTS ON HUMAN BLOOD SYSTEM
  DURING ANTARCTIC LIFE
  p0434 A72-26068

OXYGEN SATURATION OF HUMAN BLOOD DURING PROLONGED
STAY IN ANTARCTIC REGION
  p0434 A72-26069

PHYSIOLOGICAL EVALUATION OF THERMAL INSULATION
PROPERTY OF CAMEL HAIR SUITS FOR HUMAN ARCTIC
STAY
  p0434 A72-26071

COLD CATHODES

- Legibility of cold cathode, side illumination and
  straight projection electronic digital displays
  under varying ambient light and viewing positions
  p0002 A72-10118

COLD TOLERANCE

- Helium-cold hypothermia induction and maintenance
  effect on hamster myocardia, with ventricle
  anaylsis of hypoxic damage, glycogen and
  catecholamines
  p0075 A72-15720

- Aircrews tolerance to cold water and life raft
  exposure, discussing prediction model based on
  thermal insulation effectiveness, assumed
  metabolize and body surface area and mass.
  (AD-740276)
  p0227 A72-23734

- Thermally protective life rafts and clothing
  evaluation for cold sea survival potential
  assessment and tolerance limit determination
  p0343 A72-31088

- High gravity, cold and starvation space stress
  effects on oxidative metabolism of
  ethylithpirone, adilime and p-methanol in
  male rat liver
  p0364 A72-31700

- Myocardia autonomic, excitability, conductivity
  and contractility under cooling, noting complete
  inhibition at 9-3 deg C.
  p0509 A72-20722

- Acclimatization ability of divers analyzed to
determine effects of cold tolerance on work
  capacity
  (AD-726753)
  p0037 A72-10099

COLD WATER

- Thermally protective life rafts and clothing
  evaluation for cold sea survival potential
  assessment and tolerance limit determination
  p0343 A72-31088

COLD WEATHER

- Cold weather face mask to provide protection from
  cold, wind, blowing snow, and frostbite in
  environments to -65 F and 35 mph wind velocities.
  (AD-727786)
  p0086 A72-12063

COLD WEATHER TESTS

- Human tryptophan and tyrosine metabolism - Effects of acute exposure to cold stress.
  p0490 A72-60417

- Human factor evaluation of cold weather face masks
  (AD-740587)
  p0573 A72-33172

COLLAGENS

- Confinement, physical deconditioning and
  cold hypercapnia effects on human muscular
  protein by chromotographic method for
  quantifying urinary, peptides and free union action
  (AD-736665)
  p019 A72-17669
Pathological significance of high oxygen tension exposure effects on acid soluble collagen extracted from mouse skin

Collagen in human myocardium as a function of age. p0282 A72-27483

Collagenase and collagen content of hairless mice skin during carcinogenesis (UR-B-P-72-18579) p0562 A72-32105

COLLISION

Collator simulation for determining transfer of training performance in males and females (AD-730951) p0206 A72-17086

COLLISION AVOIDANCE

Collator for profile scanning in longitudinal direction of human body [AD-72-10110 p0039

COLLISION WARNING DEVICES

U COLLISION AVOIDANCE

U WARNING SYSTEMS

U COLLISIONS

ET RETROFIT COLLISIONS

ET MIDAIR COLLISIONS

Simulation of frontal collisions and injuries sustained by cadavers, using safety belts and air bags p0260 A72-19159

COLLISIONS

Landing organs defense and preservation via refrigeration and vacuum combined use in lyophilization technique p0279 A72-27293

COLLOIDS

BT AESOLOL

Alicyclic formation of nucleic acid bases and nucleosides in photochemically synthesized self-sustaining coacervates p0285 A72-27657

COLOR

Three dimensional organization of spherical colonies formed by L5178Y cells grown in soft agar cultures from light and scanning electron microscopy p0013 A72-11039

COLOR EXTRAVISION, NEURISTIC, AND COLOR PREFERENCES. p0427 A72-36903

COLORS

Colors for elements of multicolored aircraft display to insure minimum number of instrument reading errors p0355 A72-22624

COLOR BLINDNESS

COLOR VISION

COLOR PERCEPTION

COLOR VISION

COLOR PHOTOGRAPHY

In absorbent effects on evaporographic image contrast performance based on photometric study, presenting color photographs p0364 A72-31615

COLOR VISION

Temporal characteristics of wavelength and luminance modulated light perception, discussing visual system dynamics of color discrimination p0030 A72-12847

Photopic spectral curves of relative luminance efficiency for congenital deficiencies of color vision, using optical bench, interference filters and Bachstein flicker photometer p0056 A72-13939

Simultaneous brightness contrast under scotopic conditions, investigating fovea rod and cone systems interaction in subjects with normal color vision p0056 A72-13937

Ishihara charts readings in artificial daylight at low color temperatures, low light intensity and limited exposure time by normal and color defective subjects p0105 A72-17142

Human visual system frequency specific color adaptation, considering neural channels sensitivity to color and frequency bands p0196 A72-17585

Color defective vision performance predictions during day and night tests of aviation color signal light discrimination p0109 A72-17871

Human vision light adaptation effects on dichromatic color matches for bipartite centrally fixed circular matching fields p0150 A72-19033

Achromatic and chromatic thresholds during dark adaptation against varying background luminances, noting trend change at transition from cone to rod function p0158 A72-19928

Spectral response and vision thresholds to eye for light detection and color sensation p0177 A72-21332

Three color response of human vision, noting relationships to color matching function and brightness p0215 A72-22617

Proposed cone sensitivities relation to Wright color discrimination lines, tabulating optimum weighting factors and longest to shortest chromatic 'steps ratio' p0215 A72-22619

Isolated specific color dependent waveforms of visual evoked response to strong colored lights relating luminance and wave amplitude changes p0223 A72-23500

Spatial frequency specificity of edge continent color aftereffects p0237 A72-25162

Extraocular colliculostrate vision in monkey, discussing circle vs triangle and red vs green discrimination p0277 A72-26772

Frequency-specific color aftereffects as result of alternate exposure of subject to inspection gratings of different spatial frequencies p0322 A72-28615

Color discrimination threshold determination for spectral sensitivity in subjects with congenital color vision disorders p0324 A72-28763

Selective chromatic adaptation in cone photoreceptors of cynomolgus macaque monkeys, using late receptor potential as response index p0332 A72-29967

Matched luminance chromatic stimuli wavelength effects on human visual latency p0335 A72-30267

Opponent color responses of monkey optic tract fibers to achromatic lights, using chromatic adaptation and microelectrode recording p0162 A72-31369

Detection and recognition of colored signals via, the effect of chlorosextroision on visual field, extracellular muscle balance, color matching ability and hand-eye co-ordination in man. p0019 A72-35691

Analytical description of the lone element in the zone-fluctuation model of color vision. I, II. A-103
COLORATION

Fly colour vision. p0426 A72-36606
Use shifts accompany phase induced modulation enhancement of S-isoopsideally flickering lights. p0426 A72-36609
Contour-contingent color aftereffects - Retinal area specificity. p0449 A72-37273
Psychophysical procedures to investigate selective visual adaptation to light of different wavelengths from test gratings with various orientations and spatial frequencies p0451 A72-37829
Spectral sensitivity after prolonged intense spectral light exposure of rhesus monkey corneas, demonstrating long term loss of cone photopigment response. p0495 A72-40739
The photopigment bleaching hypothesis of complementsary after-images - A psychophysical test. p0587 A72-44376
Visual sensitivity measurement in retinal areas with stepwise change from monochromatic light to another, discussing eye movements effects and perception thresholds. p0598 A72-44385
Techniques for analysing differences in VEPs: Colored and patterned stimuli. p0598 A72-44387
Small field trinitrop and central fovea in terms of dichromatic area color response mechanism and adaptation speed p0599 A72-44390
Analysis of international aviation standards for colors and color perception required for civil aircraft pilots. [AVIATION-RED-BULL-29] p0801 A72-12020
Analysis of human sensory interactions between color perception and ambient white noise intensity. p0807 A72-13065
Mathematical model for human color vision process simulation p0132 A72-15030
Mathematical model of psychophysiological relationship between sensation and stimulus in human color perception p0132 A72-15031
Grassmann algebra for functional model of color vision stastics in human perception p0132 A72-15032
Spectral sensitivity functions of retinal color vision receptors p0133 A72-15034
Spectral equation for plotting functional responses of human color vision receptors p0133 A72-15035
Color discrimination ability in children with reduced visual acuity p0133 A72-15036
Phased development of human visual color perception p0133 A72-15037
Weightlessness effects on achromatic and chromatic visual perception in humans p0135 A72-15053
Development of spectral sensitivity curves for optic tucus of turtles and effect of retinal illumination on retinian vision [AD-730286] p0190 A72-16015
Color perception tester for testing color code perceptiveness of individuals [NASA-CASP-RSC-10278] p0190 A72-16015
Measurement of color and movement detection by neurons [AD-733021] p0255 A72-19114
Time variation in human processing of movement directions and Stroop color words [AD-734359] p0306 A72-20095
Human visual acuity measured by chromatic square wave gratings under luminance conditions [AD-734931] p0315 A72-21063
COLORATION

COLORIMETRY
Proposed cone sensitivities relations to Wright color discrimination lines, tabulating optimal weighting factors and longest to shortest chromaticity steps ratios p0215 A72-22619
Use determination in urine and water wastes for recycling process, using 1-dimethylaminobenzaldehyde colorimetric method p0328 A72-29325
COLOR
Cerebral blood flow and metabolic changes during wakefulness, sleep, coma and epileptic seizures in terms of homeostatic mechanisms p0376 A72-33558
COLOR
Sleep loss and work-rest cycle effects on combat efficiency, considering psychomotor reactivity, vigilance and decision making capacity p0275 A72-26688
Pilot and back-seat man physiological responses during high-g aerial combat maneuvers in F-18 aircraft, discussing ECG, respiratory rate and minute volume p0298 A72-28317
Regression analysis technique for selecting sensitive combat crew members p0535 A72-31126
CORNEAL STRESs
Effect of combined environmental stresses during flight on pilot performance [AD-727041] p0038 A72-10104
CORNEAL ILLUMINABILITy
CORRECTION PHYSICS
Development and characteristics of controlled atmospheres adequate for habitation which will not support combustion [AD-78108] p0486 A72-29096
COST
Cosst collisions in planetary nebulae as source of organic compounds in universe in preplanetary era, noting nucleic acid bases in carbonaceous meteorites p0604 A72-14802
Cosmic sources of organic compounds from chemical evolution viewpoint, discussing comets, interstellar space, prestellar nebulae and cool stellar atmospheres p0184 A72-22014
CONFORT
Design of vibration absorbers minimizing human discomfort. p0501 A72-41231
Applied research into the effects of vibration upon displays, p0504 A72-41424
CORRECTION AND CONTROL
Development of on-line partial data reduction process for use with reaction time experiments conducted on command and control simulator system [AD-730221] p0359 A72-23009
Performance of personnel operating moving command and control system that monitors psychomotor tasks [AD-738133] p0478 A72-20114
CORRECTION AND CONTROL WITH CORRECTION AND CONTROL
COMMERCIAL AIRCRAFT
Reliability design for airborne ecological system for jumbo jets, discussing toilet flushing and multiple server queueing model p0229 A72-23999
COMMERCIAL AVIATION
U CIVIL AVIATION U COMMERCIAL AIRCRAFT
COMMUNICATIONS
NT AEROPORT COMMUNICATION NT ELECTROCARDIOSCOPIC COMMUNICATION NT INTERSTELLAR COMMUNICATION NT VISUAL COMMUNICATION NT VIDEO COMMUNICATION NT UNDERWATER COMMUNICATION NT VIBRATIONAL COMMUNICATION
Non-machine systems communication ambiguities due to information misinterpretation involving sense organs, previous experience and expectational bias p0064 A72-18550
Possibility of communication with dolphins based on analyses of language and intellect p0390 A72-24131
Computer methods

Computer methods

Computer programs

NT on-line programming

Artificial intelligence and heuristic programming research

[AD-724667] p0046 A72-11102

Developing center for computer-based behavioral studies for studying and analyzing national policies and problems

[AD-724659] p0200 A72-17050

Applications of computer programming in biomedicine

[ISS-71/14] p0384 A72-24081

Analog computer program for analysis of extended electrocardiographic monitoring

p0395 A72-25053

Computer programs

NT computer systems programs

EKG parameters estimation and statistical uncertainty calculation by computer program

p0004 A72-10073

Magnetic tape recorded flight data analysis by PORTTRAN program

p0044 A72-10125

Computerized polycombariographic data processing covering 23 cardiac and respiratory characteristics, using rabbits data

p0148 A72-18668

Dynamic electrocardiography with analog computer program to detect, count and classify atrial ventricular depolarization complexes

p0293 A72-28281

General principles and 'detail similarities in visual pattern analysis by single neuron operation, computer programs and psychological perception

p0462 A72-39275

Relative position of the rib within the chest and its determination on living subjects with the aid of a computer program

p0552 A72-48957

Computer program for correlating human reactions to psychological stress

[AD-730452] p0139 A72-15081

Two Monte Carlo codes for calculation of dose distribution in human phantoms irradiated by external photon sources

[REX-71-10] p0306 A72-20082

Computer program for analyzing impact damage to skull-brain system models

[AD-733986] p0307 A72-20087

Computer analysis of clothing and human acclimatization to Antarctic Region

[AD-730775] p0313 A72-21055

Computer program arrangement for recording psychiatric data

[ISS-71/12] p0384 A72-24082

Computer program for predicting microbial burdens of unmanned planetary spacecraft

[NASA-CS-127667] p0469 A72-28048

Varus 9 computer programs for analyzing human pattern perception mechanisms

[AD-730174] p0472 A72-28070

Computer simulation

A computerized simulation

Computer systems programs

Automated hospital information management system


Computer Techniques

Computer aided biplane roentgen videometry system for dynamic circulatory structure studies including blood flow and heart volume determination

p0013 A72-11040

Synergistic control of computer-manipulators, evaluating system

p0098 A72-16450

Computers in biomedicine - Conference, University of Hawaii, January 1972

p0152 A72-19306

Computerized EKG data acquisition and transmission system for large hospitals with multiple critical care patient monitoring units, noting telephone access from outside

p0152 A72-19307

Cardiographic interpretation of computerized apex-carotid diagram, using heart-rate-pump comparison

SUBJECT INDEX

Computerized oesocardiogram for left auricle mechanical activity examination, comparing with catheterization technique

p0168 A72-20607

Anthropotechnical aspects of aircraft taxiing guidance in airfield runway areas, suggesting computerized operational system

p0216 A72-22779

Clinical reliability and normal variations of Frank ECG computer analysis by Satellite program for healthy and cardiac patients

p0221 A72-23274

Digital computer techniques for computation of pulmonary mechanics parameters, using phaser method and Fourier series analysis of respiratory flow signals

p0272 A72-26620

Computer assisted monitoring of EKG waveforms and heart sounds frequency spectra to detectable laden blood during decompression sickness

p0272 A72-26626

Left ventricular volume time course from computer processing of video angiocardiographic data based on x ray densitometry measurements

p0272 A72-26627

Random sample comparison of computer program for ECG diagnosis and physicians readings

p0278 A72-26975

Menu selection for SKILAB astronauts by computer technique based on mixed integer programing code, using measure of pleasure list

p0200 A72-27442

Computer analysis of helicopter pilots eye movement patterns dependence on visual task skill and performance time

p0261 A72-27475

Automatic ECG recording and analysis by electronic data processing equipment, discussion of data acquisition and transmission for routine diagnosis and prophylactic mass examinations

p0286 A72-27821

Low cost real time computerized C 14 radiomicroscopy telemetering system for monitoring human metabolism data during space missions

p0293 A72-28077

Computerized measurement and analysis of day-to-day variations of corrected orthogonal ECG and vectorcardiograms in normal subjects, using results as assessment standards

p0341 A72-30967

Biotelemetry and computer analysis techniques for steep states and wakefulness studies during aerospace flight

p0376 A72-33560

Serial ECG change detection and description in myocardial infarction survivors, using computer technique to find best diagnostic discriminants from multiple criteria

p0379 A72-34008

An atomatic measuring and recording system for clinical electro-oculography

p0449 A72-37400

Prediction displays based on the extrapolation method

p0502 A72-41800

Human or computer control role in teleoperator remote control mechanisms, discussing control modes, using and transmission time delay problems

p0503 A72-41416

Computerized supervisory control for interpretation of subgoal statements from human operator to permit teleoperator interaction with environment without long time delay

p0503 A72-41417

A method for the development and optimization of controller-models for man-machine systems

p0504 A72-41420

Instrumentation for pre-computer processing of electroencephalogram signals

p0578 A72-12066

Computerized analysis of display requirements for aircraft longitudinal control in landing approach


Utilization of computer technology in biomedical data processing

[AD-730676] p0305 A72-24086
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>CONDITIONING (LEARNING)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic analysis of ECG at rest, during and after exercise with two computer systems</td>
<td>Use of computer technology for solving problems in cybernetics (JPRS-55937)</td>
</tr>
<tr>
<td>COMPUTERIZED SIMULATION</td>
<td>p0395 N72-25052</td>
</tr>
<tr>
<td>NT ANALOG SIMULATION</td>
<td>p0389 N72-24126</td>
</tr>
<tr>
<td>NT DIGITAL SIMULATION</td>
<td>Model of Siegel-Wolford simulation model for on-line operation (AD-737976)</td>
</tr>
<tr>
<td>Computer simulation of evoked cortical radio potentials in animals and humans, noting clinical application for measuring threshold potentials</td>
<td>p0446 N72-27138</td>
</tr>
<tr>
<td>Computerized simulation for predicting time needed to correct electronic equipment malfunction by humans</td>
<td>Computerized simulation for predicting time needed to correct electronic equipment malfunction by humans (AD-738572) p0479 N72-28116</td>
</tr>
<tr>
<td>Aircraft safety enhancement by computer controlled flight simulator training of air crews, discussing Boeing 747 program</td>
<td>Digital simulation and experimental evaluation of CO2-2(plus) control of pulmonary ventilation (NASA-EB-127815) p0521 N72-30056</td>
</tr>
<tr>
<td>Computer graphics system simulation of saccadic eye movement made for time optimal control behavior study, incorporating eye muscle characteristics</td>
<td>Behavior of computer generated visual system (AD-744927) p0569 N72-33086</td>
</tr>
<tr>
<td>Computerized simulation from model of human pupillary motor behavioral response to light, accommodation and fusional inputs</td>
<td>COPTERS</td>
</tr>
<tr>
<td>Electrical cardiac activity computer simulation model including biophysically faithful conduction system and electrocardiograms for high fideliry production</td>
<td>NT AIRBORNE/SPACEBorne COMPUTERS</td>
</tr>
<tr>
<td>Apollo manned mission real time ground support computer simulation for NASA flight controller training to maximize flight crew safety</td>
<td>NT ANALOG COMPUTERS</td>
</tr>
<tr>
<td>Bioelectric ECG and EEG signal analysis using hybrid computer techniques and parameter optimization for autocorrelation function modeling</td>
<td>NT DIGITAL COMPUTERS</td>
</tr>
<tr>
<td>Nonlinear model for computer simulation of human arterial system, using finite difference technique for pressure and flow calculations</td>
<td>NT HYBRID COMPUTERS</td>
</tr>
<tr>
<td>Hybrid computer simulation of cardiovascular system in biomedical engineering education</td>
<td>Russian book on man and computer covering interaction system technological capabilities, mathematical aspects and applications p0361 A72-31272</td>
</tr>
<tr>
<td>Hydraulic transmission line equations for computer simulation of arterial circulatory systems</td>
<td>Research in agriculture, computers, and cybernetics, medicine, and electronics (JPRS-56202) p0433 N72-26601</td>
</tr>
<tr>
<td>Hybrid computer simulation of cockles mathematical model, noting nonlinear damping</td>
<td>Quantitative analysis of phosocardiograms by electronic computers (NASA-TR-7-14608) p0563 N72-32113</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>CONCENTRATION</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>Biological phosphate origin through atmosphere-hydrosphere interrelations, discussing concentrative processes, dehydration mechanism and evaporation p0097 A72-16129</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>CONCENTRATION (COMPOSITION)</td>
</tr>
<tr>
<td>Hybrid computer simulation of cockles mathematical model, noting nonlinear damping</td>
<td>NT ATOMIC STRUCTURE</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>NT CARBON DIOXIDE CONCENTRATION</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>NT MOISTURE CONTENT</td>
</tr>
<tr>
<td>Digital computer technique for ballistocardiography simulation, using distributed parameters for vessel segments in circulatory system model</td>
<td>Effect of low concentrations of carbon monoxide on human behavior and performance (AD-727509) p0035 N72-10086</td>
</tr>
<tr>
<td>Digital computer simulation of human systemic arterial pulse wave transmission - A nonlinear model.</td>
<td>Compilation of raw data on elemental concentrations in normal and diseased human organs (SCE-11073-P3-1-101-11) p0304 N72-22081</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>CONCENTRATORS</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>Electrochemical carbon dioxide concentrators, materials compatibility to space shuttle life support environment, comparing with LiOH method p0009 A72-10768</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>CONCORDE AIRCRAFT</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>Cosmic radiation effects in Concorde prototype cabin, using photographic dosimeters for neutron dose measurement and nuclear emulsions for all charged particle recordings p0451 A72-19241</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>Passive dosimetric interpretation of cosmic radiation dose rate onboard French prototype of Concorde 001 supersonic transport aircraft p0432 N72-26052</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>CONDENSATES</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>Sanitary-hygienic evaluation of the extraction method for water recycling in atmospheric moisture condensates p0491 A72-40435</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>Production of condensates from man occupied chambers and application to repeated cultivation of plants p0204 N72-17078</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>CONDITIONED RESPONSES</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>CONDITIONING (LEARNING)</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>METHODS FOR CONDITIONING CARDIOVASCULAR SYSTEM DURING PROLONGED WEIGHTLESSNESS (NASA-EB-12605) p0085 N72-12051</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>CONDITIONING (LEARNING)</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>Respiration effects on human heart rate deceleration and biphasic cardiac response in aversive shock conditioning situations p0003 A72-10195</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>Soviet book on physiology of conditioned reflexes covering brain and nervous system, tonic reflexes, functional models, inhibition localization, etc p0004 A72-10295</td>
</tr>
<tr>
<td>Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern</td>
<td>Operant conditioning for producing gross motor responses, discussing application to physical p0200 A72-10295</td>
</tr>
</tbody>
</table>
PROTEINASE activity in different regions of the brain during development and inhibition of conditioned passive-avoidance reflex 0057 A72-36927
Blood vessel reactions to natural defense and conditioned reflexes from plethysmography and blood pressure measurements, discussing cortical effects mechanisms 0496 A72-40758
Higher nervous activity of monkeys two years after the extirpation of the dorsolateral frontal cortex 0987 A72-40803
Effect of electrical excitation of various auditory analyzer levels on a conditioned motor reflex 0497 A72-40805
Frolicking potentials of the primary auditory cortical zone produced by positive and inhibitive conditioned stimuli 0497 A72-40806
Role of the reticular formation of the mid-brain in the storage and recreation of a series of conditioned reflexes 0498 A72-40809
Critique of Pavlov conditioned reflex role in higher nervous activity and associations principle role in psychic activity 0498 A72-40811
Electrophysiological analysis of defense reflex and unconditioned reaction and conditioned signal analyzers in nodal mechanisms of functional systems/different synthesis, decision making, correction, etc. 0506 A72-41675
Development of a defensive conditioned reflex to a slight stimulus after previous visual desensitization 0546 A72-44070
Age-induced long-term memory changes in animals 0546 A72-44079
Characteristics of conditioned reflexes to an ecologically adequate stimulus in hares 0546 A72-44080
Effects of low CO concentrations on learned behavior patterns using human subjects 0546 A72-10088
Effects of compressed air or helium oxygen mixture breathing on learning behavior of rats [AD-736960] 0547 A72-28082
Influence of discriminative training and stimulus control on key pecking behavior in pigeons (NASA CR-127772) 0540 A72-29009
CONDUCTION EVI CONDUCTIVE VEIB Titanation SYSTEMS - Conference, Berlin, April 1970 0005 A72-10463
Medical primatology - Conference, New York, September 1969 0050 A72-13068
Ballistocardiography and clinical studies - Conference, Atlantic City, 2 May 1970 0050 A72-13116
Systems, man and cybernetics - IEEE Conference, Anaheim, California, October 1971 0051 A72-13116
Coronary heart disease - Conference, Frankfurt am Main, West Germany, January 1970 0052 A72-13176
Biomechanics - Conference, Eindhoven, Netherlands, August 1969 0059 A72-14703

CONDITIONS

A-108
CONSTRUCTIONS
Restraints for passengers in automobiles
Linear and angular acceleration terminology, human restraint systems, and mathematical models of automobile crash loads
Protective aspects of passive restraints for vehicles
Simulation of frontal collisions and injuries sustained by cadavers, using safety belts and air bags

CONSUMPTION
Hydrogen consumption
Water consumption

CONTAMINANTS
Radioactive contaminants
Trace contaminants
Ultrastructural and morphometric studies of hervillus oxide-contaminated environment effect on monkey and dog lung tissue
Spacecraft critical surfaces protection from molecular and particulate contamination sources including gloves, tissues, and coverings or packaging materials
Aviator breathing oxygen contaminant detector using gas chromatography and portable II analyzer
Spacecraft functional properties degradation due to surface contamination with outgassing vapors, discussing contaminant materials transport and sorption characteristics
Chemical contaminant influence on design of bioeactive remington propulsion system for space station use

CONTAMINATION
Fuel contamination
Spacecraft contamination
Planetary quarantine microbial contamination control, considering clean room concept and microbiologic barrier techniques
Nonsterile space flight hardware effects on planetary quarantine, evaluating contamination sources, design and mission parameters, cleanliness conditions and bioload
Tectrestrial biosphere back contamination from outer space organisms, discussing microbiologic control and prevention requirements
Potential health hazards due to ingestion of garden vegetables contaminated by arsenic, cadmium, lead, and zinc

CONTENT
Effects of water activity on control and deterioration mechanisms of dehydrated food systems

CONTINENTS
Australia
Europe

CONTINUOUS RADIATION
Rabbit and monkey corneal damage following CW carbon dioxide laser irradiation, discussing hazard level derivation

CONTRAST
Perspective effects on direction of rotation judgments, using figures with rectangular and trapezoidal contours
Effect of middle ear muscle contractions on hearing and echo processing in Mustelid cat
Effect of image contrast
Detection and recognition of colored signal lights

CONTROL
The foot as input device for control operation
Meaningful shape coding for aircraft switch knobs

CONTROL EQUIPMENT
Control sticks
Pressure regulators
Teleoperators
Control panels

CONTROL SIMULATION
Apollo manned mission real time ground support computer simulation for NASA flight controller training to maximize flight crew safety
System analysis by fast time arithmetic simulation techniques, describing ground model development
Individual style differences between operators of simulated aircraft control
Teleoperator manipulator for payload handling in space shuttle, noting design features and simulations of master-slave remote control system
Model for analyzing the coordination of manual movements
Measurement of pilot stress in simulated aircraft control tasks

CONTROL STABILITY
The influence of a prediction display on the human transfer characteristics

CONTROL STICKS
Influence of prolonged longitudinal accelerations on control habits
Ban/control stick as control system

CONTROL SYSTEMS

CONTROL THEOREM
Online identification on human describing function by iterative differential analyzer, noting application to man-machine systems and on-line adaptive control systems
Ban machine system input via human controller output transformation, illustrating with spacecraft lateral position manual control problem
Lectures on theory of manual-vehicle control
Some contributions to the theory of linear models describing the control behaviour of the human operation
Some man control system synthesis, noting quality criteria and estimates for weighting function coefficients of optimization potential
Invariant transformation of the control laws in ergatic systems

Mathematical description of a human operator in ergatic control systems
Methodological aspects of studies of ergatic differential-game systems
**SUBJECT INDEX**

| Man in a control circuit during an information task synthesis | p0557 A72-85520 |
| Theoretical-experimental method for parametric synthesis of director-type control systems | p0557 A72-85522 |
| Mathematical model for stability and control of legged locomotion systems | p0039 H72-10113 |
| Electroencephalogram analysis method as means for controlling human operator | p0390 H72-24133 |
| Human behavior in control system and game theory | p0436 H72-26083 |
| Control system analysis for mathematical modelling of respiratory protective devices | p0445 H72-27128 |

**CONTROL VALUES**

| * Designs for electro-pneumatic flow control valves for artificial limbs | p0042 H72-10129 |
| Controlled atmospheres | |
| NT CABIN ATMOSPHERES | |
| NT SPACECRAFT CABIN ATMOSPHERES | |
| Normal and gern free rat antibody response to sheep erythrocyte inoculation in He-O atmosphere, analyzing microagglutins and hemolysin titres | p0064 A72-14861 |
| Respiratory in altered gas environment for spontaneous breathing and voluntarily maintained polynary ventilation level conditions | p0185 A72-22077 |
| Hypoxia effect on aircraft pilot performance, using Link GAT 1 trainer and controlled composition atmosphere under varied altitude conditions for simulated ILS landing approaches | p0239 H72-28310 |
| Calculation procedures for some parameters of space suit gas medium supply systems | p0092 A72-20449 |
| Toxicological characteristics of artificial atmosphere of closed ecological systems in spacecraft and submarines | p0085 H72-12058 |
| Measurement of physiological effects on metabolism of personnel resulting from long periods of time in submarine environment | p0673 H72-28074 |
| Development and characteristics of controlled atmospheres adequate for habitation which will not support combustion | p0486 H72-29096 |
| Effects of confined submarine environments on crew performance and biological processes during prolonged submerge | p0535 H72-21129 |

**CONTROLLED STABILITY**

| U CONTROL | |
| CONTROLLERS | |
| NT SENSORDEVICES | |
| CONVAY MILITARY AIRCRAFT | |
| U MILITARY AIRCRAFT | |

**CONVEX FLOW**

| Radial diffusion and convection capillary model for analysis of tissue protein concentration and colloidal osmotic pressure changes during transcapillary fluid movement | p0173 A72-20896 |
| Influence of intracellular convection on the oxygen release by human erythrocytes | p0506 A72-41625 |

**CONVEX HEAT TRANSFER**

| Heat transfer through fabrics by convection, conduction, radiation and vaporization related to skin temperature and thermal injury | p0058 A72-13700 |
| Convective heat transfer from human form, using cylindrical model and aluminum composite physical replica in oven and wind tunnel air flow studies | p0172 A72-20892 |

**CONVERGENCE**

| Convergence effects in visual distance perception of pilot during aircraft landing | p0135 H72-15054 |
| CONVERTPLANES | |
| U/V/STOL AIRCRAFT | |
| CONVULSIONS | |

**Mechanism in mice and rabbits /Research note/ | p0920 A72-36405 |

**COOLING**

| LT LIQUID COOLING | |
| COOLING | |
| Tech cooling effect improving tolerance to positive headward acceleration in sitting position | p0068 A72-15210 |
| Skin temperature determination under comfort-controlled liquid-cooled garment in exercising subjects | p0087 H72-13078 |
| COOLING SYSTEMS | |
| Heat structures localized cooling device using vacuum insulated closed circuit controlled cryogenic probe with cooling range of plus/minus 20 C | p0072 A72-15252 |
| Comparison of water cooled, convective air, and reverse flow system for flight personal conditioning noting hot environmental condition simulation | p0486 H72-29092 |

**COORDINATES**

| NT POLAR COORDINATES | |
| COORDINATION | |
| Eye-hand coordination modifiable parameters under optical distortion conditions, deriving quadratic equation for hand response adaptation | p0022 A72-11697 |

**COPOLYMERIZATION**

| Acrylamide polymerization - New method for determining the oxygen content in blood | p0556 A72-45376 |

**COPPER COMPOUNDS**

| Effect of copper, cobalt and manganese salts on certain morphological-biochemical components of the blood in young sheep of the Hissar breed | p0065 A72-20075 |

**COUGRA**

| Fabrication of root cord restrained fabric suit sections from sheets of fabric | p0308 H72-20098 |

**CORIOLES EFFECT**

| Navigators, pilots and airman trainees response to Coriolis accelerations, investigating myasthenia sensitivity coefficient relationship to motion sickness resistance | p0014 A72-11286 |
| Alcohol ingestion effect on vestibular responses to angular acceleration and Coriolis stimulation, discussing myasthenic and subjective responses | p0293 H72-31090 |
| Features of a speech signal during cumulative action of Coriolis accelerations | p0547 A72-14415 |
| Human reaction time tests to determine ability to perform binary choice task while subjected to coriolis stimulation | p0185 A72-24090 |

**CORNEA**

| Rabbit and monkey corneal damage following CW carbon dioxide laser irradiation, discussing hazard level derivation | p0299 A72-12413 |
| Keratoconus /noninflammatory conic protrusion of cornea/ diagnosis and rehabilitation in USAF flying personnel | p0299 A72-20331 |
| Laser irradiations inhibitory effect on cornea vascularization after treatment with suprareal total extract | p0332 A72-29867 |
| Spectral sensitivity after prolonged sleep, spectral light exposure of rhesus monkey corneas, demonstrating long term loss of cone photoreceptor response | p0495 A72-60739 |
| Unsteady state description of living corneal mass transport models, elucidating cornea thickness control mechanism | p0517 A72-20892 |
| Keratoconus incidence in USAF flying personnel, discussing diagnosis, etiology and therapy | p0557 A72-26563 |
| Hyperbaric air and corneal vascularization caused by hypoxia | p0098 A72-40912 |

**A-111**
Clinical diagnosis of ST/T depression in resting
Acute hypoxia effects on dog coronary blood flow
Left ventricular dynamic function in terms of
tachycardia role in coronary vascular bed
Autonomic nervous system role in controlling
Beta-adrenergic blocking effect on canine coronary
Assessment of regional myocardial temperature
Reciprocal temperature changes in dogs during
Hemodynamic variables relation to coronary blood flow measurement
Human epicardial arterial circulation.

Coronary circulation

Human cardiocirculatory responses to submaximal
physiologically paced bicycle ergometry, recording preload period, isovolumic contraction, left ventricular ejection and pulse transmission time

Coronary heart disease - Conference, Frankfurt am Main, West Germany, January 1976

Clinical analysis of coronary heart disease
Clinicoarteriographic correlations in angina pectoris vith and without myocardial infarction.

Effects of coronary arteriography on myocardial oxygen consumption, sympathetic nerve vasoconstrictor effect and vasodilatory response

Reciprocal temperature changes in dogs during constant thermoregulation for coronary-crown blood flow measurement

Beta-adrenergic inhibitors effects on coronary blood flow and myocardial oxygen consumption of normal and coronary artery disease patients

Tachycardia role in coronary vascular bed hemodynamic response to severe exercise in dogs

Assessment of regional myocardial temperature changes effect on blood flow measurements by heated cross-thermocouples in dogs

Beta-adrenergic blocking effect on canine coronary and systemic hemodynamic adaptation during treadmill exercise

Hemodynamic variables relation to coronary blood flow and myocardial oxygen consumption during upright bicycle exercise

Left ventricular dynamic function in terms of internal diameter, pressure and flow in dogs at rest and during isoproterenol and metaraminol infusions

Acute hypoxia effects on dog coronary blood flow and cardiac function from cardiac beta-adrenergic and hemodynamics study

Clinical diagnosis of ST/T depression in resting ECG, noting coronary heart disease and left ventricular hypertrophy

Autonomic nervous system role in controlling coronary and cardiac responses to hypoxic hypoxia, measuring blood flow with Doppler ultrasonic flow transducer

Coronary system autoregulation patterns and mechanisms from coronary flow shift measurements during circumscribed artery perfusion experiments in dogs

Cardiac stroke volume measurements during canine bicycle exercise and recovery period, using indicator-dilution technique

Platelet aggregates role in intramyocardial vessel circulation impedance in patients dying suddenly of coronary artery disease

Radiocardiology method for ventricular volume measurements, recording subclavian vein-injected radioactive passage through cardiac cavities

Indicator dilution methods for ventricular volume measurements from washout curves, discussing intraventricular blood mixing uniformity

Mountain inhabitants cardiocirculatory adaptation to chronic hypoxia, studying coronary flow and myocardial oxygen consumption and efficiency

Cardiac performance and the coronary circulation of man in chronic hypoxia

Studies of the influence of theophylline on the vasodilating action of different medications on the cerebral and coronary circulation of man

Coronary flow determination in experimental conditions with the use of radioactive xenon.

Coronary collateral circulation and myocardial blood flow reserve.

Temporal relation of the second heart sound to aortic flow in various conditions.

Coronary blood flow and myocardial metabolism in man at high altitude.

Anatomy of the coronary circulation at high altitude.

Cardiocirculatory adaptation to chronic hypoxia. II - Comparative study of myocardial metabolism of glucose, lactate, pyruvate and free fatty acids between sea level and high altitude residents.

Continuous recording of His bundle electrogram during selective coronary cineangiography in man.

Effects of coronary arteriography on myocardial blood flow.

The effect of hypoxia on the coronary blood flow in reenergized dogs.

Clinicocardiographic correlations in anjina pectoris with and without myocardial infarction.

Clinical analysis of coronary heart disease susceptibility in air traffic controller populations

Simultaneous determination of blood plasma volume and corpuscular mass by chromium 51 tagged arborocrines and iodine 131 labeled human serum albumin

Comparative radiation by optical correction procedure

Correlation by autocorrelation

A-112
Solar and cosmic radiation monitoring for Soyuz 9 flight

Light flashes seen by Apollo astronauts caused by ionization in retina by cosmic nuclei

International cooperation in biosignature, cosmic rays, heavy ions, and radiation effects research

Effects of cosmic rays on cells and roles of action of heavy ions on cerebral cortex

Radiation hazard from heavy galactic cosmic rays to astronauts on extended missions

Estimation of proton penetration and absorption of heavy nuclear from cosmic rays during space missions

Biological effects caused by heavy ions in cosmic rays during space flight

Relative biological effectiveness of various types of cosmic radiation

Biological effects of cosmic radiation under flight conditions as analyzed from data collected in experiments conducted during past 40 years

Relative biological effects of cosmic radiation on living tissue

Biological effects of cosmic radiation on light flashes in human eyes

Relative biological effects of heavy cosmic rays on living tissue

Effects of accelerated particles and cosmic rays on light flashes in human eye

Cosmic rays in supersonic aircraft

Relative biological effects of heavy cosmic rays during space flight

Cosmic ray exposure to humans at low altitudes

Relative biological effects of cosmic rays during space flight

Biological effects of cosmic rays on living tissue

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Cosmic ray exposure to humans at low altitudes
COSMOS 110 SATELLITE

Phyisical effects on prolonged weightlessness in dogs aboard Cosmos 110 biosatellite, emphasizing body weight loss and enzyme activity and bone tissue mineral concentration changes p0374 A72-33547

COST ANALYSIS

Planetary quarantine cost and mission success constraints, formulating mathematical models for international goals and implementation systems p010 A72-10819

Human ejection vertebral injury data in aircraft accidents by cross reference to final medical diagnosis, considering costs and prevention for seat systems p020 A72-11718

COST ESTIMATES

Cost analysis of training and maintaining Army pilots including costs of injuries and fatalities p0087 W72-13086

COST REDUCTION

The Space Station Prototype Program - The development of a regenerative life support systems for extended-duration missions p0554 A72-45193

COUCHES

Collapsible couch system for massed space vehicles p0048 W72-11085

COUNTERMEASURES

BY ELECTRONIC COUNTER MEASURES

COUNTERS

BY RADIATION COUNTERS W72 SCINTILLATION COUNTERS

Design of white blood cell counting system for use in Skylab W55 p0475 W72-24086

Use of low level counting Ge(Li) detectors in nuclear medicine p0572 W72-33119

COUPLERS

BY COUPLING CIRCUITS

BY OPTICAL COUPLING

COUPLING CIRCUITS

Optical vascular pressure measurements with transducers located outside body with rigid and elastic tube couplings p0451 A72-37757

CRABS

Medical research abstracts on limulus visual system, electronic sensors model development, and auditory adaptation in horseshoe crab p0316 W72-21073

Phenomena related to sensory perception including physiology of limulus visual system p0569 W72-33087

CRACKING (FRACTURING)

Impact tests to obtain skull fracture data for Federal Motor Vehicle Safety Standards p0199 W72-17041

Finite element elastic analysis for determining crack strength of human skull under heavy loads p0255 W72-19115

CRAFT

U VEHICLES

CRANIO

BY INTRACRANIAL CAVITY

Human cranio-cerebral trauma dependence on impact conditions, giving case histories p0100 A72-16643

CRASH INJURIES

Fatality aviation accident human factors investigation by roentgenography, noting flight environment factors, injury pattern relation to aircraft design and victim identification p0111 A72-17800

Crashworthy upper torso restraint systems for general aviation aircraft, incorporating strap takeup devices p0180 A72-21578

Vertical drop rig test equipment for shock attenuation of crash helmets, discussing shock absorption criteria for impact protection p0207 A72-26016

Analytical model for nonpenetrating impact caused head injuries, evaluating protective device effectiveness via energy absorption characteristics p0389 A72-32602

Aircraft crash landing induced acceleration effects on seated occupants, discussing energy absorber system dynamic response characteristics for injury protective devices p0369 A72-32603

Crash helmet performance prediction through maximum strain criterion analysis and "injury" biodynamic model p0270 A72-32607

Crash energy absorption for prevention of fatal injuries, considering human deceleration tolerance with respect to required energy absorber force-deflection relationship p0370 A72-32630

Airaccident in the Faroe Islands in 1970 - Observations from a medical point of view, with special reference to spinal fractures p010 A72-30556

Blood serum enzymes activity changes in polytransfused humans injured in automobile accidents p0500 A72-41188

Human tolerance limitations related to aircraft weightlessness p0516 A72-42765

Response of a seat-passenger system to impulsive loading p0516 A72-42766


Cost analysis of training and maintaining Army pilots including costs of injuries and fatalities p0087 W72-13086

Human tolerance to abdominal impact injury in motor vehicle accidents p0255 W72-19118

Linear acceleration of impact type causing human injuries - conferences p0255 W72-19119

Crash injury research, including pathogenesis and protection p0255 W72-19120

Biodynamic and bioengineering applications to operations problems, resulting in crash injuries p0255 W72-19121

Exposure to extreme forces through human accidental and suicidal free falls p0256 W72-19125

Safety device study for human protection during impact acceleration p0256 W72-19131

Clinical observation of massive injury causing serum enzyme activity in man after crash accidents p0258 W72-19138

Protective helmets designed to lessen effects of head injury due to impact in aircraft accidents p0260 W72-19160

Models for head injury prediction and helmets, and prediction of optimum helmet performance p0260 W72-19161

Use of shoulder harness in general aviation aircraft to prevent or minimize injury during crashes p0260 W72-19161

Protection of medical personnel against radiation exposure p0317 A72-21077

Effectiveness of restraint equipment in controlling head impact forces and body kinematics in enclosed aircraft areas p0317 A72-21078

Performance of fiberglass instrument glaseshield as protection against head injury during general aviation aircraft accidents p0365 W72-19105

Helmet for skull protection against buffeting and crash injuries p0485 W72-29091

Use of mathematical model for evaluation of head injury severity index criteria p0744 A72-30087

CHARGE

PIlot survival probabilities under various conditions of high performance aircraft takeoff and landing accidents, suggesting emergency action guidelines for pilot training, comfort, fit and ease of use p0226 A72-23732

General aviation crashworthy personal restraint systems, discussing strap take-up devices, performance characteristics p0324 A72-28726
Aircraft crash landing induced acceleration effects on seated occupants, discussing energy absorber and dynamic response characteristics for injury protective devices.  

Deceleration attenuation effectiveness of airbag restraint systems compared with seatbelt-sholder harness for aircraft occupants.  

Biodynamic models for determining suitability of energy absorbers in protecting seated man in high acceleration aircraft impacts.  

CRASHES  

NT CRASH LANDING  

Linear and angular acceleration terminology, human acceleration simulation, airplane airbag restraint systems, and mathematical models of automobile crash loads.  

Creatine  

Muscle metabolism during isometric exercise performed at constant force.  

Creatinine  

Urine and plasma protein and creatinine measurements in acclimatized and unacclimatized men before, during and after high altitude ascent.  

Nitrogen excretion as a measure of protein metabolism in man under different conditions of renal function.  

Crews  

NT FLIGHT CREWS  

NT SPACE CREWS  

Mathematical model of core effective protection for shipboard personnel against shock-excited deck motions.  

Borschak inkblot test for determining personality characteristics of crewman during 90 day manned test.  

Crickets  

NT DEPTHLIES  

NT TRIBOLIA  

Criterias  

Air traffic control systems efficiency evaluation, discussing measures for criteria conflict solution.  

Critical flicker fusion  

Flicker and flash threshold experiments, discussing flicker cut-off frequency and flash duration relations and visual sensitivity.  

Light variation threshold amounts for flicker and flickerfusion pattern detection as function of variation frequency.  

Sole of eye movements in the perception of apparent motion.  

Sensitivity of the human EOG and VEP to sinusoidally modulated light.  

Critical Reynolds number  

0 REYNOLDS NUMBER  

Crop growths  

Action of a constant magnetic field on plant growth.  

European research and atomic energy applications to agricultural crops and insect sterilization.  

Cross-correlation  

Auto- and cross correlation functions for neuron reactions in mesomotor center to adequate stimulation of cats ventral apparatus.  

Crowding  

Crowding phenomenon effect on blood cell oxygen consumption, using Cartesian diver technique for polychromatophilic leucocytes, lymphocytes and platelet measurements.  

CROSST  

NT EARTHS CROSST  

Cryogenic equipment  

Nerve structures localized cooling device using vacuum insulated closed circuit controlled cryogenic probe with cooling range of plus/minus 20 °C.  

Postflight analysis of Apollo 14 cryogenic oxygen system.  

Cryogenic fluids  

NT LIQUID OXYGEN  

Cryogenic storage  

Space shuttle environmental temperature control-life support system program changes, discussing air cooled electronic equipment, cryogenic stores, crew size and mission duration.  

Cryogenics  

Electron microscope examination of freeze-etched air-filled lung alveoli extracellular lining layer, discussing sample preparation techniques.  

Cryogenic Josephson function magnetometer in muonbeam caloridography, discussing high ambient noise levels in unshielded environment.  

Cryobiology phenomena and applications, considering mode of action of various substances for freezing injury protection.  

Crystal structure  

Russian book on powdered metals toxicity covering industrial dust, physiological effects, safety standards, electron configurations and crystalline structure.  

Cryotext  

NT CREATIVITE  

Liquid crystals  

Cues  

Reactions choice limiting cues signals effect on reaction time, considering dependence on time interval between cueing and start signals.  

Oculomotor accommodation and convergence as distance perception cues, showing size perception change relation to glasses adaptations.  

Oculomotor cue-based distance perception, discussing glasses adaptation-caused accommodation and convergence changes in stereoscopic depth perception.  

Visual space geometry and perception experiments, demonstrating size-distance relations for various visual cues.  

Counteradaptation and cue discrepancy as perceptual adaptation basis, considering changes in re-registered and apparent distance of luminous object moving in dark.  

Vergence eye movements to pairs of disparity stimuli with shape/selection cues.  

Effects of visual cues on the standing body sway of males and females.  

Supplementary cues and delayed-alternation performance of frontal monkeys.  

Visually directed pointing as a function of target distance, direction, and available cues.  

Visual, aural, motion, and control movement cues for pilot training.  

Function of visual cues in orientation navigation systems of desert ants.  

Effects of color, spatial, and conventional visual cues on human performance.  

Cuffs  

Effects of pulsatile venous pressure-cuffs in cardiovascular conditioning to postflight orthostatic intolerance produced by water immersion.  

Cultivation  

Bioengineering models of energy and mass exchange.
CULTURE TECHNIQUES

Microbiological examination of space hardware. Discussing viable organisms neutralization buried inside solid materials, sampling procedures and culture media.

Three dimensional organisation of spherical colonies formed by L5178Y cells grown in soft agar cultures from light and scanning electron microscopy.

Tobacco tissue cultures with Apollo 12 lunar material, determining endogenous steroids and fatty acids concentrations by gas chromatography and mass spectrometry.

Modular microbiology laboratory design considerations and zero gravity experiments to investigate microbial culture systems behavior.

Chlorella population age structure and cell requirements correlation with nutrient medium nitrogen and phosphorus absorption.

Isolation of extremely halophilic carbohydrate-utilizing bacteria, using acid formation from various sugars as carbohydrate metabolism index.

Isolation of a polyvalent bacteriophage for Escherichia coli, Klebsiella pneumonias, and Aerobacter aerogenes.

Functional reliability of the biological component of a life support system.

Determination of copper, iron, cobalt, nickel, and manganese in biological samples of vegetable origin.

Lactate dehydrogenase from an extremely therophilic bacillus.

Water-soluble insulin receptors from human lymphocytes.

Environmental control culture techniques for plant metabolism.

Mathematical model for algal-bacterial community forming during moniteric cultivation of Chlorella.

CURING

The effects of various cure cycles upon the viability of Bacillus subtilis var. niger spores within solid propellant.

CURRENT DENSITY

Electrode system for ventricular defibrillation, noting current density role and rounded edge effectiveness.

Electrocardiography and magnetocardiography to determine flux and vortex sources respectively of heart electrical activity impressed current density.

CURTISS-WRIGHT MILITARY AIRCRAFT

CURIATURE

Effect of spherical spectacle lenses on the monochromatic aberration of the eye.

CURVED SURFACES

CUTANEOUS PERCEPTION

CUTANEOUS PERCEPTION

DILATANT CAPILLARIES

Potassium cyanide effect on phospholipid exchange in rat brain and liver during histotonic hypoxia as function of body temperature.

CURVATURE

Effect of spherical spectacle lenses on the monochromatic aberration of the eye.

CUSHIONS

Seat cushion evaluation for behavior during helicopter crash or aircraft ejection and spinal injury probability.

DISTANT SENSATIONS

Potassium cyanide effect on phospholipid exchange in rat brain and liver during histotonic hypoxia as function of body temperature.

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CYANOPHYTA

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CYANOPHYTA

Three dimensional organization of spherical colonies formed by L5178Y cells grown in soft agar cultures from light and scanning electron microscopy.
Mathematical modeling, automata theory, speech synthesis, and mechanical modeling of heat and laser systems (JIPS-56072)

Research in agriculture, computers and cybernetics, medicine, and electronics (JIPS-56202)

Heterocentric theory for brain functions and artificial adaptive systems (AD-7622599)

Cycles

BT Activity Cycles (Biology)

BT Work-Frest Cycle

Cyclical Accelerators

Cyclic Hydrocarbons

Cyclopropane

Differential neurophysiological and psychological effects of subanesthetic concentrations of cyclopropane, diethyl ether, methoxyflurane and etthane in conscious man

Cyclothanes

Direct and indirect cyclotron production of 1-123 for radiation therapy (NAS-A-TR-1-76059)

Cytoplasmas

Synthesis of bicyclic disulfides for conversion into atherogenic lipid cysteine derivatives (AD-732059)

Cysts

Renal polycystoma - Incidence among flot personnel

Cytocineses

Evolutionary rate of centroms in vertebrates, discussing hemoglobin and cytochrome c changes involving amino acid mutant substitution

Cytocrome c X ray structure and molecular evolution rates, using amino acid sequence comparative data

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Cytocrome c X ray structure and molecular evolution rates, using amino acid sequence comparative data

Cytogenes

In concentration in chromatin bodies of ribosome crystals in Entamoeba invadens, using absorption spectrophotometry, electron microscopy and histologic staining techniques

Evolutionary clock - Nonconstancy of rate in different species.

Cytotransport

Respiratory-chain components - correlation to tension production at various oxygen pressures in guinea pig ductus arteriosus, investigating light absorption changes

Cytogenetics

Biological dosimetry in acute human irradiation from cytoplastic study of peripheral blood and bone marrow

Cytology

Chronic microwave irradiation effects on experimental animal blood forming systems, examining peripheral blood count changes and nucleic and mitotic abnormalities in erythroblastic and lymphoid cells

Soviet book on gravitation receptor covering evolution of structural, cytochemical and functional organization in invertebrates /insects/ and vertebrates /vertebrae and viscerata/ (AD-76723250)

Organ cell lysosomes polymeric properties and formation by Golgi complex, discussing role in neurocystic structure restitution following gamma irradiation

Dynamics of secondary vacuole movement within cytoplasm of Tradescantia virginianna hair cells

Acute hypoxia of the myocardium - Ultrastructural changes.

Myocardial ultrastructure in acute and chronic hypoxia.

Cytoplasmic aspect of HF radiation in the monkey.

Morphological changes in spinal cord neurons of animals due to the decreased intensity of supramaximal stimulation

Relation between mitochondria and glycolysis

Medical science research projects involving cell structure, sialic acid, hyaluronic acid, streptomycins, acute renal failure, and effects of lasers (AD-733940)

Morphological effects of space flight environment on vascular, muscular, and nervous biological systems (JIPS-55341)

Magnetic field and transverse acceleration effects on pharyngeal and esophageal nerve cells of rats

Biophysical and cytological studies with laser microbeams (AD-734181)

Radiation and acceleration effects on structure of cytoplasm in aerospace environments

Darkest (Data Analysis)

U Data Processing

U Data Reduction

Usage

Damage

Damage to Tissue or Damage to Radiation Damage

Damping

Damping in Ten

U Tan

Darkness

U Moisture Content

Dark Adaptation

Sensitization by annular surrounds, tracing early light and dark adaptation curves

Darkness enhancement measurement in interstimnt light as function of flicker frequency, describing experimental assembly

Visual adaptation to light and dark in humans and animals, discussing cellular mechanisms

Human dark adaptometric visual threshold recovery and electroretinograms in response to double light flashes, using Fourier analysis of oscillatory potentials

Dark adaptation with logarithmically time decreasing background luminance, noting threshold time lag variation with rate of background change

Achromatic and chromatic thresholds during dark adaptation against varying background luminances, noting trend change at transition from cone to rod function

Temporal summation function form change during dark adaptation, noting relationship to change under other stimulus manipulations

Lasdoit rise radioactive plaque night vision tester comparison with electroretinography and Goldmann-Weekers dark adaptometry apparatus from special tests of night blind patients

P0390 A72-24131

P0405 A72-25135

P0433 A72-26061

P0523 A72-30078

P0070 A72-15220

P0137 A72-15068

P0200 A72-17046

P0452 A72-37877

P0021 A72-11762

P0021 A72-11763

P0365 A72-31725

P0454 A72-38551

P0514 A72-42670

P0056 A72-14606

P0019 A72-11708

P0055 A72-13850

P0337 A72-30594

P0367 A72-32350

P013 A72-34982

P013 A72-39898

P056 A72-38709

P0093 A72-40580

P033 A72-10072

P0242 A72-18090

P0249 A72-19070

P0249 A72-19079

P0307 A72-20090

P0333 A72-29996

P0367 A72-32350

P054 A72-38559

P0457 A72-38928

P0194 A72-16047

P0056 A72-13936

P0106 A72-17605

P0107 A72-17720

P019 A72-19024

P0158 A72-19827

P0158 A72-19828

P0215 A72-22616

P117
Five-component cyclic model of retinal photopigment kinetics for photochemical changes corresponding to rod adaptation in cat and man in dark.

Consensual photopolar responses to light flashes recorded in full dark adaptation, noting bleaching and background effects.

Human retinal rod photopolar bleaching and regeneration measurements, tracing dark adaptation curves.

Dark adaptation studies of bleach-induced visual threshold rise and subsequent return to photopolar level.

Lamellar structure and photopolar location in bleached and unbleached rod photoreceptor membranes of dark adapted frog retinas by X-ray diffraction study.

Model to account for visual responses to light flashes of dark adapted eye, discussing perceived brightness variation with intensity.

Age dependence of changes in pupil diameter in the dark.

Localization and dynamic changes of glycogen in frog retina adapted to darkness or light.

Photopic and scotopic contributions to the human visually evoked cortical potentials.

On a long-term temporal aspect of stereoscopic depth sensation.

Component analysis of electroretinogram in dark and light adapted sheep eye, noting rod and cone receptor potentials and transient and dc responses.

Restoration time for light sensitivity in human subjects exposed to light flashes and dark adaptation.

Effects of accelerated particles and cosmic rays on light flashes in human eye.

Dark adaptation recovery of human eye after exposure to single light pulses.

Darkness:

Sleep interruption, sleep deprivation and continuous darkness effects on circadian rhythms in human performance.

DATA ACQUISITION

Computerized ECG data acquisition and transmission system for large hospitals with multiple critical care patient monitoring units, noting telephone access from outside.

Multichannel automatic data acquisition and processing in ergonomic measurements of radar controller work from ECG, EEG, EOG and respiration.

Low cost real-time computerized C 14 radioactive isotope telemetry system for monitoring human metabolism data during space missions.

Psychophysiological data acquisition with hybrid analog circuits.

Data acquisition and analysis of microspectrophotometric data in presence of noise.

Digital systems for data acquisition and storage for medical imaging instruments.

Accretion of data concerning possible deleterious effects on health of population due to small exposures to ionizing radiation at low dose rates.

Application of statistical analysis techniques for determining orientation and navigation characteristics of animals.

DATA CORRELATION

Physical training effect on subjective ratings of perceived exertion, investigating correlation with heart rate and blood lactate concentration.

QRS amplitude relation to frontal QRS axis and heart-electrode distance, using 12-lead ECG.

Central nervous plasticity and stereotypy intercorrelation in conditional reflex two dimensional decision situations.

DATA HANDLING SYSTEMS

DATA MANAGEMENT

Integration of an automated onboard data management system with a manned spacecraft environmental thermal control and life support systems.

Data management techniques and design for integrating OPI with IBMLIS for manned space flight.

DATA PROCESSING

BT DATA CORRELATION

BT DATA REDUCTION

BT DATA REPRODUCTIONS

BT DATA STORAGE

BT OPTICAL DATA PROCESSING

BT SIGNAL PROCESSING

Tissue equivalent plastic counter for radiation dose equivalent measurement in mixed radiation field, discussing data processing.

Characteristics of animals, using rabbits data.

Computers in biomedicine - Conference, University of Hawaii, January 1972.

Multichannel automatic data acquisition and processing in ergonomic measurements of radar controller work from ECG, EEG, EOG and respiration.

Time series analysis of physiologic and work study data in ATC tasks, using heart rate as strain indicator.

Sleep loss effect on reaction and movement times during information processing in step tracking task.

Data processing in isolated crab biological strain receptor formed by muscle, transducer and encoder, noting pulse frequency modulation in encoding process.

Automatic ECG recording and analysis by electronic data processing equipment, discussing methods of data acquisition and transmission for routine diagnosis and prophylactic mass examinations.

Human flexible processing accomplishment in speeded recognition task with visual stimulus dimension relevancy contingent upon other dimension stimulus values.

Predictive model for human operator performance in short term visual information processing based on psychological research to obtain decision accuracy and response time.
electrocardiograms from remote locations over switched telephone network

Application of sample quantiles to the compression of telemetric transmission and statistical processing of medical information

Digital automatic data reduction techniques for physiological data obtained in 1000-flight biomedical study

Annotated bibliographic data retrieval system on space food and nutrition

Mathematical model for adapting psychometric data in automated pilot performance evaluation

Digital systems for data acquisition and storage for medical imaging instruments

Development of system for processing of cardiac performance data from analog to digital form for direct entry into computer

Evaluation of task classification system for generalizing research findings on human performance from data base

Human performance reliability data system for documentation and retrieval of information obtained from general behavioral and machine specific studies

DATA TRANSMISSION

Methodological problems in unidimensional information transmission involving circular light identification tasks

Computerized ERG data acquisition and transmission system for large hospitals with multiple critical care patient monitoring units, noting telephone access from outside

Human behavior analysis based on nine component functional brain model, discussing information transmission mechanisms via nerve path channels

DATING

U CHRONOLOGY

U TIME MEASUREMENT

DC (CURRENT)

U DIRECT CURRENT

DC 10 AIRCRAFT

Now United trains DC-10 pilots.

DE BAYLILL AIRCRAFT

Noise environment of C-7A during ground and airborne operation

DEACCLIMATIZATION

U ACCLIMATIZATION

DEACTIVATION

Bacteriophage synergistic inactivation by beta and ionizing radiation from kinetic model describing dose rate and temperature dependences

Optimal temperature control for microbial inactivation by composite environment of heat and gamma radiation, using quadratic techniques

DEAFNESS

U AUDITORY DEFEATS

DEATH

Clinical death period and reanimation concepts, noting erroneous interpretations of irreversible histological alterations, survival attempt period and organs self reanimation potential

Tolerance and death in albino mice due to various toxic oxygen levels

Death behavior of microorganisms during heat sterilization

A-119
On a long-term temporal aspect of stereoscopic depth sensation.

On the effect of vagotomy and increased blood pressure on the occurrence of decompression sickness.

On the effect of prolonged starvation on the frequency of occurrence of decompression-induced pulmonary hemorrhage.

On interactions between gas bubbles and components of the blood.

On Roentgenologic studies of the effects of rapid decompression and hypoxia on the gall bladder in cats.

On the role of anaerobic gas exchange in prevention of decompression sickness.

On the effects of high pressures for prolonged periods on the human body and its systems, with particular reference to the cardiovascular and respiratory systems.

On the effects of high pressures on the human body and its systems, with particular reference to the cardiovascular and respiratory systems.

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Feasibility and efficiency of portable recompression chamber for treating decompression sickness

Standardized treatment of decompression sickness occurring while diving under pressure

Design of portable decompression chamber with semiclosed gas recirculation system for treating underwater divers

Ultrasonic technique for bubble detection in biological systems exhibiting decompression sickness symptoms

Effects of posture on decompression and hypoxic stress recovery induced by emergency descent of high altitude/multi-Bach transport aircraft

Pathological analysis of decompression caused lesions in nervous system

Confinement, physical deconditioning and hypoxia effects on human musculoskeletal protein by chromatographic method for quantifying urinary peptides and free amino acids

Using ethylene oxide as decontaminating agent for spacecraft flight, noting bacterial filters for air purification and wiping with disinfectants

Terminal decontamination of rooms by gaseous formaldehyde

Microbial accumulation prevention methods during spacecraft flight, noting bacterial filters for air purification and wiping with disinfectants for surface contamination reduction

Using ethylene oxide as decontaminating agent for planetary quarantine

Terminal decontamination of rooms by gaseous formaldehyde

Microbiological protection of deep space vehicles

Biological effects of unfocused laser radiation on metatarsal bone

Anaerobic glycolysis and specific gravity of red blood cells

Temperature effects on microorganism survival in deep space vacuum, using molecular sink test

Differential effects of refractive errors and receptive field organization of central and peripheral ganglion cells

Bacterial degradation of organophosphorus Anseisticide parathion

Biochemical and physiological evaluation of nourishment of subjects feeding on dehydrated products in test chamber with regenerative life support system, discussing metabolic data and hormone function

Effects of water activity on control and deterioration mechanisms of dehydrated food system

Dietary and physiological evaluation of nourishment of subjects feeding on dehydrated products in test chamber with regenerative life support system, discussing metabolic data and hormone function

Effects of water activity on control and deterioration mechanisms of dehydrated food system

Biological effects of unfocused laser radiation on DNA and RNA synthesis and cell activities in thymine dependent E. coli strain

Identification of oral hygiene, and simulated weightlessness on microbial populations in human dental plaque

Clinical observation of constant diet, minimal oral hygiene, and simulated weightlessness on microbial populations in human dental plaque

Electrical currents for controlling orofacial pain

Gamma ray absorption method for nondestructive testing

Ear densitograph for noninvasive cardiac processing of video radiographic data

Bioderivative food

Biodegradation process consisting of cooking, two freezing-thawing cycles, and then freeze drying

Defibrination

Posthypoxic thirst and relative dehydration of rats after return from hypoxia to normoxia, measuring body weight and water intake

Energetical conditions of primate biosynthesis and transhydroxylation feasibility on simplified present day templates

Energy transfer conditions of transhydroxylation reactions on primate earth leading to transphosphorylation, transacetylation and peptide synthesis

Biological phosphate origin through planetary quarantine and transdehydration feasibility on simplified present day templates

Changes in enzyme activity in small intestine of rodents deprived of drinking water and subjected to high temperatures and intense solar radiation

Differential effects of prism error and absorption on refractive field organization of central and peripheral ganglion cells

Dehydration and renal diabetes

Differential effects of prism error and absorption on refractive field organization of central and peripheral ganglion cells

Defibrination

Brain protection from loss of water during hypothermic storage

Defibrination

Brain protection from loss of water during hypothermic storage

Defibrination

Biodegradation of organophosphorus Anseisticide parathion

Biodegradation process consisting of cooking, two freezing-thawing cycles, and then freeze drying

Defibrination

Biodegradation of organophosphorus Anseisticide parathion

Biodegradation process consisting of cooking, two freezing-thawing cycles, and then freeze drying

Defibrination
DEPLOPLANTATION

Dynamic electrocardiography with analog computer
to detect, count and classify typical
ventricular depolarization complexes

Dysfunction of DNA, RNA and protein synthesis
in mitochondria and nuclei of heart muscles of rats
during adaptation to high altitude hypoxia

Comparison of the vectors of the ventricular
depolarization and repolarization of man during
imersion in a standing position

DEPOLARIZATION

U POLARIZATION

PRESSURE REDUCTION

DEPRESSORSHIP

UT SENSORY DEPRESSOR

UT SLEEP DEPRESSOR

UT WATER DEPRESSION

Space environment weightlessness induced
perceptual deprivation, considering hand-eye
coordination, visual judgments and motion
and time perception

DEPTH PERCEPTION

U SPACE PERCEPTION

DESCENT

UT PARACHUTE DESCENT

DESCENT TRAJECTORIES

Environmental effects on parachute impact injuries
at 6,000 to 10,000 feet using parabolic-apex
vested static line deployed parachute

DESSERT ADAPTATION

Natural acclimatization to work in severe heat.

New data on physiological adaptations to arid zones

DESSERTS

Probiotic thyridine phosphorylation at 65°C by
urea-phosphate mixtures in simulated desert
conditions

DESICCANTS

Development of a desiccant CO2 absorbent tailored

for shuttle application.

DESIGN OF EXPERIMENTS

U EXPERIMENTAL DESIGN

DESTRUCTION

Effects of simulated space vacuum on bacterial
cells.

DESYNCHRONIZED SLEEP

U RAPID SLEEPS MOVEMENT STATE

DEVIATION

Analysis of aircraft pilot reports on occurrence
of unreality and detachment during flight and
relationship to spatial disorientation

DETECTION

UT AIRCRAFT DETECTION

UT RADAR DETECTION

UT SIGNAL DETECTION

UT TARGET RECOGNITION

DETONATION

Effects of water activity on control and
detection mechanisms of dehydrated food

DETERMINATION

Possible diabetes mellitus in flight crews,
Canadian Air Force

Factors modifying biosynthesis of unsaturated
fatty acids, in hepatic endoplasmic reticulum

DETECTION

Clinical electrocardiography diagnostic
capability, discussing phase plane cardiograms
sensitivity to aberrations in QRS patterns

Theriovision recording IR detector/developments,
discussing application to biomedical
investigations and disease diagnostics

Thyrokinase activity determination as diagnostic
test for human myocardial infarction, comparing
to create thyrokinase activity test

Image processing of diagnostic echocardiograms by
ultrashort speed analog to digital converter
interfacing digital computer

Reliability of electroencephalography diagnostic
method from specialists

Interpretation of curve morphological features,
discussing apical and pathological record
evaluation

Picoscale blood diagnostic device for red and
white cell count, noting piston principle,
electronic operation

ECG, physical exercise and drug use in diagnosis
and aeromedical evaluation of supraventricular
arrhythmias, presenting case histories of pilots
with wandering cardiac pacemakers

Serum petidate, activity determination as enzymatic
diagnostic test for myocardial infarction

Bandsma sample comparison of computer program for
ECG diagnoses and physician's reading

Heart and circulatory system functional
diagnostics, discussing ECG, blood pressure, X
ray, pharmacocardiographical and pulmonary
examinations

Automatic ECG recording and analysis by electronic
data processing equipment, discussing methods of
data acquisition and transmission for routine
diagnosis and prophylactic mass examinations

Objective evaluation of main rheocardiogram
parameter for disturbed brain blood circulation

Frontal sinus hematoma incidence in flying
personnel and scuba divers, discussing diagnosis

A-122.
and clinical treatment

ECG diagnostics for arrhythmia assessment in
flying personnel flight fitness examination

Keratoconus / noninflammatory corneal protrusion of
cone/ diagnosis and rehabilitation in CSP
flying personnel

Serial ECG change detection and description in
myocardial infarction survivors, using computer
analysis to find best diagnostic discriminants
from multiple criteria

Diagnostic errors in draft age patients, noting
doctor, examination methods, disease type and
patient factors and psychosomatic disturbance
detection

Methods for measuring the BF oscillation frequency
in ultrasonic pulses of equipment for diagnostic
ultrasonography

Echocardiography in the diagnosis of congenital
mitral stenosis and in evaluation of the results
of mitral valvotomy.

Description of an easy and simplified test for
electrographic diagnosis of latent
asymmetry in flight personnel

Resin in differential diagnosis of hypertension.

Analysis of intracavitary electrocardiograms
through a saline bridge in the diagnosis of
Cardiac arrhythmias.

Introduction to experimental psychology including
methods in perception, learning, sociology, and
diagnosis

Dynamic sequential pattern recognition applied in
medical diagnosis

Methods for protecting medical personnel from
ionizing radiation during diagnostic and
therapeutic procedures

Clinical tandem walking test for evaluating
torsional battery test performance in detecting
vestibular problems

Application of aerospace technology to medical
equipment, and cleaning and diagnostic
procedures of earth health care systems

Clinical electrodiagnosis in prognosis of lower
motor neuron lesions

Signal and data processing technology for
diagnostic techniques in phonoangiography

Possibility of using peptidases and amylase
present in perspiration as diagnostic tools

Diagnosis of heart disease by hybrid computer from
phonoangiograms data

Development of Si(Li) and Ge(Li) detectors for
cardiac diagnosis

Improved hemodialyzer for removing selected
substances from blood by process of dialysis

EFG P-wave-like deflections caused by strong
diaphragmatic action potentials in obese woman
with fever and myalgias

Electrophysiologic investigation of diaphragm cross
contraction following spinal cord section in
cats, noting diaphragm motoneurons excitation by
breathing center pulses

Electrophysiology of rat respiratory muscles
exposed to high pressure atmosphere

Beta-adrenergic and vagal blockade altered
autonomic control effects on left ventricular
function in conscious dogs, noting heart rate,
stroke volume and end-diastolic and end-systolic
diameter of expert

Fluid mechanics of left ventricular model with
mitral and aortic valves, showing ring vortex
relation to diastole and closure

Physiological evaluation of diastole mechanisms in
rat hypertrophied myocardium as function of
heart rate, Ca ion concentrations and temperature

Coronary heart disease discriminatory factors from
comparison with healthy controls, noting
diastolic hypertensive significance

Automated constant cuff-pressure system to measure
average systolic and diastolic blood pressure in
man.

Left ventricular dynamics during handgrip.

Relationship of pulmonary artery to left
ventricular diastolic pressures in acute
myocardial infarction

Automatic system for measuring and monitoring
systolic and diastolic blood pressure in humans

Automated constant cuff pressure system to
remotely determine average systolic and
diastolic blood pressure in man

Nervous respiratory disorder in patients with
diencephalic and vegetative vascular syndromes,
discussing arterial hypoxemia development and
resulting oxygen insufficiency

Changes of the catecholamine content in the brain
of albino rats under overstrain caused by
running in a rotating cylinder

Dental plaque

Differential neurophysiological and psychological
effects of subanesthetic concentrations of
cyclopropane, diethyl ether, methoxyflurane and
ethane in conscious man

Apollo 14 food system, describing new items,
improvements in production methods, packaging
and preparation with emphasis on rehydratable
foods

Biochemical and physiological effects of Apollo
flight diet, noting no significant variations in
serum electrolytes, endocrine values, body
fluids and hematologic parameters

Protein-rich food substitute from microalgae
cultures for human nutrition, describing
experimental production, protein value
determination, special diets and food shortage
relief

Gaseous nitrogen production in humans under
steady-state conditions, relating expired
nitrogen minute volume increase after protein
consumption to possible gastrostestinal and
metabolic effects

Dietary lipid effect on platelet adhesion and
aggregation, blood coagulation and fibrinolysis
and relation to atherosclerosis and thrombosis

Blood lipid levels and dietary habits in
atherosclerotic and healthy subjects, showing
lipid and lipoprotein disturbances disturbance
increase in coronary cases

Dietary and pharmacologic treatment of
atherosclerotic hyperlipidemias from lipid-omega
balance and drug efficacy studies

A-123
DIFFUSION ANALYSES

- Menu selection for Skylab astronauts by computer
- Technique based on mixed integer programming code, using measure of pleasure lists
- Dihydroxyacetone /DHA/ as nutrient for growing rats diet, showing unsuitability of regenerated
- DHA-containing forrose mixtures for space crew diets
- Weightlessness effects on calcium and electrolyte
- Metabolism from measurements during Gemini 7 flight, using dietary control and excreta
- Collection techniques
- Rat pulmonary lipid metabolism during feeding and fasting from studies of lung lobectomy half life after C-14/palmitate and H-3/glucose injection
- Dietary regulation of fatty acid synthesis in rat liver and hepatic autotransplants.
- Relationship of sodium deprivation to 40s
- Acceleration tolerance.
- Extraction of microelements in human food rations and excreta
- Influence of potassium and synthetic sugar diets on swimming duration in rats (NASA-TP-7-14125)
- Clinical observation of constant diets, minimal oral hygiene, and simulated weightlessness on microbial populations in human dental plaque (AB-730275)

DIFFERENTIAL ANALYSES

- ANALOG COMPUTERS
- DIGITAL COMPUTERS

DIGESTIVE SYSTEM

- DIGESTIVE SYSTEM
- DIGESTIVE SYSTEM
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- DIGESTIVE SYSTEM
- DIGESTIVE SYSTEM
- DIGESTIVE SYSTEM
- DIGESTIVE SYSTEM
- DIGESTIVE SYSTEM
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>DISORDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital evoked brain potential detector using multichannel amplitude analyzers</td>
<td>performance during multiple input-output controller tasks</td>
</tr>
<tr>
<td>ECG amplifier and cardiocounter for exercise studies, using digital algorithms for heart rate</td>
<td></td>
</tr>
<tr>
<td>Digital automatic data reduction techniques used for physiological data obtained in 1000-flight</td>
<td></td>
</tr>
<tr>
<td>Digital automatic data reduction techniques for physiological data obtained in 1000-flight</td>
<td></td>
</tr>
<tr>
<td>DIGITALS</td>
<td></td>
</tr>
<tr>
<td>Arrhythmias related to coronary artery disease, discussing conduction defects, sudden death</td>
<td></td>
</tr>
<tr>
<td>Digital automatic data reduction techniques for physiological data obtained in 1000-flight</td>
<td></td>
</tr>
<tr>
<td>DIGITIS</td>
<td></td>
</tr>
<tr>
<td>Mathematical model for digit summation task search time distribution dependence on size of visual display with randomly arranged three digit numbers</td>
<td></td>
</tr>
<tr>
<td>DILUTION</td>
<td></td>
</tr>
<tr>
<td>Indicator dilution methods for ventricular volume measurements from washout curves, discussing intraventricular blood mixing uniformity</td>
<td></td>
</tr>
<tr>
<td>DIMENSIONAL ANALYSIS</td>
<td></td>
</tr>
<tr>
<td>Dimensional analysis and similarity theories application to biological organisms relationships between body size and metabolism</td>
<td></td>
</tr>
<tr>
<td>DIMENSIONAL MEASUREMENT</td>
<td></td>
</tr>
<tr>
<td>TY microscopic system for on-line measurement of cat omentum microvessels diameter relative to heart action</td>
<td></td>
</tr>
<tr>
<td>DIMENSIONLESS BERESES</td>
<td></td>
</tr>
<tr>
<td>BT RAYGLOWS RUDGER</td>
<td></td>
</tr>
<tr>
<td>Biological tissue heat transport dimensionless parameters for steady state and transient analysis of blood gases thermoregulation</td>
<td></td>
</tr>
<tr>
<td>Biological similarity theory for numerical relationships of morphologic and physiologic organization in mammals, using allometric growth equations and body weight correlations</td>
<td></td>
</tr>
<tr>
<td>DIRECTIONS</td>
<td></td>
</tr>
<tr>
<td>Effect of neurohormonal phospholipids associated with other substances on experimental intoxication by asymmetrical disatetyldihydrazine, II - Biochemical aspects of the pyridoxine-phospholipid association</td>
<td></td>
</tr>
<tr>
<td>DIODES</td>
<td></td>
</tr>
<tr>
<td>MT TUNNEL DIODES</td>
<td></td>
</tr>
<tr>
<td>DIODES</td>
<td></td>
</tr>
<tr>
<td>MT CARBON DIOXIDE</td>
<td></td>
</tr>
<tr>
<td>MT HYDROGEN PEROXIDE</td>
<td></td>
</tr>
<tr>
<td>MT QUARTZ</td>
<td></td>
</tr>
<tr>
<td>DInitOPhosphates</td>
<td></td>
</tr>
<tr>
<td>MT ADENOSINE DIPHOSPHATE (ADP)</td>
<td></td>
</tr>
<tr>
<td>DIRECT CURRENTS</td>
<td></td>
</tr>
<tr>
<td>Battery powered dc integrated circuit for temperature regulation in small experimental animals, using transistor probes and heating pads</td>
<td></td>
</tr>
<tr>
<td>Rat ventral muscular cell spontaneous activity intensified by direct current depolarization and inhibited by hyperpolarization, noting effects of calcium and sodium ions</td>
<td></td>
</tr>
<tr>
<td>DIRECT POWER GENERATORS</td>
<td></td>
</tr>
<tr>
<td>MT REGENERATIVE FUEL CELLS</td>
<td></td>
</tr>
<tr>
<td>MT THERMOELECTRIC GENERATORS</td>
<td></td>
</tr>
<tr>
<td>DIRECTURAL CONTROL</td>
<td></td>
</tr>
<tr>
<td>Mathematical models for describing pilot</td>
<td></td>
</tr>
</tbody>
</table>

A-125
DISPOSITION

DISORIENTATION

Clinical analysis of hypnosis caused changes in nervous system and effects of pharmacological procedures on hypnosis disorders

Clinical treatment of vibration induced disorders in construction workers

Techniques for eliminating disorders associated with prolonged weightlessness

DISOBEDIENCE

Involuntary head movement and helmet motion displacements during human centrifuge runs to 6 Gx from photographic recordings

Positive acceleration force-produced displacements of helmet-attached reticle in front of the left eye

Carotid displacement pulse first time derivative recording as noninvasive technique for heart function assessment

Relative position of the rib within the chest and its determination on living subjects with the aid of a computer program

General index for the assessment of cardiac function

DISPLAY DEVICES

On-line analog display system for cardiovascular functions and beat-by-beat cardiac output derived from single aortic blood flow measurements

Electrocardiographic production of shifting grid pattern displays featuring variable spatial frequency, temporal frequency and modulation depth

Pilot warning systems for visual midair collision avoidance, noting reaction to imminent threats, scanning patterns and display sector size effects

Subject index
Stimulus complexity and the EEG - Differential effects of the number and the variety of display elements.

Obedience to rotation-indicating visual displays as a function of confidence in the displays.

Recent research applicable to the design of electronic displays.

Proximity and direction of arrangement in numeric displays.

Error search reading tasks to investigate practical applicability of blinking display coloring techniques, noting reading speed reduction compared to steady display.

Temporal and spatial characteristics of selective encoding from visual displays.

Displays and controls; Proceedings of the Advanced Study Institute, Merchtalgen, feast Germany, March 15-26, 1971.

Display device layout based on human operator manual control information requirements, consideration, discussing functional categories, motion controllability, indicators relation and integration.

Prediction role in execution of manual control with display device to aid human operator adaptation.

The airborne visual simulation as an electronic display.

Problems arising in the transfer of training from simulated to real control systems.

Manual workload determination by control characteristics, control-display relationships, demands for dexterity and sensitivity and speed and accuracy requirements.

Man machine system functions and display and control, role descriptions by flow diagrams, giving examples of keying and task in guided weapon system.

The design of a nonlinear multi-parameter model for the human operator.

A new concept of flight displays compatible with digital airborne computers.

A psychologist's laboratory approach to a human factors problem.

Results of the investigation of different extrapolation displays.

The influence of a prediction display on the human transfer characteristic.

Human operator dynamics for aural compensatory tracking.

Interactions of signal and background variables in visual processing.

Mathematical model for digit summation task search time distribution dependence on size of visual display with randomly arranged digits numbers.

Computerized analysis of display requirements for aircraft longitudinal control in landing approach [NASA-CR-1952].

Effects on threshold luminous intensity and display visibility in aircraft cockpits [NASA-LIB-TANS-1545].

Psychological tests for evaluation of animated visual displays for acoustic signal recognition [AD-72056].

Comparison of human performance in reading aircraft instrument display systems consisting of vertical tape and vertical light emitting diode devices [AD-730316].

Development of adaptive displays for assisting human operator in detecting, diagnosing, and adapting to changes in systems or environment [AD-729855].

Human identification of threat symbols on simulated ECM display scopes while performing compensatory tracking tasks [AD-731186].

Distribution of visual aids and display devices in front of aircraft pilots [AD-731185].

Computer graphics for training-device instructor console applications [AD-731735].

Effects of different alcohol dosages on instrument display illumination on pilot tracking performance during vestibular stimulation [AD-732448].

Visual displays of radar, and other weapon system devices providing signals varying in brightness discrimination thresholds [AD-731376].

Time history display effects on auditory and visual perception [AD-733092].

Six display formats used by three instrument-rated pilots to regulate against random disturbances for precision tracking [AD-731580].

Applying engineering psychology to circular-scanning radar, and display devices [JPPS-55522].

Human perceptual characteristic data relating to individual electronic flight display design [AD-731580].

Colors for elements of multicolored aircraft display to insure minimum number of instrument reading errors [AD-731580].

Integrated cockpit research procedure used to identify control and display requirements for advanced aircraft [AD-731580].

Prediction and measurement of multichannel pilot performance, and system design implications for pilot capability and limitations [AD-731580].

Assessment of design, aircraft cockpit layout, and display/control system [AD-731580].

Remote sleep monitoring display console [NASA-CR-115573].

Teleoperator technology and performance evaluation of general purpose anthropomorphic manipulator with controllers and displays [NASA-CR-123781].

Effects of color, spatial, and conventional visual cues on human performance [AD-731580].

Instrumentation requirements for regenerative life support system for providing indications of malfunctions [NASA-CR-112105].

Simulator evaluation of airborne displays used as traffic situation monitors in high density terminal airspace to determine effect on aircraft pilot performance [FAR-ER-72-3].

Eye-safe levels for operating illuminated imaging systems in terms of maximum permissible corneal irradiance [AD-744656].

DISPLAY SYSTEMS: U DISPLAY DEVICES

DEWAR, WASTE DISPOSAL

DISSIPATION: NT ENERGY DISSIPATION

A-127
Dissociation

Atmospheric pressure effects on neural function in divers. 

Dissolution

Dynamics of dissolution of gas bubbles or pockets in tissues.

Distance Measuring Equipment

Distance perception

Space perception

Distillation Equipment

Compressibility-distillation unit design and development for integrated water and waste management system onboard spacecraft, describing reliability and performance tests. [NASP PAPER 72-ENAV-1]

Distribution (Property)

Flow distribution

Dye-hand coordination modifiable parameters under optical distortion conditions, deriving quadratic equation for hand response adaptation.

Distribution (Random)

Dissolution function

Experimental determination of the distribution rule for the time of failure-free operation in the tracking mode with pursuit.

Group dynamics and alternative distribution of rewards. [AD-76-1776]

Distribution Models

Variance (Statistics)

District of Columbia

Mobile monitoring of man made radio frequency and microwave radiation levels in Washington, D.C. area. [FM-206216]

Disulfides

Synthesis of bicyclic disulfides for conversion into sterically rigid cysteamine derivatives. [AD-73-2509]

Diureses

Isolation stress effect on micturition circadian rhythm and diuresis occurrence in unrestrained chimpanzees under entrained and free running conditions. [AD-73-4686]

Renal clearance studies of left atrial distention effect in dog, indicating anti-diuretic hormone inhibition mechanism of diuresis. [AD-72-2016]

Water immersion tests to study body fluid balance disturbances during weightlessness, observing diuretic reflex control of blood volume. [AD-72-13551]

Vasopressin/anti-diuretic hormone/ role in central vascular volume and fluid balance maintenance during continuous positive pressure breathing in dogs. [AD-72-15917]

Diurnal Rhythms

Circadian Rhythms

Diurnal Variations

Twelve hour light-dark cycle phase shift effects on monkey feeding behavior and serial task performance. [AD-72-11703]

Saccadic eye movements significance for jet pilots, noting saccadic rate diurnal fluctuations and alcohol and tranquilizer negative effects.

Subject Index

Diurnal and beat-to-beat variation factors in vectorcardiograms, noting respiratory movements, electrodermal location shift, skin-electrodermal impedance and heart electrical center mobility. [AD-72-21849]

Human performance dependence on time of day, discussing circadian and physiological rhythm relation and environmental changes effects. [AD-72-26777]

Sleep deprivation effects relation to work duration, time of day, circadian rhythm, memory function, task performance, environmental factors, drug use and age. [AD-72-26778]

Human functional level performance characteristics, noting relationship between spontaneous rhythm diurnal variations in psychic and physical performance. [AD-72-26791]

Diurnal changes in gas exchange and metabolic rate under normal and inverted day-night schedule conditions, studying human adaptation to shifted schedule. [AD-72-29318]

Sleep deprivation effects on diurnal urine potassium excretion, showing individual circadian rhythm variations. [AD-72-29320]

Meteorological-astronomical diurnal and seasonal environmental rhythm simulation for psychological stress alleviation in long term space missions. [AD-72-30567]

Psychological tests for diurnal variations of human visual discrimination threshold by varying test object illumination level. [AD-72-39331]

Influence of simulated sonic booms introduced during sleep on complex mental, monitoring, and pattern discrimination tasks. [FASA-88-72-19]

Diving (Underwater)

Human mental and psychomotor performance measurements in compressed oxygen-helium atmosphere pressure chamber for dive between 100 and 1500 feet. [AD-72-11701]

Diving operations medical aspects significance for manned planetary surface exploration in high density atmospheres, considering protective clothing, breathing apparatus and gas mixtures, etc. [AD-72-27415]

Biotelemetry system for EKG monitoring of free swimming diver at 15 meter depth, discussing power requirements, antenna design and signal attenuation. [AD-72-27478]

Frontal lobe hemis incidence in flying personnel and scuba divers, discussing diagnosis and clinical treatment. [AD-72-28275]

Bradycardia diving reflex to apneic face immersion related to physical exercise. [AD-72-35964]

Case report on dive decompression induced maxillary sinus barotrauma due to sinus pressure buildup caused by ostium blockage. [AD-72-82497]

Accclimatization ability of divers analyzed to determine effect of cold tolerance on work capacity. [AD-72-76753]

Noise effects of sensorimotor hearing loss to divers and hyperbaric chamber personnel. [AD-72-10099]

Effects of oxygen atmosphere in high pressure diving chamber simulation on human body. [AD-72-10106]

Analysis of diver performance on communication dependent tasks using closed and open cycle breathing apparatus. [AD-72-26225]
Development and characteristics of instruments to monitor physiological reactions of deep sea divers
(AD-728065)

Anthropometric data for Navy divers collected and analyzed for mean, standard deviation, skewness, and kurtosis
(AD-729646)

Physiological and psychological tests to determine effects of isolation during long periods in underwater habitats
(NAVY-CS-120896)

Development of diving tables and procedures for swimmer delivery vehicles and various underwater breathing apparatus types
(AD-728750)

Performance tests of underwater breathing apparatus at simulated depth of 600 feet during seven day saturation dive
(AD-729665)

Phosphofructokinase activity and adenine nucleotide levels in blood of swine pigs exposed to 15 percent CO₂ in 21 percent O₂, balance N₂ for periods of time up to one week
(AD-731984)

Measurement of human subject heart rate during dives with scuba equipment to determine effects of temperature
(AD-731675)

Estimating absolute distance underwater, and improvement of visual judgement accuracy by training
(AD-734125)

Optimum underwater work measurement techniques
(AD-734014)

Lactate-remote and redox state responses of blood and tissue in chronic hypercapnia
(AD-734120)

Plasma creatine phosphokinase response to hypercapnia
(AD-734126)

Development and tests of sensitive methodologies for measuring sensory and motor impairment in hyperbaric environments
(AD-735117)

Analysis of behavior of aerosols in high pressure helium-oxygen environment and removal of harmful aerosols from environment
(AD-735960)

Aquatic swimmers, using air and narcotic mixtures of argon and helium for breathing
(NASA-TT-P-14260)

occurrences of vertigo in hyperbaric atmospheres and among underwater divers with theoretical explanations of etiology involved
(AD-734012)

Visual evoked response as measure of nitrogen narcosis in divers breathing compressed air from 0 to 250 feet
(AD-737208)

Diver performance in manual and mental tasks at 65 feet
(AD-737376)

Standardized treatment of decompression sickness occurring while diving under pressure
(AD-737700)

Research in deep sea diving and lighting triggered by man
(AD-737708)

Development of deep sea diving technology
(AD-737201)

Design of gas mixture breathing systems for underwater diver equipment
(AD-737202)

Design of deep sea heavy duty diving equipment for salvage divers
(AD-737203)

Performance of closed circuit mixed gas underwater breathing apparatus
(AD-737204)

Diving suit and heat element combinations for thermal protection of underwater divers
(AD-737205)

Design and performance of prototype portable heat source for providing thermal insulation in diving suits
(AD-737206)

History, organization, and accomplishments of Project Teekite with emphasis on psychological reactions of aquanauts during lengthy underwater
Doppler cardiomtery determination of human cardiovascular velocities in patients with heart diseases, discussing impaired left ventricular function detection

p0098 A72-16155

Instantaneous and continuous blood flow velocity measurements by Doppler ultrasonic flowmeter using transcutaneous and implanted probes

p0278 A72-26778

Medical monitoring system for enclosed men, using ultrasonic Doppler-cardiography for heart rate determination

p0336 A72-30384

Blood vessel flow velocity measurement with ultrasonic Doppler technique

p0137 A72-15073

Doppler discrimination in high background noise of rotary winged aircraft

p0314 A72-21056

DORSAL VEGETATION

U VEGETATION

DORSAL SECTIONS

High threshold afferents role in dorsal surface potential formation in cat spinal cord

p0329 A72-29327

A possible anatomical basis for descending control of impulse transmission through the dorsal horn.

p0493 A72-40578

DOSE

RT RADIATION DOSE

Apparatus for programmed oral administration of drugs to large primates in altered environments.

p0028 A72-10921

Biological effects of daily low concentration somnothermhydrazine exposure on dogs, monkeys, rats, and mice

[A72-727526]
p0035 A72-10083

Sequential search of optimal dosage for biomedical problem

[A72-745326]
p0570 A72-33094

DOSE

U DOSE

DOSIMETERS

POLYCARBONATE DOSIMETERS (DOSSIMETERS)

Poly carbonate foils as visual solid detector in high energy radiation dosimetry

p0026 A72-12066

Cosmic radiation effects in Concord prototype cabin, using photographic dosimeters for neutron dose measurement and nuclear emissions for all charged particles recorded

p0151 A72-19241

New cancer therapy treatment techniques using space dosimetric concepts.

p0053 A72-45112

Solar and cosmic radiation monitoring for Forms of flight

p0075 A72-11995

Use of dosimeters in biological and clinical procedures

[AD-3510-18]
p0190 A72-16010

High Z particle measurements by polycarbonate plastic dosimeter on Apollo astronauts

p0207 A72-17621

Energy loss fluctuations in dosimetric interpretation of radiation absorption in biological systems

p0207 A72-17622

Development of microndosimeter to determine energy deposition in small tissue region during exposure to space radiation

p0209 A72-17656

Paired miniature ionization chambers used for research reactor dosimetry measurements

[AD-736116]
p0035 A72-22090

Active dosimetry for protection and control of cosmic rays in supersonic aircraft

p0431 A72-26047

Passive dosimetry for measuring cosmic radiation dosage and its effects during manned space flight

[A72-726048]
p0431 A72-26048

Passive dosimetric interpretation of cosmic radiation dose rate onboard French prototype of Concord 001 supersonic transport aircraft

p0432 A72-26052

Dosimetric techniques for calculating microwave energy absorption in animal tissue

[A72-7280233]
p0533 A72-31109

SUBJECT INDEX

Tissue equivalent human phantoms used to measure radiation dose rate of prototypic plutonium circulatory support heat sources

[AD-51-0124]
p0564 A72-32123

DOUGLAS MILITARY AIRCRAFT

U MILITARY AIRCRAFT

DORNO

U DOPPLER EFFECT

DRAG

Hydrodynamic wake, drag, and vortex formation behind fish and dolphins

[A72-55143]
p0260 A72-18067

Low hydrodynamic drag of fish and dolphins related to hydrodynamic pressure rather than water velocity changes

p0260 A72-18068

Vortex formation and vortex-induced resistance in fish wakes

p0240 A72-18069

EFFECT

U DRAG

DRENS

Physiology of sleep phases and dreams, discussing data on highly organized and interacting neurophysiological mechanisms exhibiting alternating forms of brain biologic activity

p0181 A72-21838

DEEP REN

Human visual system multiple channels sensitivity to patterns at low luminance or high drift rates, noting retinal ganglion cells selective sensitivity

p0105 A72-17902

DREAME

Calorimetric measurements of human body temperature and of hot saline solution drinking effects on sweating rate

p0223 A72-23440

Calorimetric study of sweating man response to drinking hot saline solution as function of temperature, volume and salinity of ingested liquid

p0223 A72-23441

DROGERS

U TOWED BODIES

DROPS EQUIPMENT

RT TARGET DROPS EQUIPMENT

DROPS VEHICLES

RT TARGET DROPS VEHICLES

DROPSIZE

Concave drops oxidoreductases and stability in primitive prebiological systems, using polypehsal oxydase-carbohydrate-histone-aminoen

p0662 A72-16784

DROSOPHILA

Phase resetting behavior of circadian rhythm of pupal ecyon in fruitfly populations

p0156 A72-19529

Phase shifting effect of light on circadian rhythm and photoreceptive pigment location in Drosophila in postpupation stages

p0157 A72-19536

Edelman's hormonal control of Drosophila circadian rhythms and synchronizing mechanisms, discussing light stimulation and neurohormonal secretion

p0157 A72-19537

Virtuoso particles in salivary gland, muscles and serous of normal and gamma irradiated Drosophila melanogaster, showing age dependent infection

p0176 A72-21190

Natural aging and radiotroin-induced life shortening in Drosophila melanogaster

p0655 A72-45279

Sales of Drosophila melanogaster treated with 250 KY X rays for determination of gynectomy mutations induced in germ cell cycle

[AD-350-3839-7]
p0082 A72-12027

Radiation effects in Drosophila due to space environment

[AD-731160]
p0302 A72-20051

Toxicogenetic and genetic effects in Drosophila caused by space environment

[AD-731159]
p0302 A72-20052

Natural ionizing radiation effects on multiplication of unicellular organisms and Drosophila melanogaster development

p1057 A72-19537
DYNAMIC STABILITY

[DYNAMIC PROPERTIES]

[AIAA PAPER 74-1940] p0096 A72-15947

Pulmonary oxygen transport dynamic model representing lung gas-side alveolar and alveolar regions and blood-side capillary bed p0325 A72-28996

Hill model for myocardium activity, taking into account contractile state variations and characteristic force-velocity curve p0368 A72-32492

Two-axis system as human body dynamic model in ballistocardiography, outlining transfer function parameter computation procedure p0423 A72-36039

Behavior analysis of mechanical model of systemic circuit of human cardiovascular system (AD-735681) p0479 A72-20119

Biodynamic models used as simulation technique in design of Air Force emergency escape systems (AD-70439) p0487 A72-29100

Biodynamic modeling of mechanical properties of skin and soft tissues (AD-740445) p0525 A72-30092

DYNAMIC PROPERTIES

DYNAMIC CHARACTERISTICS

[NT TRANSIENT RESPONSE]

Modified Van der Pol wave motion oscillator model for prediction of aortic dynamic response to negative g impact accelerations p0292 A72-20271

Aircraft crash landing induced acceleration effects on seated occupants, discussing energy absorber system dynamic response characteristics for injury protective devices p0369 A72-32603

Chamois leather mechanical response, comparing stress relaxation and frequency response characteristics to human skin for applications in anthropometric dummy construction p0370 A72-32606

Response of a seat-passenger system to impulsive loading. p0516 A72-62766

Theoretical mechanics for expressing kinematics of human impact acceleration, using two coordinate systems p0257 A72-19132

Biodynamic models of human response to various environmental forces p0257 A72-19132


Indirect measurement of primate vestibular system function through analysis of vestibulo-ocular reflex response to various input stimuli (AD-734555) p0315 A72-21065

Measuring describing behaviors by using cross power spectral density of pilot output and error (U.S.A.F.-TW-167) p0390 A72-24135

Propagation of longitudinal elastic waves along spinal column (AD-700671) p0528 A72-30106

DYNAMIC STABILITY

[NT COUPLING STABILITY]

DYNAMIC TESTS

Dynamic deceleration anthropomorphic dummy tests of general aviation occupant lap belt/shoulder harness restraint systems [AED PAPERS 703295] p0266 A72-25588

Static and dynamic tests of human tracking efficiency after alcohol ingestion (AD-729679) p0144 A72-15111

Helrets for skull protection against buffeting and crush injuries (ARC-CP-1202) p0486 A72-29091

SUBJECT INDEX

vessels of isolated rabbit ear as function of vascular tone p0068 A72-15124

Various work-rest cycles and environmental temperature effects on body temperature, determining external auditory canal and core temperature relationship p0171 A72-20806

Ear nose body temperature measurement relation to radiant heating of scalp and upper face p0299 A72-20333

Thermal relationship between tympanic membrane and hypothalamus in conscious cat and monkey. p0408 A72-36304

The physiology of hearing. I - The middle and the inner ear p0517 A72-42785

Susceptibility of chinchilla ear to damage from impulse noise (AD-726333) p0337 A72-10098

Grounding of flight crew personnel due to nasal and aural disorders p0126 A72-14106

Nasal and aural disorders and flight fitness in German armed forces p0126 A72-14107

Effect of noise and vibration on hearing and worker ear structures [NASA PP-15452] p0560 A72-32094

HAR PRESSURE TEST

Simulated sonic boom effect on tracking performance and autonomic response, noting heart rates, skin conductance and peripheral reflex p0109 A72-17868

HAR PROTECTORS

Earplugs effect on passenger speech reception and intelligibility in rotary wing aircraft, noting protection against noise annoyance, fatigue and deafening p0015 A72-11294

Flight helmet optimal fitting technique, using automatic recording audiometer and noise source for acoustic leakage detection p064 A72-16873

Aircraft noise protective earplug design, employing perforated and slit modifications for additional protection without tympanic membrane pressure excess risk p0164 A72-20187

USAF V-51R noise protector earplugs modification to allow for pressure equalization during aircraft climb and descent p0293 A72-28276

Earplugs effectiveness for narrow band white noise real-ear attenuation and wearability p0373 A72-33325

Attenuation, effectiveness, and wearability of ear protection devices (AD-731182) p0145 A72-15119

Tests to determine sound attenuation achieved by several Air Force ear protector devices (AD-731123) p0195 A72-16054

Ambient noise measurement and speech reception levels associated with T-111 T flight preparation area to find noise attenuation features of ear protection devices (AD-746828) p0569 A72-33085

HARDWARE

Aircraft noise protective earplug design, employing perforated and slit modifications for additional protection without tympanic membrane pressure excess risk p0164 A72-20187

Hypogenic and eardrum evoked auditory potentials and cortical responses to 0.2 millisecond white noise acoustic stimuli p0457 A72-38932

Human eardrum rupture and hearing loss injuries from nuclear explosions (AD-737643) p0400 A72-27092

HARDWARE

Effects of sonar headset echo ranging on hearing effects in sonar technicians (AD-737207) p0001 A72-25113

EARTH ATMOSPHERE

[NT LOWER ATMOSPHERE]

[NT RADIATION BELTS]

Planetary atmospheres composition diversity, discussing evolution of Mars, Venus, earth and
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>EFFECTIVENESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jupiter from primitive solar nebula</td>
<td>p0168 A72-22012</td>
</tr>
<tr>
<td>Russian papers on solar activity effects on earth atmosphere and biosphere covering climate, vegetation, animals and man</td>
<td>p0289 A72-28206</td>
</tr>
<tr>
<td>Visual fields of luminous objects in earth atmosphere</td>
<td>p0535 A72-31124</td>
</tr>
<tr>
<td>EARTH CREST</td>
<td></td>
</tr>
<tr>
<td>Microorganism effects on oxygen and compounds cycles, leading to changes in oxygen distribution in earth crust, hydrosphere, atmosphere and biomass</td>
<td>p0224 A72-23592</td>
</tr>
<tr>
<td>EARTH HYDROSphere</td>
<td></td>
</tr>
<tr>
<td>Terrestrial biosphere back contamination from outer space organisms, discussing microbiologic control and prevention requirements</td>
<td>p0011 A72-10825</td>
</tr>
<tr>
<td>Biochemical functions of organisms in evolution of biosphere, discussing redox reactions, elementary compositions and metal compounds role in photosynthesis</td>
<td>p0064 A72-14796</td>
</tr>
<tr>
<td>Soviet book on gravitational effects on animal evolution covering land and aqueous conditions adaptation and weightlessness in space</td>
<td>p1099 A72-17818</td>
</tr>
<tr>
<td>Russian papers on solar activity effects on earth atmosphere and biosphere covering climate, vegetation, animals and man</td>
<td>p0289 A72-28206</td>
</tr>
<tr>
<td>Solar activity effects on biospheric processes for biological and physicochemical systems in unsteady state, considering maximum effects on man at certain electromagnetic wave frequencies</td>
<td>p0289 A72-28211</td>
</tr>
<tr>
<td>Solar activity effects on biospheric processes, discussing radiation-induced molecular activation mechanisms in water and biological plasma calcium ion concentration changes</td>
<td>p0289 A72-28213</td>
</tr>
<tr>
<td>EARTH RESOURCES</td>
<td></td>
</tr>
<tr>
<td>NT DESERTS</td>
<td></td>
</tr>
<tr>
<td>NT GRAY (FOOD)</td>
<td></td>
</tr>
<tr>
<td>NT GRANITE</td>
<td></td>
</tr>
<tr>
<td>NT LAVA</td>
<td></td>
</tr>
<tr>
<td>NT VEGETATION</td>
<td></td>
</tr>
<tr>
<td>EARTH SATELLITES</td>
<td></td>
</tr>
<tr>
<td>NT BIONASSE SATELLITES</td>
<td></td>
</tr>
<tr>
<td>NT COSMOS SATELLITES</td>
<td></td>
</tr>
<tr>
<td>EATING</td>
<td></td>
</tr>
<tr>
<td>Twelve hour light–dark–dark cycle phase shift effects and hunger feeding behavior and serial task performance</td>
<td>p0019 A72-11703</td>
</tr>
<tr>
<td>ECOLOGY</td>
<td></td>
</tr>
<tr>
<td>NT COASTAL ECOLOGY</td>
<td></td>
</tr>
<tr>
<td>Microbial survivability in deep space environmental simulation experiments, describing aerospace ecology and parasitic avoidance</td>
<td>p0011 A72-10823</td>
</tr>
<tr>
<td>Ecosyenesis of volcanic island of Surtsey after 1967 lava eruption, discussing terrestrial and marine littoral and sublittoral bion</td>
<td>p0068 A72-14916</td>
</tr>
<tr>
<td>Biotlemetry applications in medicine, animal experiments and ecology, including echocardiograms, internal bleeding detection, fetal monitoring, animal brain implantsations, animal movement tracking, etc</td>
<td>p0160 A72-19916</td>
</tr>
<tr>
<td>Cellular evolution investigation using molecular biology, microbial physiology and ecology</td>
<td>p0184 A72-22011</td>
</tr>
<tr>
<td>Space flight ecology and physiology, discussing atmospheric temperatures and radiation, biological effects of acceleration, deceleration and weightlessness and physiological stresses</td>
<td>p0267 A72-26018</td>
</tr>
<tr>
<td>Characteristics of conditioned reflexes to an ecologically adequate stimulus in hens</td>
<td>p0586 A72-44080</td>
</tr>
<tr>
<td>Ecology of biting insects, birds, and mammals with their associated pathogens</td>
<td>p0944 A72-11008</td>
</tr>
<tr>
<td>Environment pollution control and dialectic materialism</td>
<td>p0197 A72-16974</td>
</tr>
<tr>
<td>Biostatistical procedures for analyzing ecological and environmental problems</td>
<td>p0198 A72-17037</td>
</tr>
<tr>
<td>Ecology and thermal activation of microorganisms in and on interplanetary spacecrafts</td>
<td>p0239 A72-18064</td>
</tr>
<tr>
<td>Effects of atmospheric distribution of plutonium on ecological systems of desert areas</td>
<td>p0354 A72-22101</td>
</tr>
<tr>
<td>Biosynthesis of screw worm breeding ecology</td>
<td>p0468 A72-28045</td>
</tr>
<tr>
<td>ECOCOLOGICAL FACTORS</td>
<td></td>
</tr>
<tr>
<td>Development trends in airborne man machine flight control, discussing optimal division between human pilot and machine in relation to total system performance and economic factors</td>
<td>p0217 A72-22781</td>
</tr>
<tr>
<td>Flight crew training programs cost and quality, emphasizing safety and flight simulator application</td>
<td>p0278 A72-26998</td>
</tr>
<tr>
<td>EDENA</td>
<td></td>
</tr>
<tr>
<td>Hemodynamics, pulmonary gas exchange and circulatory responses to high altitude in subjects with previous history of high altitude pulmonary edema</td>
<td>p0116 A72-11422</td>
</tr>
<tr>
<td>Hyperbaric oxygen exposure effect on cardiovascular system in rats, discussing pulmonary edema relation to hypertensive left ventricular failure</td>
<td>p0163 A72-20162</td>
</tr>
<tr>
<td>Thyroid gland iodine concentrations, blood proteins and morphological changes in embryos with acute hypoxic hypoxia and pulmonary edema</td>
<td>p0169 A72-20620</td>
</tr>
<tr>
<td>EDUCATION</td>
<td></td>
</tr>
<tr>
<td>NT ASTRONAUT TRAINING</td>
<td></td>
</tr>
<tr>
<td>NT FLIGHT TRAINING</td>
<td></td>
</tr>
<tr>
<td>NT PILOT TRAINING</td>
<td></td>
</tr>
<tr>
<td>NT SPACE FLIGHT TRAINING</td>
<td></td>
</tr>
<tr>
<td>Education and training of personnel for photo interpretation, discussing psychological, physiological and methodological aspects of aerial photointerpretation</td>
<td>p0221 A72-23989</td>
</tr>
<tr>
<td>Introduction to experimental psychology including methods in perception, learning, sociology, and diagnostics</td>
<td>p0231 A72-23989</td>
</tr>
<tr>
<td>Teaching and training innovations and technological improvements for augmenting human cognition</td>
<td>p0039 A72-10108</td>
</tr>
<tr>
<td>Perceived noise level correction for background noise effects based on frequency band SSB</td>
<td>p0041 A72-10124</td>
</tr>
<tr>
<td>Development and evaluation of C-130 aircrew training program based on systems approach</td>
<td>p0048 A72-12064</td>
</tr>
<tr>
<td>Development of concepts to improve selection and training of apprentices in aviation work</td>
<td>p0143 A72-15109</td>
</tr>
<tr>
<td>Training in identification of sound characteristics in sonar classification task</td>
<td>p0151 A72-20117</td>
</tr>
<tr>
<td>EEG (ELECTROENCEPHALOGRAMS)</td>
<td></td>
</tr>
<tr>
<td>EFFECTIVE PERCEIVED NOISE LEVELS</td>
<td></td>
</tr>
<tr>
<td>Perceived noise level correction for background noise effects based on frequency band SSB</td>
<td>p0161 A72-20170</td>
</tr>
<tr>
<td>Mark VII ear performance calculation procedure for perceived loudness or nonlinearity levels relation to sound pressure, using experimental frequency weighting contours</td>
<td>p0182 A72-21895</td>
</tr>
<tr>
<td>EFFECTIVENESS</td>
<td></td>
</tr>
<tr>
<td>NT SISTER EFFECTIVENESS</td>
<td></td>
</tr>
<tr>
<td>Stochastic models of human performance effectiveness functions reliability and correctness from error data generated by tracking and vigilance tasks</td>
<td>p0229 A72-24001</td>
</tr>
</tbody>
</table>
**EFFEKTIVE NERVOUS SYSTEMS**

Discharge patterns in motor nerve fibers during human voluntary muscle contractions ... 

- Spinal reflexes through electric stimulation of gastrocnemius and soleus human leg muscles, attributing increased tendon reflex amplitudes to gamma motor neurons hyperactivation

- Short and long term mental and physical work effects on central nervous system and motor apparatus in young people

- Bioelectric activity study of cat and dog cerebral intercentral relations during various motor activities and poses

- Human arm muscle motor neuron reflex response to rectangular pulse excitation of ulnar nerve

- Cat and rabbit middle ear muscles contraction by electric stimulation of motor nerves, noting sound transmission reduction

- Cat middle ear muscles motor units twitch tension and contraction time in response to motor neuron threshold stimulation

- Dynamic orthosynaptic control of cardiovascular system, studying efferent element link between autonomic vasomotor and cardiac centers and effector cells

- Energetic motor activity rule hypothesis for physiological mechanisms of certain ontogenesis system, studying efferent element link between autonomic vasomotor and cardiac centers and effector cells

- Functional organization of monkey cortical efferent zones in distal forelimb muscle control from intracortical microstimulation study, showing stimulation thresholds distribution

- Peripheral efferent input to monkey cortical efferent zones of distal forelimb muscle control, using single microelectrode for intracortical stimulation and cellular discharge recording

- Vasomotor efferent effects on rabbit, lamb posterior lobe blood content in response to electrical stimulation of vagus nerve peripheral ends

- Different vestibular activity in response to horizontal plane rotary stimulation in frog, showing efferent relations between both ears

- Electrosympathetic and myogenic responses in phasic stretch reflex under prestrain conditions as index of fast motor activity level in normal humans

- Neural mechanisms of muscular motor activity control, analyzing cerebrospinal-neuron connections, spinal potentials, monosynaptic responses and depolarization

- Human spinal segment functional state before voluntary movement during water immersion, using R-reflex for spinal cord motor neuron excitability evaluation

- Human and animal central nervous system repair processes for brain damage caused motor function disturbances

- Multilevel motion control

- Servo action in human voluntary movement

- Russian book - Mechanisms of descending control of spinal cord activities

- Morphological changes in spinal cord neurons of animals due to the decreased intensity of supraspinal stimulation

- Synaptic suprasegmental control mechanisms of spinal cord motor neurons

---

**SUBJECT INDEX**

- Influence of a preceding afferent stimulation on the pyramidal activation of spinal motor neurons

- Role of pyramidal and extrapyramidal components of cortically-induced afferent stimuli in the mechanism of cortical motor activity coordination

- Synchronization in the work of motor neurons during arbitrary motor activity of various types

- Role of efferent influences of temporalo-thalamocerebellar cerebral structures in pre-adjustment alterations of spinal motor neuron excitability

- Role of the hypothalamus and limbic system in the regulation of the motor and secretary functions of the digestive apparatus

- Cortical metabolisms regulation and efferent systems of the adaptation process

- Effect of afferent and efferent connections in the formation and reproduction of trace processes in man

- Patterns of spontaneous and reflex-induced activity in phrenic and intercostal motorzones.

- Effects of physical exercise on spinal reflectivity in man

- Respiration control mechanism ensuring adaptation to postural and movement changes, preparing maintenance in tissues, considering brain stem location

- Mathematical models for analyzing sequential and continuous motor behavior in humans

- Development and tests of sensitive methodologies for measuring sensory and motor impairment in hypergravity environments

- EEG as an indicator of sensory and motor response in man

- Development and tests of sensitive methodologies for measuring sensory and motor impairment in hypergravity environments

- Ejection injuries from O.S. Davy aircraft, human ejection simulation by human pilot studies

- Effects of combined G-G-simulation and hypergravity on eggs of the nematode, Ascaris suum

- [DFVLS-30662] D 226-22225 The influence of climostat rotation on the fertilized amphibian egg

- [ASB-34567] D 226-22365 Insar gas effects on embryonic development

- Weightlessness effect on fertilized frog egg growth

- Subgravity effects on sea, archin egg fertilization and development

- Effects of weightlessness on fertilized eggs of grass frog, Rana pipiens

---

**EJECTION**

- Performance tests of protective clothing to determine effectiveness against air blast during high speed ejection

**EJECTION INJURIES**

- Human ejection vertebral injury data in aircraft accidents by cross reference to final medical diagnosis, considering costs and prevention for seat systems

- Aircraft ejection simulation by human thoroaco-lumbar spine flexion dynamic model, using strength of materials theory and shear effects for curved elastic beam

- [ASB-1594] D 226-21577 Seat cushion evaluation for behavior during helicopter crash or aircraft ejection and spinal injury probability

- Ejection injuries from U.S. Navy aircraft, discussing statistical distribution of vertebral, shoulder, arm/hand, knee, leg, head

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A-134
and face injuries


Analysis of aerodynamic forces causing distortion of limbs and flailing of body extremities following ejection seat bailout at high speed [AD-731195] N72-15121

Effects of G forces on injuries during ejection/extension escape in USAF [AD-729-2D273] N72-19144

Human tolerance and physiological changes caused by acceleration and ejection stresses

Radiological observations of spinal injuries to pilots caused by sudden ejection [AD-729-2D273] N72-19146

Clinical observation of vertebral injuries caused by vertical acceleration of spine [NASA-CR-116452] N72-2D2077

Impact of angular acceleration on human body under emergency conditions-aircraft ejection [NASA-FR-7-18561] N561 N72-2D100

EJECTION SEATS

Dissipative suspensions impact energy absorbent properties, considering application to ejection seat cushions for occupant acceleration attenuation

Model of human subject and ejection seat used to calculate aerodynamic and dynamic forces, deflections, and trajectories for zero speed and high speed ejections [AD-730907] N72-19137

Analysis of aerodynamic forces causing distortion of limbs and flailing of body extremities following ejection seat bailout at high speed [AD-731195] N72-15121

Energy absorption and safety properties of dissipative suspension systems used in ejection seat cushion materials [AD-730423] N72-19181

Biodynamic modelling of aircraft ejection systems to determine human tolerances to aircraft ejection [AD-729046] N72-2D100

ELASTIC CONSTANTS

U ELASTIC PROPERTIES

ELASTIC DEFORMATION

Human spine elastic deformation due to bending stresses, presenting statistical data on cadaveric acceleration effects in vertebral column injuries

ELASTIC MODULUS

U MODULI OF ELASTICITY

ELASTIC PROPERTIES

U MODULI OF ELASTICITY

VISCOElasticity

Hydroxyapatite isotropic and anisotropic elastic properties compared with experimentally observed anisotropic behavior of bone

Dog mesenteric terminal venous microvessel distensibility characteristics from response to arterial and venous pressure changes

Speed and mechanical work measurements during knee bending, isolated or delayed leg extension exercise, showing muscle elastic potential energy utilization

Added elastic load tests for thoracic elastance change effects on human response to carbon dioxide inhalation, using rebreathing technique

Energy absorption and safety properties of dissipative suspension systems used in ejection seat cushion materials [AD-730423] N72-19181


Elastic properties of excised human artery subjected to dynamic loads [AD-729046] N72-3D097

ELASTIC WAVES

U AERODYNAMIC NOISE

U AIRCRAFT NOISE

U SHOCK WAVES

U SONIC ROOMS

U ULTRASONIC RADIATION

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts [AD-729-2D273] N72-3D085

Propagation of longitudinal elastic waves along spinal column [AD-729046] N526 N72-3D097

ELASTICITY

U ELASTIC PROPERTIES

ELECTRIC ANALOGIES

U ANALOGIES

ELECTRIC CHANGES

U ELECTRIC DIPOLES

ELECTRIC CIRCUITS

U CIRCUITS

ELECTRIC CURRENT

U DIRECT CURRENT

U LIGHTNING

Electrical currents for controlling oral facial pain as working quantity for frontal plane ECG leads

ELECTRIC DISCHARGES

U LIGHTNING

ELECTRIC FIELDS

Weak LP electric field influence on circadian rhythms of human rectal temperature and activity

Qualitative microscopic model for biologic post synaptic membranes with tunneling chemical bonds, noting selective ionic conductivity as function of electric field

Electric field projections in contrast to voltage as working quantity for frontal plane ECG leads

ELECTRIC FILTERS

U BANDPASS FILTERS

U DIGITAL FILTERS

U LOW PASS FILTERS

U OPTICAL FILTERS

ELECTRIC GENERATORS

U REGENERATIVE FUEL CELLS

U THERMOELECTRIC GENERATORS

ELECTRIC IMPULSES

U ELECTRIC PULSES

ELECTRIC LEADS

U ELECTRIC WIRE

ELECTRIC MOTORS

Structural design and electrical drive mechanism of helicopter hoist for rescue operations

ELECTRIC POTENTIAL

U BIOELECTRIC POTENTIAL

U SPIKE POTENTIALS

ELECTRIC POWER SUPPLIES

U SPACECRAFT POWER SUPPLIES

ELECTRIC PULSES

Computation of the shape and velocity of a nerve pulse

ELECTRICAL ROCKET ENGINES

U RESISTOJET ENGINES

ELECTRICAL STIMULI

Visual cortex neuron responses to light flashes under hypothalamic and reticular electric stimulation in rats

Neurosecretory cell functional activity of supraoptic and paraventricular hypothalamic nuclei in rats after electrical stimulation of midbrain reticular formation

Vestibular nuclei bulbar complex evoked potentials under visceral and somatic nerves electric stimulation in anesthetized cats
Hippocampus electric activity and cardiovascular variations responses to various intensity electric stimulation of central gray matter 

Blink reflexes in man during sleep and wakefulness, discussing electroencephalographically recorded orbicularis oculi monopolar polysynaptic responses to electrical stimuli 

Analogic electrical stimulation in rat brains with other sensory modes unaffected 

Cerebral neurons population electric stimulation effect on deep sleep duration in Parkinsonism patients 

Thermal stability variations in blood serum protein after electrical stimulation of rabbit hypothalamic structures 

Cat and rabbit middle ear muscles contraction by electric stimulation of motor nerves, noting sound transmission reduction 

Cat middle ear muscles motor units twitch tension and contraction time in response to motor neuron threshold stimulation 

Functional organization of monkey cortical efferent zones in distal forelimb muscle control from intracortical microstimulation studies, showing stimulation thresholds distribution 

Vasomotor efferent effects on rabbit lung posterior lobe blood content in response to electrical stimulation of vagus nerve peripheral ends 

Lenticular conditioning-shock stimulation effect on cat visual cortex response to light stimuli, posterior lobe blood content in response to electrical stimulation of vagus nerve peripheral ends 

Electrode system for ventricular defibrillation, noting current density role and rounded edge effectiveness 

Cat and rat cardiac and cardiovascular reflexes responses to electric pulse stimulation of sensorimotor cerebral cortex 

Cat auditory cortex neurons response to auditory and medial geniculate body electrical stimulation 

Neuronal spike activity changes in rabbit visual and sensorimotor neocortex and hippocampus during EEG activation 

Contractile responses of guinea pig, rat and human isolated ventricular myocardium to increased stimulation frequency 

Electric stimulation of rabbit brain liable formations /castraceus, asygllus, hippocampus/, showing effect on emotional response motor and vegetative components 

Cat cerebellum cortex evoked response impulses interaction during stimulation of hypothalamic and peripheral nerves 

Cerebral cortex electric shock stimulation effects on phrenic nerve discharges in bipartotized and curarized cats 

Cat bulbar respiratory neuron discharge modification by single electric shock stimulation of cerebral cortex 

Sucrassic dehydrogenase activity in rabbit eye ciliary epithelium during electric stimulation of hypothalamic, using histochemical techniques 

Long term weightlessness-induced physiological response normalization by muscle activity, using electroencephalography, muscular tissue energy load increase and mineral metabolism stabilization

Response-dependent electric shock punishment schedule preference during response sequence in food-deprived pigeons

Neuroinhibition in the regulation of capillaritis 

Nicotine influence effect on eliciting pain in individuals subjected to previously reported nonpainful electric shocks 

Electrical stimulation of vestibular nuclei - Effects on light-evoked activity of lateral geniculate nucleus neurons. 

Proteins' activity in different regions of the brain during development and inhibition of a conditioned passive-avoidance reflex 

Device for eliminating the artifact of electrical stimulation when recording evoked pulse activity of neurons 

Role of pyramidal and extrapyramidal components of cortically-induced different stimuli in the mechanism of cortical motor activity coordination 

Effect of electrical excitation of various auditory analyzer levels on a conditioned motor reflex 

Analysis of the activity evoked in the cerebellar cortex by stimulation of the visual pathways 

Unresponsiveness of pil precapillary vessels to catecholamines and sympathetic nerve stimulation 

Modulating effect of limbic brain formations on the blood system 

Reactions of auditory cortex neurons to geniculocortical fiber stimulation 

Effect of a polarizing current on the activity of neurons of the respiratory center 

Biological system transfer-function extraction using swept-frequency and correlation techniques 

Effect of electrical stimulation of the olfactory bulbs on the behaviour of cats and on the electrical activity of the neo- and archesopaleocortex 

Lung volume changes of people in antithorostatic position in hospital beds for control exercising and muscle electric-stimulated groups 

Metabolic changes in healthy humans caused by prolonged bed rest in horizontal position, noting prevention by physical exercises and electric muscle stimulation 

Changes in the impulse activity of cortical neurons during selective reinforcement of a chosen range of their interpulse intervals 

Neural and focal reactions of the parctal associative cortex to various peripheral stimuli 

Responses of anterior cingulate gyrus neurons to peripheral stimuli of different modalities 

Post-synaptic potentials of motor neurons of the facial nerve nucleus evoked by afferent and corticofugal pulse stimulation 

Elaboration of steady changes in the firing rate of cortical neuron populations 

Eye movements evoked by collicular stimulation in the alert monkey 

Ventilatory reactivity in humans to galvanic current stimuli 

Effects of experimental manipulation of painful electric shocks, independent of subject performance, on aural monkey responses

NEL

SUBJECT INDEX

Hippocampus electric activity and cardiovascular variations responses to various intensity electric stimulation of central gray matter

Blink reflexes in man during sleep and wakefulness, discussing electroencephalographically recorded orbicularis oculi monopolar polysynaptic responses to electrical stimuli

Analogic electrical stimulation in rat brains with other sensory modes unaffected

Cerebral neurons population electric stimulation effect on deep sleep duration in Parkinsonism patients

Thermal stability variations in blood serum protein after electrical stimulation of rabbit hypothalamic structures

Cat and rabbit middle ear muscles contraction by electric stimulation of motor nerves, noting sound transmission reduction

Cat middle ear muscles motor units twitch tension and contraction time in response to motor neuron threshold stimulation

Functional organization of monkey cortical efferent zones in distal forelimb muscle control from intracortical microstimulation studies, showing stimulation thresholds distribution

Vasomotor efferent effects on rabbit lung posterior lobe blood content in response to electrical stimulation of vagus nerve peripheral ends

Lenticular conditioning-shock stimulation effect on cat visual cortex response to light stimuli, posterior lobe blood content in response to electrical stimulation of vagus nerve peripheral ends

Electrode system for ventricular defibrillation, noting current density role and rounded edge effectiveness

Cat and rat cardiac and cardiovascular reflexes responses to electric pulse stimulation of sensorimotor cerebral cortex

Cat auditory cortex neurons response to auditory and medial geniculate body electrical stimulation

Neuronal spike activity changes in rabbit visual and sensorimotor neocortex and hippocampus during EEG activation

Contractile responses of guinea pig, rat and human isolated ventricular myocardium to increased stimulation frequency

Electric stimulation of rabbit brain liable formations /castraceus, asygllus, hippocampus/, showing effect on emotional response motor and vegetative components

Cat cerebellum cortex evoked response impulses interaction during stimulation of hypothalamic and peripheral nerves

Cerebral cortex electric shock stimulation effects on phrenic nerve discharges in bipartotized and curarized cats

Cat bulbar respiratory neuron discharge modification by single electric shock stimulation of cerebral cortex

Sucrassic dehydrogenase activity in rabbit eye ciliary epithelium during electric stimulation of hypothalamic, using histochemical techniques

Long term weightlessness-induced physiological response normalization by muscle activity, using electroencephalography, muscular tissue energy load increase and mineral metabolism stabilization

Response-dependent electric shock punishment schedule preference during response sequence in food-deprived pigeons

Neuroinhibition in the regulation of capillaritis

Nicotine influence effect on eliciting pain in individuals subjected to previously reported nonpainful electric shocks

Electrical stimulation of vestibular nuclei - Effects on light-evoked activity of lateral geniculate nucleus neurons.

Proteins' activity in different regions of the brain during development and inhibition of a conditioned passive-avoidance reflex

Device for eliminating the artifact of electrical stimulation when recording evoked pulse activity of neurons

Role of pyramidal and extrapyramidal components of cortically-induced different stimuli in the mechanism of cortical motor activity coordination

Effect of electrical excitation of various auditory analyzer levels on a conditioned motor reflex

Analysis of the activity evoked in the cerebellar cortex by stimulation of the visual pathways

Unresponsiveness of pil precapillary vessels to catecholamines and sympathetic nerve stimulation

Modulating effect of limbic brain formations on the blood system

Reactions of auditory cortex neurons to geniculocortical fiber stimulation

Effect of a polarizing current on the activity of neurons of the respiratory center

Biological system transfer-function extraction using swept-frequency and correlation techniques

Effect of electrical stimulation of the olfactory bulbs on the behaviour of cats and on the electrical activity of the neo- and archesopaleocortex

Lung volume changes of people in antithorostatic position in hospital beds for control exercising and muscle electric-stimulated groups

Metabolic changes in healthy humans caused by prolonged bed rest in horizontal position, noting prevention by physical exercises and electric muscle stimulation

Changes in the impulse activity of cortical neurons during selective reinforcement of a chosen range of their interpulse intervals

Neural and focal reactions of the parctal associative cortex to various peripheral stimuli

Responses of anterior cingulate gyrus neurons to peripheral stimuli of different modalities

Post-synaptic potentials of motor neurons of the facial nerve nucleus evoked by afferent and corticofugal pulse stimulation

Elaboration of steady changes in the firing rate of cortical neuron populations

Eye movements evoked by collicular stimulation in the alert monkey

Ventilatory reactivity in humans to galvanic current stimuli

Effects of experimental manipulation of painful electric shocks, independent of subject performance, on aural monkey responses

A-136
Influence of vestibules stimulation on segmentary reflexes in spinal cord p0388 A72-24109

ELECTRIC WIRE
Microbiological assay of electric wire bundle from Surveyor 3 spacecraft p0437 A72-26769

ELECTRIC WIRING
U ELECTRIC WIRE p0088 A72-25184

ELECTRICAL CONDUCTIVITY
U ELECTRICAL RESISTIVITY p0088 A72-25184

ELECTRICAL IMPEDANCE
NT ELECTRICAL RESISTANCE
NT SKIN RESISTANCE
Transistorized amplifier input elements design for biopotentials recording, providing minimum noise at high input impedance p0270 A72-26468

Electrical components of cardiac and skeletal muscle impedance, calculating rectangular stimulating current mean value p0321 A72-28461

ELECTRICAL PROPERTIES
NT CAPACITANCE
NT ELECTRICAL IMPEDANCE
NT ELECTRICAL RESISTANCE
NT ELECTROPHlicity
NT INDUCtANCE
NT PHOTOCONDUCTIVITY
NT PHOTONIC ELECTRICAL AND OPTICAL PROPERTIES
NT POLARIZATION CHARACTERISTICS
NT SKIN RESISTANCE
The effect of membrane parameters on the properties of the nerve impulse. p0507 A72-81936

ELECTRICAL RESISTANCE
NT SKIN RESISTANCE
Organic blood volume and losses determination by measuring human body electrical resistance, noting unsatisfactory results p0111 A72-17994

ELECTRICAL RESISTIVITY
NT PHOTOCONDUCTIVITY
Stainless steel electrodes resistive and capacitive properties in contact with saline solutions of various concentrations and over extensive frequency range and current densities p0049 A72-12953

ELECTROACOUSTIC TRANSCEIVERS
NT MICROPHONES
ELECTROACOUSTICS
Electrical currents for controlling orofacial pain [JAD-736391]

ELECTROCARDIOGRAMS
U ELECTROCARDIOGRAPHY
Human patients with chest pain and normal ECG, examining diagnostic value of graded exercise test, history and lipid levels with coronary arteriography data p0003 A72-10146

Clinical electrocardiography diagnostic capability, discussing phase plane cardiogram sensitivity to aberrations in QRS contours p0003 A72-10146

HIS bundle electrocardiography for arrhythmia studies, discussing conducting tissue potential recording, ventricular delay and block site determination and electrophysiological effects of drugs p0003 A72-10146

Canine and human ventricular myocardium microelectrophysiologic studies of postextrastimolic T wave change relation to cellular repolarization and contractile potential magnitude p0017 A72-11147

Arrhythmias relation to coronary artery disease, discussing conduction defects, sudden death, procoagulant and prevention and digitalis as antiarrhythmic agent p0017 A72-11147

ECG telemetry systems parameters, discussing manufacturers specifications and standardized laboratory performance test data p0017 A72-11147

ECG telemetry system parameters, discussing manufacturers specifications and standardized laboratory performance test data p0017 A72-11147

Human pulse wave propagation velocity measurement, using biotelemetry systes of phoereresistance sensors and endoscopic bulbs connected to electrocardiograph p0031 A72-12519

Physical exercise effect on ECG atrial recovery wave duration and magnitude in humans with A-V blocks p0032 A72-12691

Age related diastasis in balleltiocardio GRAPHIC and electrocardiographic amplitude, observing relation to heart position lateralization and size reduction p0051 A72-13144

Exercise ECG correlation to morphological patterns of selective cinecoronary arteriography and ventriculography, revealing significant information on occlusion and stenosis p0052 A72-13178

QRS amplitude relation to frontal QRS axis and heart-electrode distance, using 12-lead ECG p0055 A72-13801

Familial cardiomyopathy detection by electrocardiography noting arrhythmias, ventricular hypertrophy, abnormal Q waves and intraventricular conduction defects p0056 A72-14443

Exercise ECG multichannel radio telemetry equipment, discussing sources of malfunction and unreliability and remedial procedures p0099 A72-16610

Electrocardiography telemetry system for intense radiation environment, describing electrode and transmitter implantation in monkey heart signal transmission and reception p0102 A72-16678

Electrocardiographic age trends in adult healthy populations, discussing diagnostic implications and overweight, exercise and latent coronary artery disease influence p0105 A72-17425

Airline pilot postexercise electrocardiograms, showing S-T segment depression correlation to subsequent coronary heart disease p0111 A72-17881

On-line digital computer system for real time interpretation and report generation of electrocardiograms from remote locations over switched telephone network p0152 A72-19311

Electrical cardiac activity computer simulation model including biophysically faithful conduction systems and electrocardiograms for high fidelity production p0153 A72-19313

Biomedical transducers for NASA space program, discussing spray-on electrodes and telemetering for ECG respiration and body temperature p0160 A72-19917

Coronary artery disease and vessel involvement severity predictions from electrocardiographic and vectorcardiographic patterns of anterior wall myocardial infarction p0160 A72-19994

ECG evidence of myocardial ischemia in patients without arteriographic evidence of coronary artery disease, studying myocardial oxygen supply p0160 A72-19995

ECG and VCG in diagnosis of myocardial infarction and QRS changes p0162 A72-20174

Bioelectric ECG and EEG signal analysis using hybrid computer techniques and parameter optimization for autocorrelation function modeling p0165 A72-20333

Abnormal ECG in healthy man due to fever disease, subclinical disease, congenital anomalies, hereditary disease or functional aberrations p0168 A72-20574

Atypical ECG of sportsmen, considering repolarization disorders due to ischemia, lesion, excitability and conduction abnormalities p0168 A72-20575

Pulmonary blood pressure and ECG in squirrel monkeys, considering catheter electromanometer system and implanted arterial cannulas long stability p0173 A72-20900

Vectorcardiographic and ECG diagnosis of left anterior heasblock combined with complete right bundle branch block, discussing coexisting
ELECTROCARDIOGRAPHY CONTD

myocardial infarction influence
Cardiac cycle intervals measurement with multielectrode oscilloscope synchronized with multichannel polycardiographic automatic recording machine
Clinical reliability and normal variations of Frank ECG computer analysis by Smith-Hyde program for healthy and cardiac patients
Mathematical, physical and engineering aspects of electro- and magnetocardiography, noting heart field nondipolar properties and heart vector determination differences
ECG, physical exercise and drug use in diagnosis and aeroedical evaluation of supraventricular arrhythmias, presenting case histories of pilots with wandering cardiac pacemakers
QRS wave detectors for arrhythmia and hemodynamic data analysis, using standardized FR magnetic tape containing various artifacts for evaluation
Positive acceleration effects on human heart and circulatory system functional diagnostics, discussing ECG, blood pressure, X-ray, phonoangiographic and pulmonary examinations
Clinical diagnosis of ST/T depression in resting ECG, noting coronary heart disease and left ventricular hypertrophy
Automatic ECG recording and analysis by electronic data processing equipment, discussing methods of data acquisition and transmission for routine diagnosis and prophylactic mass examinations
Dynamic electrocardiography with analog computer programs to detect, count and classify atrial and ventricular depolarization complexes
Stress vectorcardiography quantitative analysis of ECG response to treadmill exercise test to establish diagnosis criteria for coronary heart disease
ECG diagnostics for arrhythmia assessment in flying personnel flight fitness examination
ECG P-wave-like deflections caused by strong diaphragmatic action potentials in obese woman with fever and erysipelas
Human torso surface mathematical model to determine equivalent heart dipole and quadrupole locations for ECG measurements
Electrophysiologic data acquisition by multiple dipole type of inverse electrocardiographic procedure based on model data, noting favorable dipole configuration
Electrocardiography and magnetocardiography to determine flux and vortex sources respectively of heart electrical activity impressed current

SUBJECT INDEX

P0182 A72-21850
P0220 A72-23192
P021 A72-23278
P022 A72-23414
P0273 A72-26629
P0279 A72-27238
P0279 A72-27271
P0286 A72-27733
P0286 A72-27821
P0293 A72-28281
P0293 A72-28282
P0295 A72-28294
P0291 A72-28569
P0322 A72-28571
P0326 A72-28999
P0332 A72-29057
P0335 A72-30382
P0336 A72-30383
P0340 A72-30800
P0371 A72-32747
P0409 A72-37224
P0413 A72-37853
P0452 A72-37871
P0456 A72-38816
P0497 A72-40769
P0500 A72-41193
P0506 A72-41747
P0518 A72-42900
P0542 A72-43811
P0542 A72-43812
P0545 A72-43938
P0545 A72-43996
Analysis of intracavitary electrocardiograms through a saline bridge in the diagnosis of cardiac arrhythmias.

W-Y intervals in left bundle-branch block - Clinical and electrocardiographic correlations.

Clinical and anatomic implications of intraventricular conduction blocks in acute myocardial infarction.

Biomedical technology transfer of NASA: Cardiovacular monitoring (NASA-CR-128017)

Electrocardiographic and phonocardiographic cardiac cycle measurements on crewmembers during long term space flights (JETP-8054).

Long term electrocardiograms in analysis of rhythmic heart disturbances of German Air Force personnel.

Portable equipment for detecting myocardial activity (AD-715881).

Insulated electrode and impedance transformer system for electrocardiographic data acquisition (NASA-CR-115530).

High power radio telemetry of heart rate detected by ECG (NASA-CR-1214103).

Long term ECG examinations of pilots using tests at rest and after tests (NASA-CR-12506).

One-channel portable tape recording system for long term ECG recording of flying personnel (NASA-CR-12506).

Automatic analysis of ECG at rest, during and after exercise with two computer systems (NASA-CR-12506).

Method and criterion for evaluating ELF magnetic field interference effects on cardiac pacemaker function (NASA-CR-12506).

Computerized EEG data acquisition and transmission system for electrocardiographic data acquisition (NASA-CR-12506).

Development and characteristics of electrodes for measuring ECG, ECG, and temperature of laboratory animals (NASA-CR-12506).

Insulated electrode and impedance transformer system for electrocardiographic data acquisition (NASA-CR-12506).

Method and design for securing implanted electrodes during chronic experiments (NASA-CR-12506).

Manufacturing process for making peristaltic motors - resistant-stress resistant bipolar electrode (HASA-CASE-BSC-90153-2).

Dry electrode manufacture, using silver powder, with cement (NASA-CASE-BSC-90153-2).

Compressible electrolyte saturated sponge electrode for biomedical applications (NASA-CASE-BSC-90153-2).

ERG and electrooculogram recording of chimpanzee sleep, noting rapid eye movement stages (NASA-CASE-BSC-90153-2).

ERG phase asymmetry fluctuations relation to respiration rhythm in subjects from pneumograms during rest, mental activity, hypnosis and sleep (NASA-CASE-BSC-90153-2).

Short-time memory and electrographic effective and factor elimination (NASA-CASE-BSC-90153-2).

Facial electromyogram recording of electrical activity during repeated biceps and triceps brachii contractions (NASA-CASE-BSC-90153-2).

Surface electrode distance, area and pressure effects on electroencephalogram recording of large skeletal muscle electrical activity during defined muscular tensions (NASA-CASE-BSC-90153-2).

'V1-like' and 'avV-like' leads for continuous electrocardiographic monitoring (NASA-CASE-BSC-90153-2).

Design of photo-optical recorder, implantable electrodes, and magnetic/Doppler flow sensor (NASA-CASE-BSC-90153-2).

Technique using electrodes for measuring arterial oxygen partial pressure in dogs, rabbits, and monkeys (NASA-CASE-BSC-90153-2).

Development and characteristics of electrodes for measuring ECG, ECG, and temperature of laboratory animals (NASA-CASE-BSC-90153-2).

Portable equipment for detecting myocardial activity (AD-715881).

Insulated electrode and impedance transformer system for electrocardiographic data acquisition (NASA-CR-115530).

High power radio telemetry of heart rate detected by ECG (NASA-CR-1214103).

Long term ECG examinations of pilots using tests at rest and after tests (NASA-CR-12506).

One-channel portable tape recording system for long term ECG recording of flying personnel (NASA-CR-12506).

Automatic analysis of ECG at rest, during and after exercise with two computer systems (NASA-CR-12506).

Method and criterion for evaluating ELF magnetic field interference effects on cardiac pacemaker function (NASA-CR-12506).

Computerized EEG data acquisition and transmission system for electrocardiographic data acquisition (NASA-CR-12506).

Development and characteristics of electrodes for measuring ECG, ECG, and temperature of laboratory animals (NASA-CR-12506).

Insulated electrode and impedance transformer system for electrocardiographic data acquisition (NASA-CR-12506).

Method and design for securing implanted electrodes during chronic experiments (NASA-CR-12506).

Manufacturing process for making peristaltic motors - resistant-stress resistant bipolar electrode (HASA-CASE-BSC-90153-2).

Dry electrode manufacture, using silver powder, with cement (NASA-CASE-BSC-90153-2).

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ERG and electrooculogram recording of chimpanzee sleep, noting rapid eye movement stages (NASA-CASE-BSC-90153-2).

ERG phase asymmetry fluctuations relation to respiration rhythm in subjects from pneumograms during rest, mental activity, hypnosis and sleep (NASA-CASE-BSC-90153-2).

Short-time memory and electrographic effective and factor elimination (NASA-CASE-BSC-90153-2).

Facial electromyogram recording of electrical activity during repeated biceps and triceps brachii contractions (NASA-CASE-BSC-90153-2).

Surface electrode distance, area and pressure effects on electroencephalogram recording of large skeletal muscle electrical activity during defined muscular tensions (NASA-CASE-BSC-90153-2).

'V1-like' and 'avV-like' leads for continuous electrocardiographic monitoring (NASA-CASE-BSC-90153-2).

Design of photo-optical recorder, implantable electrodes, and magnetic/Doppler flow sensor (NASA-CASE-BSC-90153-2).

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Development and characteristics of electrodes for measuring ECG, ECG, and temperature of laboratory animals (NASA-CASE-BSC-90153-2).

Portable equipment for detecting myocardial activity (AD-715881).

Insulated electrode and impedance transformer system for electrocardiographic data acquisition (NASA-CR-115530).

High power radio telemetry of heart rate detected by ECG (NASA-CR-1214103).

Long term ECG examinations of pilots using tests at rest and after tests (NASA-CR-12506).

One-channel portable tape recording system for long term ECG recording of flying personnel (NASA-CR-12506).

Automatic analysis of ECG at rest, during and after exercise with two computer systems (NASA-CR-12506).

Method and criterion for evaluating ELF magnetic field interference effects on cardiac pacemaker function (NASA-CR-12506).

Computerized EEG data acquisition and transmission system for electrocardiographic data acquisition (NASA-CR-12506).

Development and characteristics of electrodes for measuring ECG, ECG, and temperature of laboratory animals (NASA-CR-12506).

Insulated electrode and impedance transformer system for electrocardiographic data acquisition (NASA-CR-12506).

Method and design for securing implanted electrodes during chronic experiments (NASA-CR-12506).

Manufacturing process for making peristaltic motors - resistant-stress resistant bipolar electrode (HASA-CASE-BSC-90153-2).

Dry electrode manufacture, using silver powder, with cement (NASA-CASE-BSC-90153-2).

Compressible electrolyte saturated sponge electrode for biomedical applications (NASA-CASE-BSC-90153-2).
ELECTROBIOLOGICAL CONTROL

Circadian rhythms variations for sleep, EEG, temperature and activity in monkeys, indicating aerosol, amplitude and level regulation

Isolation stress effect on circadian rhythmic patterns of EEG activity during sleep-wake and sleep cycles in unrestrained chimpanzees

Bioelectric EEG and EEG signal analysis using hybrid computer techniques and parameter optimization for autoregression function modeling

Human cortical auditory evoked response to speech and sound effects, relating EEG interhemispheric wave amplitude asymmetry to stimulus meaningfulness

Reliability of electroencephalography as a diagnostic method from specialists interpretation of curve morphological features, discussing normal and pathological record evaluation

Comparative EEG characteristics of frontal and occipital human brain cortex, relating psychophysiological and neurophysiological factors

Isolated specific color dependent waveforms of EEG as indicator of sensory and motor response in visual evoked response to strong colored lights relating luminance and wave amplitude changes

Orienting response indication by EEG alpha rhythm desynchronization in relation to visual stimulation intensity

Jet aircraft noise effect on sleeping EEG and subsequent waking performance, showing presence of carry-over effects

Biotelemetry system for EEG monitoring of free swimming diver at 15 meter depth, discussing power requirements, antenna design and signal attenuation

Human electrophysiological changes during perceptual isolation from EEG, EKG, vertical eye movements and electrodermal measurements

Electrocardiograph monitoring of central nervous system state in dogs reanimated by artificial blood circulation after prolonged clinical death by drowning

EEG recording and analysis by analog technique as means of studying human responses to hyperventilation

Deep brain structure biopotential correlations during wake sleep development, using electrosensory electroencephalograms

Neuronal spike activity changes in rabbit visual and sensorimotor neocortex and hippocampus during EEG activation

Adaptation period to inverting work-rest cycle observed with electroencephalograph, noting effect of brain bioelectric activity circadian rhythm stability

EEG diurnal rhythms during 72 hour insomnnea, considering adaptation to altered work-rest cycle in subjects with stable and unstable brain activity rhythms

Human brain sensorimotor region EEG dependence on proprioceptive influence, instruction for active movement and preparation passive movement of hands

Occipital EEG activity during fluctuations of perception under stabilized image and simplified stimulus conditions.

Stimulus complexity and the EEG - Differential effects of the number and the variety of display elements.

Cortico-visceral studies of spinal cord reticular formation stimulation and destruction effects on electroencephalography, cardiac activity and interoceptive glycemic reflexes

Electrophysiological analysis of limbic-cerebellar interaction during the orientating reflex

Ensemble characteristics of the human visual evoked response - Periodic and random stimulation.

Electroencephalogram analysis method as means for controlling human operator

EEG as indicator of sensory and motor response in pilot studies

Electrophysiological temperature effects on blood electrobioluminescence, relating luminescence peaks to protein and lipid molecular structure changes

Electrophysiological effects on blood electrolyte excretion, relating luminescence to protein and lipid molecular structure changes

Electrolyte transport

Temperature effects on blood electrolyte excretion, relating luminescence to protein and lipid molecular structure changes

Electrolyte transport

Temperature effects on blood electrolyte excretion, relating luminescence to protein and lipid molecular structure changes

Electrolyte transport

Temperature effects on blood electrolyte excretion, relating luminescence to protein and lipid molecular structure changes

Electrolyte transport
Multihour immersion effects on blood plasma protein and electrolyte concentration in trained and untrained subjects.

Sleep deprivation effects on diurnal urine potassium excretion, showing individual circadian rhythm variations.

Hypokinesia effect on fluid and electrolyte metabolism change patterns in rabbits from blood plasma studies.

Potassium, sodium and calcium ion distribution in skeletal muscle subcellular organelas, discussing lipid, protein and nucleic acid binding.

Electroretinographic illumination potentials dependence on extracellular chloride ion concentration in isolated frog retina.

Weightlessness effects on calcium and electrolyte metabolism from measurements during Gemini 7 flight, using dietary control and excreta collection techniques.

Effect of Acetozolamide /Dimox/ at different dose levels on survival time of rats under acute hypoxia and on Rs/4 / p/Pase activity of rat retina microsomes.

Changes of intracellular myocardial electrolytes in experimental hypotension.

Ion alterations during myocardial ischemia.

Interrelationship of hemodynamic alterations of valvular heart disease and renal function - Influences on renal sodium reabsorption.

Sweat depression during controlled hyperthermia in man - Effects on the sweat rate and sweat electrolytes.

Respiratory effects of hypophoeresis potassium depletion in the dog.

Effects of simulated high altitude on renin-aldosterone and Na homeostasis in normal man.

Excitation contraction correlates in true ischemia.

Capillary circulation as a regulator of sodium reabsorption and excretion.

Increased fluid turnover and the activity of the renin-angiotensin system under various experimental conditions.

Metabolism of angiotensin 'II in sodium depletion and hypertension in humans.

Intracellular potassium in cells of the distal tubule.

Relationship of sodium deprivation to QRS acceleration tolerance.

Response to daily lower body negative pressure /LBNP/ exposure /-70mm Hg/, with emphasis on plasma renin activity, sodium and potassium excretion.

Solid electrolyte oxygen regeneration system with electrolyzer, carbon deposition reactor, and palladium membranes for separating hydrogen.

Automated, six channel, discrete sample electrolyte analyzer, using peristaltic pump.

Compressible electrolyte saturated sponge electrode for biomedical application.

Rejuvenation of oxygen from carbon dioxide and water.

Light absorption and scattering factors in whole blood related to hemoglobin concentration, discussing oxygen saturation, cardiac output and pathological conditions.

Inh absorbent effects on evaporographic image contrast performance based on photometric study, presenting color photographs.

Respiratory chain components correlation to light production at various oxygen pressures in guinea pig ductus arteriosus, investigating light absorption changes.

Hbassauer effect for measuring radio frequency fields in biologic entities.

Electromagnetic control and remote control.

Electromagnetic fields Magnetic storm strength ELF electromagnetic field effects on rabbits, dogs and bacteria, discussing changes in EEG, ECG and blood characteristics.

Electromagnetic fields as isolated stimuli for brain function.

Low frequency pulsed electromagnetic field effects on carbohydrate energy and nitrogen metabolism of living organisms.

Electromagnetic interactions Therapeutic electromagnetic equipment hazards due to electromagnetic interaction, considering implantation and simulation of human body.

Electromagnetic interference Magnetic resonance imaging electromagnetic field interference effects on cardiac pacemaker function.

Electromagnetic measurement Electromagnetic velocity and flow measurements techniques application to cardiovascular patients, discussing utilization problems.

Electromagnetic noise Magnetic noise. - Origin and characteristics.

Electromagnetic properties Magnetic susceptibility.

Bright,Brightness.

Color.

Electrical properties.

Electromagnetic absorption.

Optical properties.

Photoconductivity.

Photoelectric effect.

Photovoltaic effect.

Refractance.

Refractivity.

Electromagnetic pulsars

Electromagnetic pulsed radiation fields effects on monkeys and dogs behavior and blood chemistry, noting biological hazard absence.
ELECTROMAGNETIC RADIATION

Susceptibility of chinchilla ear to damage from
infrared noise [AD-72633] p0037 A72-10098

ELECTROMAGNETIC RADIATION
MT CEREBROV RADIATION
MT COHERENT LIGHT
MT ELECTROMAGNETIC PULSES
MT GAMMA RAYS
MT GAMMA BEAMS
MT INFRARED RADIATION
MT LIGHT (VISIBLE RADIATION)
MT LIGHT BEAMS
MT LONG WAVE RADIATION
MT MICROWAVES
MT MONOCRUSTAN RADIATION
MT NEAR INFRARED RADIATION
MT NEAR ULTRAVIOLET RADIATION
MT PLANETARY RADIATION
MT RADIO WAVES
MT SOLAR WAVE
MT THERMAL RADIATION
MT ULTRAVIOLET RADIATION
MT X BEAMS

Clinical effects on atrio-ventricular pacing system of electromagnetic weapon
in HIT LIGHT BEAMS systems used for air passenger screening at
airports in air hijacking prevention efforts p0228 A72-23740

Standardization of microwave irradiation
experiments on animals, discussing power density
level evaluations and local vs whole-body
irradiation effects p0340 A72-30746

Electrical and biological effects of microwave
radiation intensity measurement in harmful
exposure study p0369 A72-32574

Nonionizing electromagnetic radiation effects in
biological systems, discussing microwave
penetration, therapeutic warming, light
scattering in tissues and medical instrument
applications p0377 A72-33754

Microwave radiation - Biophysical considerations
and standards criteria. p0408 A72-34299

Cytologic aspect of RF radiation in the monkey.
p0456 A72-36709

Physiological effects of microwave radiation on
animals and interaction of electromagnetic waves
with tissues to change structure and function
[AD-72839] p0087 A72-13069

Effects of electromagnetic radiation on biological
systems of living organisms p0248 A72-18261

Effects of microwave electromagnetic radiation on
organisms of man and animals [NASA TT-F-708] p0350 A72-22073

Effects of long term ELF magnetic field exposure
on central nervous system of squirrel monkeys
[AD-73545] p0351 A72-22084

Biological effects of RF electromagnetic field
emissions on human organisms p0432 A72-26053

Electromagnetic scattering

MT LIGHT SCATTERING
MT ELECTROMAGNETIC SCATTERING

Semiconductor devices potential interference and
biological exposure hazards in microwave leaka-
field, control shielding and filtering
methods for reducing susceptibility p0056 A72-14032

ELECTROMAGNETIC SHOCK TUBES
MT SHOCK TUBES
MT ELECTROMAGNETIC SPECTRUM
MT PHANKOHIPS RAYS
MT ELECTROMAGNETIC WAVE FILTERS
MT OPTICAL FILTERS
MT ELECTROMAGNETIC WAVE TRANSMISSION
MT LIGHT SCATTERING
MT LIGHT TRANSMISSION
MT ELECTROMAGNETIC WAVES
MT ELECTROMAGNETIC RADIATION
MT ELECTROMAGNETIC FIELD
MT X BEAMS

Man machine systems in navigation, discussing
problems of integrating man with high speed and
high capacity electromechanical systems with
allowance for human weaknesses and abilities
[AD-72633] p0216 A72-22777

ELECTROGRAPHICS
MT ELECTRAPHOTOGRAPHY
MT ELECTROGRAPHY

Optimum cylindrical handle size determination by
muscle electromyography, considering gripping
task, routine performance and fatigue test
[AD-72839] p0092 A72-10119

Human and monkey muscle tonic vibration reflex
response to vibratory stimulation dependent on
frequency range, electromyograph discharge
interval length, etc p0028 A72-12250

Electromyographic determination of muscular
compliance during arm movements, using on-line
analog computer p0059 A72-14708

Frog and rabbit sciatic nerve afferent impulse
recordings during prolonged sinusoidal vibration
of foot p0072 A72-15235

Electromyographic study of antagonist muscles
reactions to Achilles tendon percussion or whole
body sudden motion via test stand jerking
[AD-73008] p0184 A72-18864

Electromyographic and myograph responses in phasic
stretch reflex under preload conditions as
index of fusimotor activity level in normal humans
p0073 A72-26622

Dynamic bioelectrical impedance level of tissie area
between active electromyograph electrodes
related to human skeletal muscle fatigue
p0239 A72-29332

Surface electrode position effect on
electromyographic recording of electrical activity
during repeated biceps and triceps brachii
contractions p0367 A72-32489

Surface electrode distance, area and pressure
effects on electromyographic recording of large
skeletal muscle electrical activity during
defined muscular tensions p0368 A72-32490

Description of an easy and simplified test for
electromyographic diagnosis of latent
esprosphilia in flight personnel
p0452 A72-37878

The silent period in man during muscle lengthening
produced by loading p0464 A72-39590

Synchronization in the work of motor neurons
during arbitrary motor activity of various types
p0494 A72-40595

Electromyographic investigation of diaphragm cross
contraction following major cord section in
cats, noting diaphragm motoneurons excitation by
breathing center pulses p0510 A72-42281

Instrumentation for pre-computer processing of
electromyographic signals p0078 A72-12006

Electromyographic activity of biceps muscle during
submaximal isometric contraction determined from
auditory feedback
[AD-73008] p0308 A72-20094

Electromyographic measurement of maximum voluntary
muscle contraction endurance in chronic
hyperventilators [AD-73429] p0316 A72-21072

Clinical electrodiagnosis in prognosis of lower
motor neuron lesions p0395 A72-25058

Electron beam

Absorbed dosen at various depths in water target
exposed to charged pions and electron
beams, using Monte Carlo program
[CERN-71-16] p0026 A72-12063

Dr. B. scintillator calculation of absorbed dose
rate from electron beams in tissue medium
[AD-73520] p0523 A72-30079

Electron collision
MT ELECTRON-SCATTERING
MT ELECTRON-EMISSION

Electron emission
MT SECONDARY EMISSION

A-142
ELECTROBIOLOGY

Electroabundance equilibrium as factor in biological effectiveness of proton beam irradiation of animals

Synchronous orbit simulation for determining long term effects of electron irradiation on spacecrews using miniature pigs

ELECTRON MICROSCOPES

Electron microscope examination of freeze-etched air-filled lung alveoli extracellular lining layer, discussing sample preparation techniques

Electron microscope study of hyperoxia-induced pathogenetic ultrastructural changes in rat lung

Freeze etching techniques in electron microscopic investigations of biological cells molecular structure

Review and forecast of electron microscope studies of membranes systems in extracellular matrix of fundamental problems of biomedical research and molecular biology

ELECTRONIC SWITCHES

Electrical production of shifting grid pattern displays featuring variable spatial frequency, temporal frequency and modulation depth

Electrocardiographic recording, ventricular delay and block site studies, discussing conducting tissue potential adaptation mutual inductance coil technique

Electrocardiographic monitoring of cardiovascular system processes and providing time signals for computer monitoring of cardiovascular system

Training devices for training operators in use characteristics and maintenance of Naval electronic equipment

Human perceptual characteristic data relating to individual electronic flight displays design

Research in agriculture, computers and cybernetics, medicine, and electronics

Computerized simulation for predicting time needed to correct electronic equipment malfunction by humans

ELECTRONIC MEASUREMENT TESTS

Human factors characteristics for evaluating electronic equipment

ELECTRONIC SWITCHES

Human identification of threat symbols on electronic equipment

Electrical equipment malfunction by correcting electronic equipment malfunction by

ELECTROPHYSIOLOGY

Studies of the electron transport chain of extremely halophilic bacteria. VII

Freeze etching techniques in electron microscopic examination of freeze-etched air-filled lung alveoli extracellular lining layer, discussing sample preparation techniques

Human factors characteristics for evaluating electronic equipment

Computerized simulation for predicting time needed to correct electronic equipment malfunction by humans

ELECTROPHYSIOLOGY

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Sacca nemestrina monkey organ tissue concentrations of lactic dehydrogenase /LDH/, creatine phosphokinase and aldolase, with electrophoretic determination of LDH isoenzymes

Platelet electrophoretic mobility responses to adenosine diphosphate /ADP/ in patients with coronary artery disease

Clinical investigations of cancer prevention, infectious diseases, body fluids, and electrophoresis

Electrophotographs

Combined photoelectric-photographic and plethysmographic technique for continuous measurement of rabbit ear vein diameter and tissue volume changes

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs

Erythrocyte hemolysate catalasephorins studies of human hemoglobin changes during stepwise adaptation to high mountain conditions

Electrophotographs
### ELECTROCARDIOGRAPHY

<table>
<thead>
<tr>
<th>Action, peripheral coding activity and central subsystems</th>
<th>p0016 A72-11545</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spinal reflexes through electric stimulation of gastrocnemius and soleus human leg muscles, attributing increased tendon reflex amplitudes to muscle motoneurons hyperactivation</td>
<td>p0059 A72-14704</td>
</tr>
<tr>
<td>Neuroelectric signal recognition system with computerized compensation for variations due to small random changes, slow trends and interference potentials</td>
<td>p0072 A72-15253</td>
</tr>
<tr>
<td>Human male gonadotropin secretion in relation to sleep stages, using electrophysiologic recordings and radioimmunossay techniques</td>
<td>p1003 A72-17128</td>
</tr>
<tr>
<td>Electrophysiology for auditory temporal mapping mechanisms in cat cochlear nucleus and inferior colliculus single neurons</td>
<td>p1004 A72-17175</td>
</tr>
<tr>
<td>Electrophysiological responses to maximum exercise in healthy humans from polarcardiographic display of heart vector changes</td>
<td>p1018 A72-18891</td>
</tr>
<tr>
<td>Electrophysiological, neurophysiological, metabolic, vegetative, psychological, chemical and pathological aspects of sleep, noting disturbance and wakefulness mechanisms for various clinical disorders</td>
<td>p2013 A72-22223</td>
</tr>
<tr>
<td>Multichannel oscillograph for real time biomedical studies of TP physiological processes</td>
<td>p2018 A72-22881</td>
</tr>
<tr>
<td>Mathematical, physical and engineering aspects of electro-anatomocardiography, mycardial heart field nondipolar properties and heart vector determination difficulties</td>
<td>p2022 A72-23814</td>
</tr>
<tr>
<td>Peripheral afferent input to monkey cortical different zones of distal faciobrew muscle control, using single microelectrode for intracranial stimulation and cellular discharge recording</td>
<td>p2022 A72-23583</td>
</tr>
<tr>
<td>Single lateral quadrangular neuron recording during receptive field-centered flashing spot variations for intensity response function comparison with optic neurons in cats</td>
<td>p2036 A72-25177</td>
</tr>
<tr>
<td>Human electrophysiological changes during perceptual isolation from EEG, ENG, vertical eye movements and electrodermal measurements</td>
<td>p2083 A72-27484</td>
</tr>
<tr>
<td>Electrical components of cardiac and skeletal muscle impulses, calculating rectangular stimulating current value</td>
<td>p2083 A72-27484</td>
</tr>
<tr>
<td>Functional organization and neurophysiological mechanisms of return corticothalamic system in anesthetized cats, showing axon terminal presynaptic depolarization</td>
<td>p2032 A72-28461</td>
</tr>
<tr>
<td>Electrophysiologic data acquisition by multiple dipole type of inverse electrocardiographic procedure based on modal data, noting favorable and unfavorable dipole array configurations</td>
<td>p2036 A72-28762</td>
</tr>
<tr>
<td>Electrophysiography and magnetocardiography to determine flux and vortex sources respectively of heart electrical activity increased current density</td>
<td>p2036 A72-28997</td>
</tr>
<tr>
<td>Lower body decompression effects on ECG, showing heart rate decrement, an and T amplitude changes and heart electrical axis displacements</td>
<td>p2036 A72-30383</td>
</tr>
<tr>
<td>Electric field projections in contrast to voltage as working quantity for frontal plane ECG leads</td>
<td>p2035 A72-31766</td>
</tr>
<tr>
<td>Weightlessness effects on animal voluntary motor activity and wakefulness from brain and muzzle area electrical activity recordings during ballistic flight</td>
<td>p2074 A72-33584</td>
</tr>
<tr>
<td>An automatic measuring and recording system for clinical electro-oculography</td>
<td>p2049 A72-37400</td>
</tr>
</tbody>
</table>

### SUBJECT INDEX

| Role of afferent and efferent connections in the formation and reproduction of trace processes in man | p0697 A72-40807 |
| Patterns of spontaneous and reflexly-induced activity in phrenic and intercostal motoneurons | p0505 A72-41462 |
| Morphological and electrophysiological analysis of efferent receptor connections in cerebral cortex, discussing fast conducting, diffuse reticular and inferior olive fiber paths | p0506 A72-41674 |
| Electrophysiological analysis of defense reflex and unconditioned reaction and conditioned signal analyses in neural mechanisms of functional system /afferent synthesis, decision making, correction, etc | p0506 A72-41675 |
| Electrophysiological investigation of the excitation and inhibition processes in the auditory cortex | p0520 A72-43165 |
| Electrophysiological analysis of limbic-reticular interaction during the orienting reflex | p0586 A72-44081 |
| Preprocessing of nerve pulse sequences for analysis by digital computer | p0547 A72-44349 |
| Comparison of the vectors of the ventricular depolarization with optic neurons in cats | p0552 A72-44924 |
| Mathematical modeling of cardiovascular system for determination of electrocardiographic vectors of the ventricular depolarization in man during immersion in a standing position | p0552 A72-44924 |
| Electrophysiology of thalamocortical recruitments | p0309 A72-10107 |
| Mathematical models for determining nature of electrocardiographic vectors and its sensitivity in fibrillating hearts | p0308 A72-20093 |
| Electrophysiology of rat respiratory muscles exposed to high pressure atmosphere | p0381 A72-20603 |
| Electrophysiology of embryonic rat surface cells stimulated by proton fraction of fetal calf serum | p0382 A72-20671 |
| Interactive graphics for structural languages and biological waveform analysis, using special purpose computer | p0406 A72-27135 |
| Evoked potentials and electrophysiology of nervous system | p0559 A72-32061 |

### ELECTRORETOGRAPHY

| Conduction velocity groups in cat optic nerve from antidromic responses recorded in peripheral retina and arcuate parafovea | p0053 A72-13621 |
| Eye movement control device for photostystagmography, describing construction, line drawing and basic circuits | p0055 A72-13724 |
| Retinal ganglion cell spikes timing in mammalian retina, using electroretinography and computer analysis | p0107 A72-17721 |
| Human dark adaptometric visual threshold recovery and electroretinograms in response to double light flashes, using Fourier analysis of oscillographic potentials | p0149 A72-19029 |
| Intraelectroretinographic analysis of light signal summation at different retinal nerve levels in frogs | p0229 A72-26454 |
| Landolt ring radioactive plaque might vision center comparison with electroretinography and Goldmann-Weekers dark adaptometry apparatus from special tests of night blind patients | p0229 A72-28332 |
| Electroretinographic illumination potentials dependence on extracellular chloride ion concentration and isolated retina areas | p0368 A72-32941 |
| Electroretinographic evidence for a photonic system in the rat | p0611 A72-34878 |
| Intracellular noise - origin and characteristics | p0426 A72-36605 |
The electrical activity of the isolated frog retina in buffered chloride-deficient Ringer's solution

Component analysis of electroretinograms in dark and light adapted sheep eye, noting rod and cone receptor potentials and transient and dc responses

Sensitivity of the human EOG and VEP to sinusoidally modulated light.

Mathematical model for linear stationary operator describing relationship between stimulus and evoked potential in electroretinograms.

Electroretinographic evaluation of Bunsen-Roscoe law for human eye at high energy levels

**ELECTROSTATIC EFFECT**

**U ELECTRIC CURRENT**

**ELECTROSTATIC FIELDS**

**U ELECTRIC FIELDS**

**ELECTROSTATIC PLASMA**

**U PLASMAS (PHYSICS)**

**ELECTROSTATICS**

Electrostatic adhesive devices for zero-g intra/extravehicular activities, noting applications to astronaut and cargo maneuvering, worksite restraint, tool and equipment tidewax, etc

**ELECTROTHERMAL ENGINES**

**MT RESISTIBILITY Engines**

**MT ALPHA PARTICLES**

**MT BETA PARTICLES**

**MT LIGHT BEAMS**

**MT NEUTRON BEAMS**

**MT NEUTRONS**

**MT NUCLIDES**

**MT PHOTONS**

**MT BETA PARTICLES**

**MT SOLAR PHOTONS**

**ENDOSILIS**

**MT AEROSOLISOL**

Fremocellular monitoring for pulmonary gas embolism and decompression bubbles.

Relation of the electrocardiogram to hemodynamic alterations in pulmonary embolism.

**EBYTOLOGY**

Alpha-1-fucosidase, beta- and alpha-1-galactosidases and alpha-D-mannosidase activity changes in human placenta at various embryogenesis phases

Histological examination of transverse acceleration stress effect on inner ear development of quantating rat embryos.

Endocrine motor activity rule hypothesis for physiological mechanisms of certain osteogenesis patterns, suggesting motor activity as excess anabolism induction factor

Embryogenesis of fertile chicken eggs in pure oxygen at reduced pressure

Sperm neuronal specificity hypothesis for nerve cell connections formation between eye and brain during embryonic development, proposing systems matching theory

Intravascular injection and histology studies of human embryonic and fetal choroidal vasculature development

**EMBROS**

Insert gas effects on embryonic development.

Glycolysis in fibroblasts of rat embryos infected with adenoviruses, and oncogenic adenovirus type 12

Effects of radiation by fission neutrons and X-rays on mouse embryos

**EMISSIO**

Kjeldahl aminals and mass spectrometric methods for studying atmospheric nitrogen assimilating ability of quail embryo

Electrophysiology of embryonic rat surface cells stimulated by protein fraction of fetal calf sera

Pilot survival probabilities under various conditions of high performance aircraft takeoff and landing accidents, suggesting emergency action guidelines for pilot training

Effect of impact angular acceleration on human body under emergency conditions-aircraft ejection

Effect of oxygen breathing equipment for mine rescue operations

Design of portable decompression chamber with semiclosed gas recirculation system for treating underwater divers

Life support system for rescue crew in altitude chamber tests

Simulation of emergency occurring on Apollo 13 flight and development of procedures for employing lithium hydroxide canisters to reduce ambient carbon dioxide levels

**EMISSION**

MT BIOLUMINESCENCE

NT CHEMILUMINESCENCE

NT ELECTROLUMINESCENCE

NT FLUORESCENCE

NT LUMIN LUMINESCENCE

NT PHOTOELECTRIC EFFECT

NT SECONDARY EMISSION

**EMISSION SPECTRA**

External radiation and internal emitter studies

Human skin thermal radiation properties, presenting data on reflection, emission, transmission and complex refraction

**EMISSIONS**

MT RECOR DING INSTRUMENTS

**EMOTIONAL FACTORS**

Painting prevention in flying personnel, discussing constitutional susceptibility, health irregularities, alcohol, heavy smoking, lack of sleep, emotions and medical history

Human coagulating and anticoagulating blood system changes due to emotional stress during parachute jumps, noting plasma recalcification time increase

Emotional aspects of pilot performance under high stress in emergency situations, discussing psychophysiological training methods
Crew members handling of emotionally disturbed aircraft passengers

p0167 A72-18368

Hyperventilation relationship with monoamphilia, noting psychoemotional cause and neuromuscular excitability

p0166 A72-20364

Improperly controlled learning processes relationship to hypertonic blood pressure irregularties pathogenesis in rats, investigating negative emotional reactions effects

p0169 A72-20659

Evoked cortical potentials changes from emotional visual word stimuli stress under nitrosal anticholinesterase drug influence

p0176 A72-21194

Conditioned reflex mechanisms responsible for regulation of emotions in higher order animal and human neurophysiology

p0181 A72-21837

Psychiatric preventive intervention in emotional crises situations during patients aeromedical evacuation and transportation, discussing personnel shortage

p0228 A72-23743

Electric stimulation of rabbit brain limbic formations /claustrum, amygdala, hippocampus/, showing effect on emotional response motor and vegetative components

0338 A72-30668

Social and emotional crises with respect to isolation, confinement and group dynamics of astronaut crews during long duration space flight

p0374 A72-33545

Increase in skeletal muscle performance during emotional stress in man

p0412 A72-34942

Limbic-neocortical, cardiovascular and hormonal system vegetative shifts associated with emotional behavior response, presenting neurogenic stress model for animals

p0520 A72-43166

Noxious-emotional stress as a problem of modern work physiology

p0520 A72-43170

Causes and prevention of flight stress and evaluation of emotional stability of flying personnel

p0222 A72-18063

EMOTIONS

Negative and positive emotional states influence on blood cholesterol and arterial pressure levels in dogs, suggesting common subcortical genesis of atherosclerosis and hypertension

p0214 A72-22498

Psychological and physiological parameters correlation for astronaut functional state relation to emotional tension level during around and flight tests

p0376 A72-33563

Negative/painful/ stimulus cessation relation to emotionally positive zone activation in rat brain during self stimulation experiments

p0463 A72-39410

EMPLOYER RELATIONS

Frankfurt Airport air traffic controller opinion survey of attitudes toward work and working environment

p0220 A72-23138

EMULSIONS

EMULSIONS: NUCLEAR EMULSIONS

Encephalitis influence of rhythmic photo-stimulation on lower-order monkeys with hyperkinesia of post-encephalitic origin

p0457 A72-36930

ENCODERS

U CODERS

ENCODING

U CODING

ENDOCRINE GLANDS

NEDRENAL GLAND

GONADS

PANCREAS

PARATHYROID GLAND

THYROID GLAND

Hypoxic hyperthemia effects on endocrine organs phospholipid metabolism during chronic hypoxic hypoxia

p0031 A72-12516

ENDOCRINE SECRETIONS

ALDOSTERONE

BLOOD

HORMONES

HYPOCORTICOSTEROID

INSULIN

PITUITARY HORMONES

THYROID

Hypothalamia effects on neurosecretory system of rat hypothalamus and hypophysis, noting increased antidiuretic hormone contents in blood

p0099 A72-16636

Work-rest schedules endocrine and metabolic effects on aircrews during 50 hour flight missions in C-141 aircraft, using urinary test techniques

p0277 A72-23737

Role of the hypothalamus and limbic system in the regulation of the motor and secretory functions of the digestive apparatus

p0096 A72-40750

Effects of gravity on neurosecretory physiology in fresh water teleost fish

p0249 A72-19072

Existence of hypocalcemic factor in human thyroid

p0309 A72-27079

Effect of age on TCT produced hypocalcemia and hypophosphatemia in rats

p0470 A72-28053

ENDOCRINE SYSTEMS

Central cooling and warming effects of preoptic/anterior hypothalamic region on thermoregulatory activity of neurosecretion, cardiovascular and neuromuscular systems

p0050 A72-13070

Blood serum proteins thermal stability in patients with vegetative vascular and neuroendocrine syndromes, discussing ATP effects

p0217 A72-22877

Neuroendocrine responses in microwave radiation exposed rats, correlating thyroid and thyrotropic activity

p0298 A72-28321

Hippocampus morphology and physiology in relationship to emotion and memory mechanisms, time links, visceral activity and motivations and endocrine control

p0438 A72-20399

Seasonal rhythms of endocrine system in hibernating mammals, discussing central and peripheral biological clock in relation to hypothalamus and pancreas/thyroid gland

p0373 A72-33100

Nerophy-functional changes in the endocrine system during oxygen starvation

p0692 A72-40447

Oxygen starvation effects on functions of animal endocrine systems

p0483 A72-29906

ENDOCRINOLOGY

Should-induced fighting effect on pituitary adrenocorticotrophic hormone ACTH and adrenocortical steroids plasma concentration in rats, relating psychological stress to physiological function

p0096 A72-16080

ENDOGENOUS CONDITIONS

U PHYSIOLOGY

ENDOLYSIS

Mathematical model for semicircular canal dynamic response to angular acceleration, emphasizing role of pentograph over endolymph in cupula displacement

p0155 A72-13941

Vestibular, auditory, acceleration and altitude decompression testing of pilot following endolymphatic shunt surgery for Meniere disease

p0283 A72-27805

The vestibular apparatus. I - The physics and physiology of the otoliths and the semicircular canals

p0517 A72-42787

Relation between response thresholds of cupular-endolymphatic system to angular and Coriolis accelerations in humans and motion sickness tolerance

p0075 A72-11996
Pulse modulated biotelemetry system for
Spectroscopic, kinetic, and thermodynamic analysis,
Human-body calorimetry with water cooled garment
Albino rats spinal cord capillaries ultrastructure
processes, chemical secretions, muscle activity,
Energy absorbing seat design for light aircraft,
Describing development and static and dynamic
testing
Aircraft crash landing induced acceleration
effects on seated occupants, discussing energy
absorber system dynamic response characteristics
for injury protective devices
Dilatant suspensions impact energy absorbent
properties, considering application to ejection
seat cushions for occupant acceleration
attenuation
Energy absorption for prevention of fatal
injuries, considering human deceleration
tolerance with respect to required energy
absorber force-deflection relationship
Energy absorption and safety properties of
dilatant suspension system used in ejection
seat cushion materials
Ergonomic papers on human body energy balance and
temperature control covering energy conversion
processes, chemical secretions, muscle activity,
etc
Physical and chemical identification for
biochemical reactions and energy balance of
muscular contraction and shaking
False modulated biotelemetry system for
determining energy budgets in free-ranging
vertebrates from heart rate and body temperature
measurement
Ergonomic papers on human body energy balance and
temperature control covering energy conversion
processes, chemical secretions, muscle activity,
etc
Thermodynamics of human body metabolism,
discussing energy conversion calorimetric
measurements, body size, food intake, age, sex,
edendrime and nervous effects
Human body biochemical energy conversion processes
during muscular activity, discussing nutrition,
circulation and respiration roles
Effect of chronic hypoxia on the kinetics of
energy transformation in heart mitochondria.
Chemical energy transformation to mechanical
energy and heat in muscles during exercise,
considering energy sources for contraction,
oxidations, glycolysis and elastic anaerobic
mechanisms
Mathematical model for life support system
optimization in terms of reduced mass
minimization as quality criteria for energy
conversion and metabolic processes
Spectroscopic, kinetic, and thermodynamic analysis
of biochemical energy conversion mechanisms in
flavin molecular complexes
Human body calorimetry with water cooled garment
for dynamic and continuous recording of heat
dissipation from surface over extended time
Information and energy costs in human daily
circadian work-rest cycle
Energy loss fluctuations in domerotic
interpretation of radiation absorption in
biological systems
Optimal choice of scattering foils for electron
therapy including computation of energy losses
Linear energy transfer distribution for negative
ions beams in human tissue, calculating
relative biological efficiency and oxygen
enhancement ratio
Energy exchange
Energy transfer
Energy storage
Energy dissipation
Energy requirements
Optimum duration of human circadian cycle with
respect to energy cost during work hours,
relating normal cycle change to prolonged space
mission stresses
Speed and mechanical work measurements during
bending and immediate or delayed leg extension
exercise, showing muscle elastic potential
energy utilization
Energy cost/oxygen consumption prediction for
treadmill and various levels terrain walking at
two speeds under three different pack loads
Metabolic energy requirements for pushing loaded
handcarts, measuring expenditure during
treadmill and outdoor asphalt circuit walking
Analysis of body temperature control and thermal
economy during work by unclothed subjects on
ergometer
Effects of high altitude on cellular and energy
metabolism in rats
Structural lipid role in accumulating light
energy during prebiological evolution, using
conductance studies in lipid-chlorophyll-water
system
Changes in energy stores in the hypoxic heart
Energy storage devices
Energy storage
Energy transfer
St coupling circuits
Linear energy transfer (left)
Linear energy transfer distribution for negative
ions beams in human tissue, calculating
relative biological efficiency and oxygen
enhancement ratio
Linear energy transfer response of
polyvinyltoluene plastic scintillator,
preventing data on quality factor and radiation
dose equivalent determinations in mixed
radiation field
Energetical conditions of primeval biosynthesis
and transdehydration feasibility on simplified
present day templates
Book - Energy metabolism of human muscle.
Simulation and design of a breathing metabolic simulator.

**Environmental Chambers**

**U Test Chambers**

**Environmental Control**

Mathematical models for man-machine control behavior in biodynamic environments including manual control performance and interface elements. p0445 872-27129

Luver fibrosis and cancer caused by asbestos fibers inhalation, noting environment control for protection against workers health hazards. p0265 872-25548

Pilots maintaining active and passive isolation from LF vibrations in helicopters and jet aircrafts, discussing human factors and dynamic environment. p0380 872-29558

U.S. federal regulation on occupational noise exposure control for hearing loss prevention, discussing noise measurement, reduction and periodic tests. p0373 872-33246

Optimal temperature control for microbial inactivation by composite environment of heat and gamma radiation, using quadratic technique. p0429 872-36313

Space station prototype environmental/thermal control and life support system - a current overview. [ASBE PAPER 72-ENAT-25] p0460 872-39152

Development of a laboratory prototype spraying flash evaporator. [ASBE PAPER 72-ENAT-25] p0459 872-39149

Design criteria for the modular space station environmental control and life support system selection. [ASBE PAPER 72-ENAT-25] p0460 872-39154

Environmental control and life support subsystem conceptual design studies for shuttle launched 6-12 man crew modular space station [ASBE PAPER 72-ENAT-22] p0460 872-39155

Significant factors in environmental and thermal control/life support system design for space shuttle orbiter. [ASBE PAPER 72-ENAT-22] p0459 872-39156

Optimal shuttle research applications module /RM/ environmental control and life support system for sortie missions. [ASBE PAPER 72-ENAT-20] p0460 872-39157

Comparative evaluation of environmental control and life support systems for the space shuttle orbiter. [ASBE PAPER 72-ENAT-20] p0459 872-39158

Space shuttle environmental temperature control/life support system program changes, discussing air cooled electronic equipment, cryogenic stores, crew size and mission duration. [ASBE PAPER 72-ENAT-18] p0461 872-39159

Modular environmental control/life support system design for low cost shuttle launched space station, evaluating humidity, carbon dioxide, water and waste management. [ASBE PAPER 72-ENAT-17] p0461 872-39160

Computer simulation of the space shuttle orbiter environmental thermal control system. [ASBE PAPER 72-ENAT-12] p0461 872-39165

Integration of an automated onboard data management system with a manned spacecraft environment thermal control and life support system. [ASBE PAPER 72-ENAT-6] p0462 872-39171

R and D on environmental and thermal control/life support system application to lunar base mission, discussing reliability and food regeneration. p0558 872-45164

The Space Station Prototype Program - The development of a regenerative life support system for extended-duration missions. p0558 872-45164

Thermal environment control for astronauts. [NASA-CS-1852] p0592 872-10130

Personal protection measures, environmental control, and noise reduction to avoid hearing
Subject Index

Environmental Temperature
- Ambient Temperature
- Environmental Tests
- Cold Weather Tests
- Corrosion Tests
- Low Temperature Tests
- Underwater Tests

Microorganisms life in extreme high temperature, pH and solute concentration environments; noting salt effect on enzyme activity

External biodynamic models for human mechanical response to various environmental forces, emphasizing injury mechanisms

Sonic boom effects on domestic and wild animals, discussing field and laboratory findings

Perot fluid 17-hydrocortisone steroid level in relation to hyperthermia stress at various heat levels during thermal environmental testing

Irradiation system for animal and human subjects exposure to controlled microwave radiation in environmental tests

-Blood oxygenating ability of helinm- and argon-oxygen environments relative to air, using alveolar gas equation to predict arterial oxygen pressure

USAF aerospace medical research on human capabilities as limiting factor in defense system development, discussing environmental simulators and human test facilities

Inert gas effects on embryonic development

Thermal balance in man during 24 hours in a controlled environment

Influence of a preliminary exposure to carbon monoxide on the development of hypokinetic disturbances in albino rats

Evaluation of life detecting systems under various environmental and soil conditions

Environmental tests of commercially available abandon-ship survival suit

Environmental Engineering
- Aerospace Environments
- Deep Space
- Extraterrestrial Environments
- High Altitude Environments
- High Gravity Environments
- High Temperature Environments
- Interstate Space
- Jupiter Atmosphere
- Low Temperature Environments
- Lunar Environment
- Mars Atmosphere
- Planetary Atmospheres
- Rotating Environments
- Solar Atmosphere
- Spacecraft Environments
- Stellar Atmospheres
- Thermal Environments

Environmental Qualitites

United Nations study of human environmental quality

Environmental Index

Environmental and endogenous timing factors as stimuli for bird migration

Environmental Quality

United Nations study of human environmental quality

Environmental Phenomena

Hypoxia effects on rat myocardial lactic dehydrogenase isozyme complement and anoxic tolerance

A-149
ENZYME ACTIVITY CONT'D

Biochemical processes and structures
interrelation, using nucleoprotein concentrate
models and ribonucleic and polynuclette
phosphorlase oxamates and aldoxanes
p0032 A72-12834

Concentrate drops oxidoredoxases and stability in
primate prebiological systems, using
polyethylene oxidase-carbohydrate-histone-xuliones
p0062 A72-14778

Primitive earth model of ion selective enzymatic
asymmetric synthetic membranes for accelerated
nutrients and metabolites transfer studies
p0062 A72-14777

Microorganism life in extreme high temperature, pH
and solute concentration environments, noting
salt effect on enzyme activity
p0064 A72-14801

Serum enzyme activity changes response to constant
test exercise, discussing relation to maximum
oxygen uptake
p0069 A72-14897

Plasma renin activity during supine physical
exercise as function of salt loading
p0069 A72-15234

Myokinase activity determination as diagnostic
test for human myocardial infarction, comparing
to creatine phosphokinase activity test
p0098 A72-16388

Conformal electron interactions in biomolecular and
hypermolecular biological systems, discussing
calcium ions effects, enzyme activity, muscle
cractures and information theory
p0147 A72-18003

Kinetics of heat inactivation of phosphoglycerate
kinase in soluble fraction from <i>hydrocoronousa</i>
facilis
p0164 A72-20237

Ribonuclease molecule damage and enzyme activity
under UV irradiation and repeated freezing and
thawing
p0224 A72-23594

Parenterally introduced protein hydrolyzates and
aminopeptides influence on human pancreas enzyme
secretory activity
p0224 A72-23595

In vivo measurements of oxygen tension effect on
teleost and amphibian retinal lactate
dehydrogenase activity, discussing acetazolamide
produced hypoxia effects
p0226 A72-23729

Pressure sensitivity of Na-K-Mg ATPase activity
from rat intestine, investigating inhibiting
effects of oxygen, nitrates and blood tension
increase
p0226 A72-23731

Thermolabile triose phosphate isomerase in
psychrophilic Clostridium at moderate temperatures
p0266 A72-25851

Serum proteinase activity determination as enzymatic
diagnostic test for myocardial infarction
p0266 A72-25852

Heart enzyme activity under experimental
myocardial ischemia in rabbits determined for
blood, left and right ventricles and atrium
p0321 A72-28463

Cardiac membrane pain sensitivity in vagotomized
cats under sensitizing acetylcholine influence
during reduced cholinesterase activity
p0329 A72-29329

Epithelial follicle and mast cell role in
peroxidase activity of thyroid gland during
experimental burn development
p0329 A72-29330

Mechanical vibration induced physiological changes in
rats, determining plasma Ca, Mg and isomeric
phosphates concentration and xanthine oxidase
activity response to frequency and g-levels
p0330 A72-29560

Macaca nemestrina monkey organ tissue
concentrations of lactate dehydrogenase (LDH/,
creatine phosphokinase and aldolase with
electrophoretic determination of LDH isozymes
p0332 A72-29661

Enzyme activity and ascorbic acid concentration as
index of rat thyroid gland tissue functional
activity during hypertermia
p0345 A72-31098

Suclidean dehydrogenase activity in rabbit eye
ciliary epithelium during electric stimulation
of hypothalamus, using histochemical techniques
p0345 A72-31099

Physiological effects on prolonged wakefulness in
dogs aboard Cosmos 110 biosatellite,
emphasizing body weight loss and enzyme activity
and bone tissue mineral concentration changes
p0374 A72-35387

Effect of Acetazolamide /Diamox/ at different dose
levels on survival time of rats under acute
hypoxia and on Na/K/ATPase activity of
rat tissue microsomes
p0409 A72-38566

Magnetic field effects in enzymes, tissue
respiration and some metabolize characteristics
of an intact organism
p0415 A72-35003

Studies of the electron transport chains of
extremely halophilic bacteria. VII -
Solubilization properties of menadione reductase
p0450 A72-37649

Hypocapnic hypoxia effects on lactose coagulation and
fihrinolysis
p0452 A72-37880

Renin, in differential diagnosis of hypertension
p0455 A72-38070

Peripheral venous renin activity during 70 deg
tilt and lower body negative pressure
p0455 A72-38073

Proteins activity in different regions of the
brain during development and inhibition of a
conditioned passive-avoidance reflex
p0457 A72-38927

Variation of the acetylcholine content and of
the cholinesterase activity in the blood under
muscular strain
p0458 A72-38934

The resonance mechanism of the biological action
of vibration
p0463 A72-39409

Effects of simulated high altitude on
renin-alderosterone and Na homeostasis in normal
man
p0490 A72-40422

Blood serum enzymes activity changes in
polytransfused humans injured in automobile
accidents
p0500 A72-41198

Effect of hypoxia and physical activity on plasma
enzyme levels in man
p0505 A72-41522

Lysosomal enzymes of eye tissues during the action
of hydrocorinose
p0509 A72-42279

Succinic and lactic dehydrogenase activities in
homogenates from myocardial tissues of guinea
pigs, rabbits and dogs in high altitude
environments
p0513 A72-42592

Hypoxic acidification effects on rats heart, liver
and kidney mitochondria, measuring cytochrome
oxidase and succinic dehydrogenase activities
p0574 A72-42673

Increased fluid turnover and the activity of the
renin-angiotensin system under various
experimental conditions
p0585 A72-43997

Metabolism of angiotensin II in sodium depletion
and hypertension in humans
p0595 A72-43998

Lactate dehydrogenase from an extremely
thermophilic bacillus
p0599 A72-44526

Influence of elevated partial oxygen pressure on
the sympathetic-adrenal and acetyl-choline systems
p0551 A72-44959

In vivo hemolysis due to hyperoxia - Role of H2O2
accumulation
p0557 A72-45561

Response to daily lower body negative pressure
and shock waves with weak shocks on
plasma renin activity, sodium and potassium
excretion
p0557 A72-45568

Inheritance of lactate dehydrogenase and xalate
dehydrogenase enzymatic diseases in human
erythrocytes
p0043 A72-11070
EBGOHOMICS

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D HOBAH FACTORS ENGINEERING

Performance and support requirements of life

Correlation between ergometry,

Measurement of heart rate and oxygen uptake of

Physiological stressing and conditioning ergometer

Analysis of body temperature control and thermal

Bicycle ergometer measurements of thermoregulation

Maximum oxygen intake during exercise on treadmill

Guidelines to utilization of human factors in

Physical work capacity comparison during bicycle

Equipment specifications for general purpose

Equipment designed for accurately measuring

Design of photo-optical recorder, implantable

Electrodes, and magnetic/Doppler flow sensor

Hemoglobin determination in whole blood with

Vibrotactile warning device effectiveness under

Hyperoxia effect on kidney blood flow,

erthrocytotic properties in rabbits, noting

Hypoxia

HT WIND EROSION

ERROR ANALYSIS

Vibratory warning device effectiveness under

auditory and visual loadings, investigating

reaction time and errors number

Steroscopic acuity for photometrically matched

background wavelengths at scotopic and photopic

levels, plotting variable depth error as

function of retinal illuminance

Hemoglobin determination in whole blood with

Specol-Zeiss spectrocolorimeter, comparing

accuracy to cyanmethemoglobin measurements

Error arising from experimenter influence on

subject behavior and performance, discussing

expectancy effects on stimulus presentation and

IQ and success-failure judgments

Some effects of cognitive similarity on proactive

and retroactive interference in short-term memory.

ERROR BAND

U ACCURACY

ERROR CORRECTING DEVICES

Inspiration time correction factor for pulmonary

diffusing capacity measurement by single breath

method

ERRORS

HT INSTRUMENT ERRORS

HT PILOT ERROR

HT POSITION ERRORS

Human operator errors in performing audio-video

and audio only tracking tasks

ERYTHROCYTES

HT PICTOCYTES

Hypoxemia in rats, resulting in prolonged red

cell survival due to oxygen consumption
decrease and altered erythrocyte enzymatic

processes

Anoxic glycolysis and specific gravity of red

cells in rats exposed to pure oxygen at

600 torr

Normal and germs free rat antibody response to

sheep erythrocyte inoculation in He-O

atmosphere, analyzing microsuglumina and

hemolysin titres

Prolonged muscular work effects on erythrocyte

2,3-DPG generation relation to oxygenhemoglobin

affinity

Holographic measurement of red blood cell rotation

in orbital flight, transforming orientation into

form distribution data

Physiological effects of transfusing

2,3-diphosphoglycerate /DPG/ depleted red cells

with high oxygen affinity in anemic hypoxic

patients

Active Na-K transport and passive permeability

temperature adaptation in ground squirrel

erthrocytes

Sublethal X radiation effects on rat

erthrocytotic system during altitude hypoxia

acclimation

Light scattering time dependence, erythrocyte

aggregation rates and hydrodynamic

characteristics in ex, pig and horse blood stream

Human urine reconstituted in various dilutions

effect on fish and rat erythropoiesis

Erythrocytes catalase activity and number content

effect on fish and rat erythropoiesis

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erthrocytotic system during altitude hypoxia

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effect on fish and rat erythropoiesis

Erythrocytes catalase activity and number content

effect on fish and rat erythropoiesis

Prolonged muscular work effects on erythrocyte
activity in bone marrow culture  p0112 A72-18051
Plasma erythropoietin concentration in men and mice during altitude acclimatization  p0158 A72-19940
Microcirculation study of intravascular erythrocyte aggregation /blood sidegra/ in rats  p0158 A72-19666
Chinchilla and guinea pig tolerances to hypoxia and hyperoxia in pressure chamber tests, suggesting relation to red blood cell size and number  p0216 A72-22647
Erythrocyte hemolysate catapathies studies of human hemoglobin changes during stepwise adaptation to high mountain conditions  p0218 A72-22080
Picoscale blood diagnostic device for red and white cell count, noting piston principle electronic operation  p0221 A72-23257
Erythrocyte life span in mice under normal atmospheric pressure and various degrees of hypoxia acclimatization, using radioactive labeled disopropyl phosphorofluoridate  p0270 A72-26608
Red cell mass plasma volume decrease inApollo mission crews, indicating erythropoiesis inhibition  p0291 A72-28265
Suppression effects of hyperoxic breathing gases on red blood cell and erythropoietic hormone production following blood loss  p0295 A72-28296
Supercellular regulators of triggering mechanism of regenerative reaction in sternal erythropoietic bone marrow tissue  p0322 A72-28636
Red blood cell reserve mobilization in healthy and chronically irradiated dogs after treadmill exercise  p0335 A72-30379
Stepwise altitude acclimatization and subsequent readaptation to lower atmspheric pressure and clinical death effects on dog peripheral blood erythrocytes, reticulocytes, hemoglobin and hematocrit  p0338 A72-30671
Whole blood flow dependence on optical density from light transmission measurement, showing photometric effects of red cell aggreation, deformation and orientation  p0364 A72-31639
Light transmission measurements of blood flow to quantify red cell aggreation and deformation  p0364 A72-31640
Red blood cell metabolites, 1,3 dihydrophosphoylcerate determination method by rapid depolymerization, concentration by precipitation and enzymatic reaction  p0367 A72-32488
Exchange diffusion process contribution to human red blood cell transmembrane cation movement from sodium tracer influx studies  p0371 A72-32746
Astronauts red cell mass changes associated with space flight due to space and earth environment differences  p0376 A72-33564
Effects of in vivo inhalation of 100% oxygen at reduced pressure on serum and red cell lipids.  p0401 A72-34053
The effect of chronic erythrocytic polycythemia and high altitude upon plasma and blood volume.  p0453 A72-38028
n
Nervous and humoral stimulation and hypoxia effects on erythropoiesis control, studying human blood serum additions to bone marrow cultures  p0457 A72-40762
Experimental studies of the production of erythropoietin in relation to the intensity and duration of hypoxia  p0500 A72-41189
Studies of renal and extrarenal production of erythropoietin in male and female rats  p0500 A72-41190

Influence of intracellular convection on the oxygen release by human erythrocytes.  p0506 A72-81625
Control of the circulating blood mass in the case of a functional detachment of various amounts of pulmonary tissue  p0507 A72-81825
Modulating effect of limbic brain formations on the blood system  p0510 A72-42282
Statistical analysis of erythrocyte acid phosphatase inheritance in French families based on starch gel electrophoresis of hemolysates  p0533 A72-10067
Inheritance of lactate dehydrogenase and malate dehydrogenase enzymatic diseases in human erythrocytes  p0543 A72-11070
Relation between lactic dehydrogenase and alpha hydroxybutyryl dehydrogenase of red and white blood cells  p0550 A72-12016
Erythropoietic changes in fish and rats caused by water regenerated from human urine  p0550 A72-12016
Adaptation of cells to aerospace environments notting cell renewal, regulation, and limitations  p0553 A72-16040
Erythrocyte reserve in healthy and chronically irradiated dogs subjected to physical loads  p0587 A72-24100

ESA/4  DIODES
U TUNNEL DIODES

ETCHING

Effects of Q forces on injuries during ejection/extraction escape in USAF  p0258 A72-19144
Biodysmic models used as simulation technique in design of Air Force emergency escape systems  p0287 A72-29100
Biodysmic modelling of aircraft escape systems to determine human tolerances to aircraft ejection  p0287 A72-29101

ESCHERICHIA
Intestinal disbioclastism and autoinoculation occurrence in guinea pigs and rats under magnetic field effect, noting Escherichia population changes  p0101 A72-16647
Isolation of a polyvalent bacteriophage for Escherichia coli, Klebsiella pneumoniae, and Aerobacter aerogenes.  p0450 A72-37650
Anoxia and genetic strain effects on ionizing radiation damage and repair of deoxyribonucleic acid in Escherichia coli  p0482 A72-12028
Ionizing radiation effects in damage and repair of deoxyribonucleic acid in Escherichia coli  p0482 A72-12029
Effects of extraterrestrial radiation on escherichia coli culture during flight of Cosmos-368 artificial earth satellite  p0502 A72-17058
Compositional changes in E. coli in human intestines during confinement  (JPPS-55191)  p0525 A72-19096

ESTERS

B7 CARBAMATES (TRADEMARK)
B7 GLUTARATES
B7 LACTATES
B7 NITROGLYCERIN
B7 POLYCARBONATES

Esters and amides participation in probiotic polynear, discussing ribosome bonds and memnerge RMA  p0661 A72-14767

ESTIMATES

B7 COST ESTIMATES
Accuracy of monocular motion parallax absolute distance estimation before and after training (AD-7402708)  p0536 A72-31139

ETCHING
Electron microscope examination of freeze-etched air-filled lung alveoli extracellular lining layer, discussion sample preparation techniques  p0103 A72-16787
Freeze etching techniques in electron microscopy investigations of biological cells molecular
ETHERS

structure
Freeze-etching method for studying yeast cell envelope structure

[ASAE-77-F-14308] p0426 A72-36829

ETHEREAL

ANISOLE
DIETHYL ETHER

BENZ ALCOHOL

Aluminum oxide chromatography for ethanol-amine acetyl derivatives detection and separation in animal tissue extracts, using water-butanol solution as solvent

p0342 A72-30972

Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation

p0410 A72-36554

ETHEREAL OXIDE

Using ethereal oxide as decontaminating agent for planetary quarantine

[ASAE-CR-126038] p0313 A72-21048

ETIOLOGY

Age related disiminarions in ballistocardiographic and electrodcardiographic amplitudes, observing relation to heart position lateralization and size reduction

p0051 A72-13142

EUCLIDEAN GEOMETRY

ANGLES (GEOMETRY)
LINES (GEOMETRY)

EVCHEES

Eclipses cell division timing control by endogenous circadian rhythm, showing direct entrainment by low frequency dark-light cycles

p0157 A72-19539

EUROPE

European research and atomic energy applications to agricultural crops and insect sterilization

[WP-19076] p0305 A72-20077

EUSTACHIAN TUBES

Acoustic impedance bridge for clinical evaluation of eustachian tube function

[AD-72-1126] p0243 A72-18095

EVACUATION (TRANSPORTATION)

General aviation patient transportation, investigating military helicopter airlift performance

p0016 A72-11298

Psychiatric preventive intervention in emotional crisis situations during patients aeronautical evacuation and transportation, discussing personnel shortage

p0228 A72-23732

Helicopter search, rescue and transportation of wounded and ill persons in Denmark, discussing accidental hypothermia treatment

p0456 A72-33714

EVAPORATION

Biological phosphate origin through evaporative water loss during exercise, from humidity change, ventilatory exchange and oxygen uptake data

p0270 A72-26610

Spacecraft functional properties: degradation due to surface contamination with outgassing vapors, discussing contaminant materials transport and sorption characteristics

p0541 A72-43619

EVAPORATORS

Development of a laboratory prototype spraying flash evaporator

[ASME PAPER 72-314-28] p0459 A72-39149

EVAPOROGRAPH

In absorbent effects on evaporographic image contrast performance based on photographic study, presenting color photographs

p0364 A72-37615

EUROFIBRIN

FICTION (DEVELOPMENT)

ABIOGENESIS

BIOLGICAL EVOLUTION

PLANETARY EVOLUTION

Significance of water in biochemical processes and organic molecule synthesis for evolution of life

[PR-57] p0080 A72-12018

Weightlessness effect on fertilized egg growth

[RIPT-5003] p0013 A72-15404

Subgravity effects on sea urchin egg fertilization and development

p0120 A72-14065

Influence of flow conditions on thrombus formation in fresh blood


Natural ionizing radiation effects on multiplication of unicellular organisms and Drosophila melanogaster development

p0431 A72-26050

EXAMINATION

EYE EXAMINATIONS

GAS EXCHANGE

ION EXCHANGING

EXCITATION

SELF EXCITATION

EXCRETION

Ground and flying activity endurance training effect on urinary excretion of noradrenaline and adrenaline

p0064 A72-18488

Immobilization hypercalciuria, discussing treatment by diet-induced extracellular volume depletion and possible pathophysiologic mechanism of intercompartmental fluid and electrolyte shift

p0064 A72-18471

Isolation stress effect on excretory products in restrained chimpanzees, suggesting Ca to P excretion ratio as physiological stress indicator

[AD-739067] p0163 A72-20179

Food deprivation stress effects on urinary excretion values in restrained chimpanzees

p0238 A72-24822

Calcium and phosphorus excretion relation to bone density changes in immobilized Macaca nemestrina monkeys

p0261 A72-27473

Sleep deprivation effects on diurnal urine potassium excretion, showing individual circadian rhythm variations

p0328 A72-29320

Weightlessness effects on calcium and electrolyte metabolism from measurements during Gemini 7 flight, using dietary control and excreta collection techniques

p0375 A72-33552

Interrelation of intercostators and extracostators in the process of urination and defecation reflect actuation in osteopathy

[AD-72-35022] p0146 A72-35022

Nitrogen excretion as a measure of protein metabolism in man under different conditions of renal function

p0505 A72-41523

Capillary circulation as a regulator of sodium reabsorption and excretion

p0545 A72-43995

EXECUTIVE AIRCRAFT

U GENERAL AVIATION AIRCRAFT

EXECUTIVE (PHYSIOLOGY)

Human exercise capacity assessment from maximal oxygen intake estimates and Harvard step test

p0002 A72-10116

Human patients with chest pain and normal ECG, examining diagnostic value of graded exercise test, history and lipid levels with coronary arteriography data

p0003 A72-10146

Human cardiovascular responses to submaximal physiologically paced bicycle ergometry, recording preexposure period, isovolumic contraction, left ventricular function and pulse transmission time

p0003 A72-10147

Exercise and observation effects on intracellular muscle fibers morphology, noting 25-33 percent cross-sectional area atrophy in nuclear bag and chain fibers

p0003 A72-10147

A-154
Exercise ECG multichannel radio telemetry equipment, discussing sources of malfunction and unreliability and remedial procedures

Human temperature regulation during upright and supine exercise, showing nonlinear relationships between perspiration and skin and core temperatures

Endurance exercise effect on respiratory capacity in white,elite endurance runners in rats, relating fiber type to oxidative capacity

Physiological and subjective responses of physically fit young men to combined exercise-carbon dioxide stress tests

ECG amplifier and cardiotachometer for exercise studies, using digital algorithms for heart rate compensation and ECG signal preprocessing for R wave detection

Human plasma free fatty acids relation to lactic acid concentration and maximum aerobic power, noting cardiotachometer availability as an exercise capacity limiter

Frenometer for use as quantitative exercise device in spacecraft environment

Use of isometric exercises as means of preventing muscular atrophy in treatment of fractures of extremities

Metabolic, respiratory, and circulatory measurements during exercise and rest, including low concentration study of CO2

Gastric motility in normal people at rest and during physical exercise

Witting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices

Effects of exhaustive exercise on rats at various times following blast exposure

Rhesus monkey heart rate during exercise

Computer analysis of cerebrovascular response during exercise, atrial pacing, and drug injections

Exercise

U PHYSICAL WORK

Exhalation, gas exchange, and carbon dioxide content in humans during passive orthostatic tests

Exhaust Flow Simulation

At Flight Simulation

Extraterrestrial life origin in space from point of hydrocarbons, cravids, abiogenic organic synthesis and protobiotics evolution

Comet collisions in planetary nebulae, as source of organic compounds in universe in preplanetary era, noting detailed bases in carbonaceous meteorites

Extraterrestrial life on Mars and Venus and Jupiter atmospheres, discussing abiogenesis

Failure on life-supportable planets

Extraterrestrial life origin and evolution, estimating possibilities on Mars, Venus and Jupiter

Papers on exobiology theory and experimental considerations extraterrestrial organic compound detection, Jupiter atmosphere, porphyrins, radiation production of life molecules, etc

Porphyrin exobiology, discussing organic and random biosynthesis and extraterrestrial existence based on interstellar spectral evidence

Papers on exobiology concerning abioticogenesis, extraterrestrial life, prismatic organic chemistry, biochemical evolution electronic factors, weariness origin, molecular chirality, protein and cellular evolution, etc

Cosmic sources of organic compounds from chemical evolution viewpoint, discussing comets, interstellar space, prestellar nebulae and cool stellar atmospheres

Terrestrial life origin understanding by investigating life possibilities in nonterrestrial environments

Review of NASA Ames Research Center 1971 conference on interstellar molecules and origin of life

Mars biology likelihood from long winter model, suggesting north polar cap summer vaporization as atmosphere, liquid water and greenhouse effect source

Biological experiments of Viking Mars lander 1975, mission regarding Uranus-Baldus evolution hypothesis

Biological experiments on plants, animals and bacteria aboard Vos 5, 6 and 7 spacecrafts, noting flight conditions effect on physiological functions and hereditary structures

Environmental chamber simulation to show terrestrial microorganisms survival under Jovian atmospheric conditions

Spacecraft bacteria population resistance to simulated Jovian trapped radiation belt electrons and solar wind protons, noting dependence on isolate, dose and electron energy

Survival of cosmic terrestrial microorganisms under simulated Jovian conditions

Russian book - Problem of the stability of biological system

Adaptability limits on protein-nucleus-water life under exobiological extremal conditions, considering macromolecules, extraterrestrial life search and origin

Thermodynamic proportion and mathematical modeling of complex biological systems, considering energy and mass exchange in photosynthesizing organisms for exobiological life support

Life sciences and space research I; Proceedings of the Fourteenth Plenary Meeting, Seattle, Wash., June 21-July 2, 1971

Development of planetary quarantine in the United States

Biological instrumentation for the Viking 1975 mission to Mars

Biological aspects of communications with extraterrestrial life and possibility of communication with extraterrestrial life, discussing possibilities on wandering planets

Aerospace medical and exobiological factors of manned space flight

Conference on space biology related to Post-Apollo program, Paris, Mar. 1971

A-155
EXPANDABLE STRUCTURES

Aerospace environment effects (noting weightlessness and bioevolution) on planets, cells, and frogs observed in Gemini and Biosatellite experiments [NASA-TM-X-67505] p0192 72-16032

Exobiology research emphasizing oxygen supply, experiments on locusts, and interstellar cooperation [NASA-TM-1-66370] p0193 72-16038

Effects of weightlessness on cellular systems [NASA-TM-1-66370] p0194 72-16050

Biological effects caused by heavy ions in cosmic rays during space flight [NASA-TM-1-66370] p0194 72-16050

Capability of space shuttle service for performing biological and medical research experiments [NASA-CR-125666] p0281 72-18078

Developments in space hydrobiology research and application to creating closed ecological system for support of space crew [JPIES-55284] p0242 72-18082

Problems concerned with biological effects of space radiation [NASA-TP-P-604] p0301 72-20039

Quantitative evaluation of effects of radiation sickness as applicable to problems of space radiobiology [JPIES-55284] p0301 72-20041

Modifying influence of various flight factors on radiobiological effects of ionizing radiation on organisms in space flight [JPIES-55284] p0301 72-20042

Relative biological effectiveness of various types of cosmic radiation [JPIES-55284] p0301 72-20043

Abstracts on space biology and medicine involved in cosmonaut training [JPIES-55687] p0312 72-21043

Extraterrestrial life and its detection methods [NASA-TP-P-704] p0312 72-21046

Results of studies on microorganisms with direct bearing on space biology [NASA-TP-F-14307] p0439 72-27081

Environmental control and life support subsystems, guide for space biology payload definition and integration study [NASA-TP-F-66678] p0460 72-29050

Aerospace medicine and exobiology problems of manned space flight [JPIES-55675] p0460 72-29051

EXPANDING STRUCTURES

MT GAS BAGS

MT INFLATABLE STRUCTURES

EXPANSION WAVES

EXPERIMENTAL DESIGN

Flight summary of biomedical sciences experiments in Gemini Program [NASA-TP-X-50741] p0118 72-14053

Pilot trainer experiment to compare three adaptive variables and two logic schemes in adaptive training of animal control [AD-73627] p0360 72-23097

EXPIRATION

Plethysmographic and laryngoscopic investigation of glottis opening and airway resistance relation to lung volume during panting and continuous slow expiration [AD-72-26611] p0270 72-26611


EXPIRED AIR

Gaseous nitrogen production in humans under steady-state conditions, relating expired nitrogen minute volume increase after protein consumption to possible gastrointestinal and metabolic effects [NASA-TM-X-50741] p0170 72-20882

Four-parallel-compartment lung model for emptying pattern study, using expired nitrogen concentration data to calculate alveolar dilution ratio and emptying rate [NASA-TM-X-50741] p0339 72-30703

Myth of nitrogen equality in respiration - its history and implications.
control and prevention requirements

Extraterrestrial life on Mars and Venus and Jupiter atmospheres, discussing abiogenesis failures on life-supportable planets

Extraterrestrial life origin and evolution, estimating possibilities on Mars, Venus and Jupiter

Ti leaching from granitic rocks by Penicillin, simplicissimum, discussing extraterrestrial life detection

Papers on exobiology theory and experiments, considering extraterrestrial organic compound detection, Jupiter atmosphere, porphyrazin, radiation production of life molecules, etc

Papers on exobiology covering abiogenesis, extraterrestrial life, prismatic organic chemistry, biochemical evolution electronic factors, membranes origin, molecular chirality, protein and cellular evolution, etc

Extraterrestrial life origin and development possibilities from earth chemical and biological evolution description, noting external conditions requirements

Terrestrial life origin understanding by investigating life possibilities in nonterrestrial environments

Life beyond solar system, discussing planetary formation and prebiological organic chemistry development and interstellar communication

Biological experiments of Viking Mars lander 1975 mission regarding Chaein-Haldane evolution hypothesis

Viking lander light scattering experiment to detect microbial growth from aqueous turbidity changes in contact with Martian soil

Life on Mars, investigating ground based and probe observations of atmospheric composition and pressure, surface temperature and features and UV radiation

Extraterrestrial life search, noting radio contact with civilizations, bioastronautics, Martian conditions and physicochemical experiments

Environmental chamber simulation to show terrestrial microorganisms survival under Martian atmospheric conditions

Adaptability limits on protein-nucleic-water life under exobiological extremal conditions, considering macromolecules, extraterrestrial-life search and origin

Thermodynamic properties and mathematical modeling of complex biologic systems, considering energy and mass exchange in photosynthesizing organisms for exobiological life support

Biological aspects of communications with extraterrestrial intelligence, discussing life existence possibility on wandering planets

Extraterrestrial life and its detection methods

[CEHN-71-16] p0024 A72-12051
A new model for estimating space proton dose to body organs.

Summary of latent effects in long term survivors of whole body irradiations in prisons.

Effects of preflight and postflight irradiation of biological specimens using yeast cells, hydrogen bacteria, lettuce, and pea seeds on Cosmos satellite-368

Effects of extraterrestrial radiation on microorganisms culture during flight of Cosmos-368 artificial earth satellite

Effect of specific flight factors on preirradiated yeast cells during flight of Cosmos-368 artificial earth satellite

Effect of specific flight factors on preirradiated yeast cells during flight of Cosmos-368 artificial earth satellite

Biological effects of gamma rays on germination and growth processes of lettuce seeds during Cosmos-368 artificial satellite flight

Effect of space flight factors on spontaneous and induced mutagenesis of gamma irradiated and nonirradiated lettuce seeds

Effects of extraterrestrial radiation on dormant pea seeds during flight of Cosmos-368 artificial earth satellite

Effects of space flight factors on formation of anomalous metabolites and activity of enzymes in plants

High energy particle irradiation effects on biological systems of spacecrews

Development of microdosimeter to determine energy deposition in small tissue region during exposure to space radiation

Biological response of sheep and swine to space radiation dose protraction and dose distribution at low intensities

Problems concerned with biological effects of space radiation

Extravehicular activity

Extravehicular life support systems for shuttle, space station, lunar base and Mars missions, considering thermal control, carbon dioxide control and oxygen supply subsystems

Electrostatic adhesive devices for zero-g extravehicular activity applications to astronaut and cargo maneuvering, worksite restraint, tool and equipment tiedown, etc

Calculation procedures for some parameters of space suit gas media supply systems

Design, development, and characteristics of portable life support system for extravehicular activity

Russian astronaut training in aircraft for V1 and V2 in space

Development and evaluation of space activity suit assembly for extravehicular activity applications

Problem areas defined for university research in astronaut life support systems involving extravehicular guidance and stabilization

A-157
### Extracellular noise - Origin and characteristics
- p0426 A72-36605

### Fly colour vision
- p0426 A72-36609

### The neurophysiology of binocular vision
- p0409 A72-37250

### An automatic measuring and recording system for clinical electro-oculography
- p0409 A72-37400

### Receptive fields of units in the visual cortex of the cat in the presence and absence of bodily tilt
- p0455 A72-36806

### Quantitative determination of fluorescence within the eye without disrupting the integrity of the eyeball
- p0458 A72-38991

### Continuous subjective measurement of the accommodation of the human eye
- p0695 A72-40730

### Crystalline lens optical structure in human eyes, representing on and off axis imaging characteristics by mathematical model
- p0695 A72-40737

### Effect of spherical spectacle lenses on the monochromatic aberration of the eye
- p0496 A72-40746

### Lysosomal enzymes of eye tissues during the action of hydrocortisone
- p0505 A72-42279

### Ocular and induced visual effects of systemic and topical drugs in terms of eye neuroanatomy and pharmacology, stressing glaucoma therapy
- p0511 A72-42499

### Biological effects of laser radiation on eyelash, skin, and other body organs
- [AD-726558] p0037 B72-10100

### Optic functions and retinal circulation in humans exposed to combined centripetal and Coriolis accelerations
- p0708 A72-11998

### Physiological factors in color vision, simulation of visual systems, aerospace environment effects on visual perception, and electrophysiological aspects of eye responses
- [NASA-CR-114321] p0529 A72-30114

### Development of life support subsystems for advanced extravehicular protective systems
- p0529 A72-30114

### Extraversive, neuroticism, and color preferences
- p0427 A72-36903

### Keys and Anatomy

#### Choroid Membranes
- [MT] p0136 H72-15062

#### Cornea
- [MT] p0136 H72-15061

#### Eyeball
- [MT] p0136 H72-15064

### Behavioral-visual similarities of nonhuman and human primates
- p0050 A72-13069

### Spectral response and vision thresholds of human eye for light detection and color sensation
- p0177 A72-21332

### Biological hazards of high intensity light sources, considering physiological factors involved in threshold eye damage values determination
- p0177 A72-21332

### Destructive changes in rabbit brain and eyes under pulsed laser beam irradiation
- p0329 A72-29333

### Succinic dehydrogenase activity in rabbit eye ciliary epithelium during electric stimulation of hypothalamus, using histochemical techniques
- p0345 A72-31099

### Eagle eye retinal image quality determination by ophthalmoscopic method, comparing to human visual acuity
- p0365 A72-31724

### The distribution of the long wave photoreceptors in the compound eye of the honey bee as revealed by selective osmic staining
- p0411 A72-36877

### Light induced alterations in growth pattern of the avian eye
- p0411 A72-36980

### Sperry neuronal specificity hypothesis for nerve cell connections formation between eye and brain during embryonic development; proposing systems matching theory
- p0416 A72-35070

### Open loop life support subsystem using breathing bag as reservoir for EVA

### Development of regenerable or partially regenerable life support systems use in EVA protective systems
- [NASA-CR-114321] p0409 N72-25133

### Portable life support system for astronaut working outside of lunar module
- p0402 N72-27109

### Regenerative portable life support system development for extravehicular human activities during advanced space missions
- p0403 N72-27113

### Carbon dioxide- and thermal-control in regenerative life support system for extravehicular human protection during advanced space missions
- p0403 N72-27114

### Description of astronaut space suit used during EVA
- p0577 N72-28104

### Development of life support subsystems for advanced extravehicular protective systems
- [NASA-CR-114321] p0529 A72-30114

### Extremely Low Frequencies

#### Magnetic storm strength ELF electromagnetic field effects on rabbits, dogs and bacteria, discussing changes in EEG, ECG and blood characteristics
- p0289 A72-26210

#### Method and criterion for evaluating ELF magnetic field interference effects on cardiac pacemaker function
- [AD-737237] p0401 N72-25111

### Noise effects on human attention and work efficiency in extroverted and introverted individuals
- p0186 A72-22137

### Circadian rhythms effects on introverts and extroverts biochemistry, physiology and performance, suggesting arousal mechanisms differences
- p0276 A72-26693

### Extraversive, neuroticism, and color preferences
- p0427 A72-36903

### Life Support Systems

#### Development of life support subsystems using breathing bag as reservoir for EVA

#### Development of regenerable or partially regenerable life support systems use in EVA protective systems
- [NASA-CR-114321] p0409 N72-25133

#### Portable life support system for astronaut working outside of lunar module
- p0402 N72-27109

### Extraversive, neuroticism, and color preferences
- p0427 A72-36903
The effect of target contrast variation on dynamic vergence eye movements to pairs of disparity, BEH period functional maintenance of coordinated voluntary eye movement and convergence effects on optokinetic thresholds in the normal monkey.

Voluntary saccade length dependence on visual task characteristics.

Field and intracellular potentials in cat trochlear nucleus following vestibular nerve and nuclear stimulation for synaptic organization study of vestibulo-ocular reflex.

Human binocular visual system fusional information processing, evaluating compensatory eye movements role in overcoming retinal image disparity.

Computer graphics system simulation of saccadic behavior study, incorporating eye muscle characteristics.

The role of eye movements in the perception of apparent motion.

Involuntary eye movements during the performance of mental tasks.

Conjugate and divergent optokinetic eye movements in the rabbit, evoked by rotatory and translatory motion.

Visual sensitivity measurement in retinal areas function loss exposed to prolonged tilt (NASA-CE-17034).

Perception error suppression during sacadic eye movements in terms of metacnormal determined by post-saccadic accumulated luminance relation to stimulinking.

Research projects to determine visual perception capability and factors which affect visual perception efficiency.

Eye movements evoked by collicular stimulation in the alert monkey.

Determinant of relationship between frequency of small eye movements and vermicular activity in human subjects.

Ravel research on laser caused visual acuity decrement in monkeys and ocular injury in humans.

Otolith organ response of normal vision people and persons with severe bilateral labyrinthine function loss exposed to prolonged tilt (NASA-CE-12701).

Visual sensitivity measurement in retinal areas function loss exposed to prolonged tilt (NASA-CE-17036).

Perception of real motion by human eye (ICH-DR-70-77).

Effect of maneuver and flight conditions on helicopter pilot eye movements.

Effect of retinal control and sleep deprivation on human eye movement behavior.

Industrial safety rules recommendations for lasers based on radiation biological effects and eye optical and physiological properties.

Visual acuity restoration improvement after flash blindness by monocular shielding and ingestion of vitamin complexes containing ATP with pyridoxal, considering twilight vision.

Eye protection against laser visible and near IR radiation, using explosive mirror assembly (AD-731780).

Ocular laser protective filter with narrowband absorption, luminous transmission, and optical density of 3.5 (AD-735799).

Optokinetic thresholds in the normal monkey.

Eye movements to pairs of disparity stimuli with shape selection cues.

Personality correlates of lateral eye movement and handedness.

Bering's law of equal innervation and the position of the binoculars.

Parallel shift with affixed luminous disks test for induced vestibular stimulation effects on moon illusion, noting eye movement factors.

Fixation eye movements and the processing of visual information.

Parametric adjustment to a shifting target alternating with saccades to a stationary reference point.

Role of eye movements in the perception of apparent motion.

Involuntary eye movements during the performance of mental tasks.

Conjugate and divergent optokinetic eye movements in the rabbit, evoked by rotatory and translatory motion.

Visual sensitivity measurement in retinal areas function loss exposed to prolonged tilt (NASA-CE-17036).

Perception of real motion by human eye (ICH-DR-70-77).

Effect of maneuver and flight conditions on helicopter pilot eye movements.

Effect of retinal control and sleep deprivation on human eye movement behavior.

Industrial safety rules recommendations for lasers based on radiation biological effects and eye optical and physiological properties.

Visual acuity restoration improvement after flash blindness by monocular shielding and ingestion of vitamin complexes containing ATP with pyridoxal, considering twilight vision.

Eye protection against laser visible and near IR radiation, using explosive mirror assembly (AD-731780).

Ocular laser protective filter with narrowband absorption, luminous transmission, and optical density of 3.5 (AD-735799).

Optokinetic thresholds in the normal monkey.

Eye movements to pairs of disparity stimuli with shape selection cues.

Personality correlates of lateral eye movement and handedness.
The role of inhibition in the fatigue phenomenon

Changes of the catecholamine content in the brain of albino rats under overstrain caused by running in a rotating drum

Methods of measuring visual fatigue of workers engaged in tasks involving visual checks

Psychophysiological fatigue effect on human visual analyzer during microscopic assembly of semiconductor devices

Effects of low altitude high speed flight on physiological responses, cumulative fatigue, and decrease in performance capabilities of aircrews

Effects of prolonged wideband noise on functional condition of human organs

Boeing 707 rapid decompression at 25,000 feet, noting rivet hole fatigue damage

Effect of continuous noise and vibration on carbohydrate, fat, and protein metabolism in white rats

Tobacco tissue cultures with Apollo 12 lunar material, detecting endogenous steroids and fatty acids concentrations by gas chromatography and mass spectrometry

Glucose and fatty acid metabolic response during impending myocardial infarction in animals

Dose dependent hyperglycemia and hypolipemia response to pentobarbital sodium injection in rats from plasma glucose and fatty acid analysis

Myocardial infarction stress effect on serum cortisol, plasma free fatty acid and urinary catecholamine levels

Induction of ventricular arrhythmias by elevation of arterial free fatty acids in experimental myocardial infarction

Dietary regulation of fatty acid synthesis in rat liver and hepatic autotransplants

Human plasma free fatty acids relation to lactic acid concentration and maximum aerobic power, noting carbohydrate availability as exercise capacity limiter

Factors modifying biosynthesis of unsaturated fatty acids in hepatic endoplasmic reticulum

Regulatory mechanism of acetyl-CoA carboxylase activity in fatty acid biosynthesis

Hypothalamic stimulation conditioned negative fear reflex in cats before/after neocortex isolation

Group dynamic behavior in simulated panic situation

Measurement of radionuclide content in feces and urine of Apollo 12 and 13 astronauts

Determining radiation exposure of astronauts by gamma analyses of neutron activated fecal samples from Apollo 12 and 13 missions

Determining radiation exposure of astronauts by analysis of urine salts and raw feces in gamma ray spectrometers

Radiochemical technique for determining radionuclides present in urine and feces of Apollo 15 astronauts

Pressurized tank for feeding liquid waste into processing equipment
FLASH LAMPS

Effects of high intensity anticollision light pulses on physiological responses of instrument rated pilots and non-pilots [PAE-IA-72-61] p0030 872-26072

FLASH TUBES

U FLASH LAMPS

FLICKER

Darkness enhancement measurement in intermittent light as function of flicker frequency, describing experimental assembly [0064 A72-14873]

Light variation threshold amounts for flicker and flickering pattern detection as function of variation frequency [0215 A72-22615]

Flicker adaptation, discussing intermittent lights effect on apparent brightness [0236 A72-25181]

Flicker sensitivity and its measurement [0262 A72-36613]

Flare search testing and tasks to investigate practical applicability of blinking display coding techniques, noting reading speed reduction compared to steady display [0499 A72-81018]

FLICKER PULSE FREQUENCY

D CRITICAL FLICKER PULSE FREQUENCY

FLIGHT ALTITUDE

Low-altitude flight imposed psychophysiological stresses due to air turbulence discomfort, instrument dial vibration and ground-based navigational objects recognition difficulty [0340 A72-30747]

FLIGHT CLOTHING

Flight helmet optimal fitting technique, using automatic recordingaudiometer and noise source for acoustic leakage detection [0064 A72-14873]

Bioassay tests to evaluate fire resistance and thermal protection properties of lightweight fabrics used for flight clothing [AD-732429] p0206 872-17091

Flight glove material development for mechanical performance characteristics similar to leather, but flameproof and thermally stable [AD-737091] p0359 872-23090

FLIGHT CONDITIONS

Effect of maneuvers and flight conditions on helicopter pilot eye movements [AD-748270] p0565 872-12130

FLIGHT CONTROL

AT AUTOMATIC FLIGHT CONTROL

Unmanned system flight testing by test bed vehicle conversion to man operated mode, discussing T-33A jet trainer conversion to drone operation [0102 A72-16665]

Apollo manned mission real time ground support computer simulation for NASA flight controller training to maximize flight crew safety [0165 A72-20329]

Problems arising in the transfer of training from simulated to real control systems [0503 A72-81412]

Determination of optimal stability augmentation system for minimizing pilot rating for pitch tracking task [AD-730143] p0130 872-14138

Scheduling factor analysis for flight controllers of loop duration matched space flight simulations [AD-731765] p0195 872-16057


Contribution of reduced visibility and turbulence to loss of aircraft control and inadvertent aircraft maneuvers [0293 A72-25041]

Application of methods of simulation of instrument flying as means of reducing occurrences of spatial disorientation in flight [AD-730765] p0027 872-29090

Measurement of maximum isometric forces male subjects can exert at six locations of hand operated aircraft controls [AD-740930] p0530 872-30122

FLIGHT CREWS

Spaceship and aircraft crew survival after emergency landing in adverse environments, discussing water and food requirements, survival supplies and medical and first aid equipment [0099 A72-16629]

Transmeridian flight psychological effects on aircrews, discussing anxiety, stress, circadian rhythm disruption and sleep loss effects on performance deterioration [0108 A72-17816]

Crew members handling of emotionally disturbed aircraft passengers [0147 A72-18836]

Sleep pattern relation to duty hours of aircrew operating worldwide east-west routes [0162 A72-20178]

Physiological evaluation of crew piloted qualities, considering nervous/emotional stress, ECG, arterial pressure and breathing frequency recorded on simulator [0166 A72-20375]

Aerobatics evolution and treatments in armed forces aircrews, noting acetylcholine test [0176 A72-21270]

Hypertension, gout and lithiasis among operating aircrews, discussing diagnosis and relation to arteriosclerosis [0176 A72-21271]

Dazzle glare effects and acuity recuperation among aircrews during daytime and nighttime flights [0177 A72-21272]

Permeant flight unfitness attributable to air service, noting orthopedic traumatic sequelae, cardiovascular illnesses, psychological and ophthalmological causes [0176 A72-21273]

Custom fit oxygen mask for life support of crew members [0179 A72-21567]

Aircrews tolerance to cold water and life raft exposure, discussing prediction model based on thermal insulation effectiveness, assayed metabolins and body surface area and mass [AD-740276] p0227 872-23734

Work-rest schedules endocrine and metabolic effects on aircrews during 50 hour flight missions in C-141 aircraft, using urinary test techniques [AD-740992] p0227 872-23737

Fatigue factors in aircrew related to shift working and technological advances, discussing implications for industry and work-rest cycles [0334 A72-24988]

Hemodynamic criteria for physical fitness in airmen, discussing age dependent variations in heart beat, arterial pressure and body temperature [0278 A72-26907]

Flight crew training program, cost and quality, emphasizing safety and flight simulator application [0278 A72-26998]

Life support equipment and pressure suit, operational requirements from viewpoint of flight crews and test pilots [0283 A72-27516]

Pilot selection criteria for replacement air crew/POQ, using scored maneuver item correlations for flight crew and pilot training [0291 A72-28062]

Multivariate algorithms of optimal content and form for cardiovascular risk assessment in pilots and air transport personnel [0291 A72-28064]

Biomedical effects on air crews of chemical fire suppression agent Halon 1301/bromofluorocarbone/ during simulated aircraft cabin fires [0297 A72-28308]

USAF aircraft accidents/incidents involving aircrews with medical waiver on various visual, cardiopulmonary and other chronic pathological and psychiatric conditions [0394 872-25046]
FLIGHT FITNESS

Comparison of water cooled, convective air, and reverse flow system for flight personal conditioning noting hot environmental condition simulation [ARC-CP-1210] p0466 A72-25092

Statistical measurements of simulated stresses in ABC and other aviation personnel [FAA-AB-72-23] 0529 A72-30117

FLIGHT FATIGUE

Prolonged jet flight effect on passenger intrathoracic and intracellular fluid volumes from plasma, extracellular and total body water measurements, noting dehydration and foot swelling patient A72-17866

Psychological principles of active rest during long space flights p0492 A72-80446

FLIGHT FITNESS

Student naval aviator selection by multiple correlation techniques using noncognitive college and flight background questionnaire to reduce attrition rate p0199 A72-11704

Psychological tests of airmen with performance error histories, considering psychic characteristics for limited assignment p0054 A72-13723

Pilot in-flight incapacitation probability from airline reports, career termination studies and questionnaire responses p0064 A72-18870

Physiological evaluation of crew piloting qualities, considering somatosensory/visual stress, ECG, arterial pressure and breathing frequency recorded on simulator 0166 A72-20375

Flight personal statistical survey of clinical, physical and psychic causes of temporary and permanent flight service unfitness p0167 A72-20447

Permanent flight unfitness attributable to air service, noting orthopedic traumatic sequelae, cardiovascular illnesses, psychological and ophthalmological causes p0177 A72-21273

ECG diagnostics for arrhythmia assessment in flying personnel flight fitness examination p0295 A72-20294

Sight impairment-caused flight personal disqualification analyses, establishing eye disease structure, sight damage preconditions and ophthalmological practice inadequacies p0340 A72-30748

Medical factors in air racing accidents investigating drug, fatigue and gastrointestinal symptoms effects on pilot reaction to emergency p0343 A72-31089

Active leisure effect on pilot work efficiency, health maintenance and job longevity p0453 A72-38184

Professional capabilities activation of flying personnel, discussing psychological training for flight fitness p0453 A72-38184

The prediction of the condition of man during a space flight p0489 A72-40172

General and specific medical causes for grounding flying personnel - conferences [AGAB-CP-69-7] 0124 A72-14090

Clinical causes for permanent grounding of British air fleet crews 0124 A72-14090

Analysis of causes of temporary and permanent unfitness in Belgian Air Force 0124 A72-14093

Grounding of flight crew personnel due to nasal and aural disorders 0126 A72-14106

Possible diabetes mellitus in flight crews, Canadian Air Force 0126 A72-14109

Psychiatric reasons for permanent grounding of flight crew members in Royal Air Force 0127 A72-14110

Threshold values for spatial vision and distance perception of flight crew p0135 A72-15052

Statistics on number of US civil aviation personnel based on certificates issued to pilots and nombeld p0206 A72-17090

Effects of psychological conditioning on flight crews and passengers of commercial aircraft [NASA-TP-13591] 0240 A72-18070

Environmental control and life support systems for aircraft crews p0244 A72-18101

Median hearing levels determined for young airman entering training for occupations involving exposure to potentially hazardous noise p0247 A72-18123

Design, development, and testing of helmets for flight crews p0260 A72-19162

Listening levels preferred by flying personnel [AD-73A778] 0307 A72-20088

Set covering algorithms for extracted small matrices, applied to airline crew scheduling [TR-320-3004] 0308 A72-20099


Metropolitan requirements for entrance into naval flight training program [AD-735101] 0315 A72-21067

Handbook on aviation medicine for safe mental and physical health of aircrew during flight [AGAB-CP-154] 0301 A72-24038

Effects of high altitude and oxygen deficiency on psychomotor performance of flight crews [SOL-72-02] 0306 A72-24080

Aeromedical requirements and examination techniques for aircrews - conference [AGAB-CP-95-9-P2] p0394 A72-25048

Raised arterial blood pressure level in aircrew members p0395 A72-25054

Respiratory gas analyzer for aircrew pulmonary function measurements [NASA-SR-60370] 0395 A72-25057

...
Neuropsychiatric and other causes for permanent grounding of French Air Force flying personnel

p0125 72-14098

Ten year analysis of medical factors in flying and flight training in Greek Air Force

p0125 72-14099

Cardiac conditions as factor in evaluating flight fitness of Air Force personnel

p0125 72-14101

Description of routine cardiologic program to determine flight fitness for German Air Force

p0125 72-14102

Factors in medical suspensions of Air Force flying personnel

p0126 72-14105

Grounding of flight crew personnel due to nasal and aural disorders

p0126 72-14106

Nasal and aural disorders and flight fitness in German armed forces

p0126 72-14107

Opthalmological reasons for grounding pilots of German Air Force

p0126 72-14108

Psychiatric reasons for permanent grounding of flight crew members in Royal Air Force

p0127 72-14110

Psychological factors in pilot grounding in German Air Force

p0127 72-14111

Annotated bibliography on vestibular functions and aviation safety

p0521 72-30060

FLIGHT HAZARDS

Effective dose change after repeated radiation exposures as function of time intervals between fractions, evaluating space flight radiation hazards

p0625 72-12059

Medical and physiological hazards for SST passengers and crews, discussing cumulative cosmic radiation and high altitude decompression risks

p0266 72-25816

Stapedectomy postoperative complications as flying hazard, discussing pilot reaction to middle ear pressure changes

p0348 72-31094

Airline management and flight crew role in prevention, detection and dealing with airline pilot incapacitation in flight, noting physiological and psychological factor recognition

p0410 72-34555

Analysis of spatial disorientation occurrences among military pilots and classification according to types of aircraft and nature of accidents

p0392 72-25033

FLIGHT INSTRUMENTS

ATITUDE INDICATORS

AT AUTOMATIC PILOTS

AT HORIZON SCANNERS

A new concept of flight displays compatible with digital airborne computers.

p0504 72-41426

Human perceptual characteristic data relating to individual electronic flight display design

p0355 72-22622

Pupil diameter variations for measuring mental process involved in interpreting aircraft instruments

p0569 72-33089

FLIGHT PLANS

Automation in planning and execution of flights, considering navigation, communication, flight instruments monitoring, control/stabilization and warning systems

p0216 72-22780

FLIGHT RECORDERS

Magnetic tape recorded flight data analysis by PORTAN program

p0004 72-10215

FLIGHT RULES

AT INSTRUMENT FLIGHT RULES

AT VISUAL FLIGHT RULES

FLIGHT SAFETY

Pilot in-flight incapacitation probability from airline reports, career termination studies and questionnaire responses

p0064 72-14870

TRANQUILIZERS EFFECT ON PILOT IN-FLIGHT PERFORMANCE, DISCUSSING FLIGHT SAFETY, ALCOHOL POTENTIATION EFFECT, STUDENT PILOT STRESS REACTIONS AND SICKNESS TREATMENT

p0133 72-18158

Hypnotic drug use effect on pilot performance and flight safety, using glutethimide, flurazepam and placebo in double blind study

p0164 72-20188

Disorientation in naval aircraft accidents from psychophysiological and environmental factors, suggesting flight scheduling and training improvements

p0180 72-21574

Recovery or flight after retinal surgery

p0652 72-37879

Human organization and space flight stress endurance limits and manned space mission rescue capabilities requirements, considering cabin decompression, anoxia, radiation, onboard illness, etc

p0555 72-85218

Development of analytical model for determining probability of successful instrument landing and assessment of interaction of factors with flight crew

p0354 72-22099

FLIGHT SIMULATION

Flash blindness effects during flight simulation, investigating recovery time

p0015 72-11296

Pilot glide slope and locator tracking performance during successive in-flight simulated ILS approaches

p0291 72-28260

Pilot pursuit tracking performance under acceleration stresses, simulating high performance aircraft dynamics via human centrifuge equipped with simulated head-up predictive go-arounds

p0298 72-28320

Time perception distortion level in simulated and real flight due to task complexity-related pilot emotional stress

p0337 72-30392

The airborne visual simulation as an electronic display

p0502 72-81410

Improved ground trainers for flight simulation and pilot training

p0046 72-11098

Simulated flight tests of waste disposal system for use on manned spacecraft

p0141 72-15093

Effectiveness of tactile warning system under varying gravity loads and flight conditions

p0195 72-16650

Selection, training, and performance of cosmonauts during actual and simulated space flight - USSR

p0386 72-24096

Effects of flight stress on pilots time perception in simulated and real space flight

p0309 72-24113

Application of methods of simulation of instrument flying as means of reducing occurrences of spatial disorientation in flight

p0394 72-25046

Pilot tracking performance during in-flight simulated instrument approaches with single engine general aviation aircraft

p0404 72-25130

Simulation and training for spacecraft docking

p0406 72-27282

FLIGHT CONCEPTS SIMULATORS

Airplane safety enhancement by computer controlled flight simulator training of air crews, discussing Boeing 747 program

p0188 72-18839

Night Carrier Landing Trainer flight and carrier environment simulator for A-7 aircraft pilot training, discussing performance predictions from computer data analysis

p0150 72-19137

Hypoxia effect on aircraft pilot performance during altitudes and flight simulation, testing instrument landing approaches

p0164 72-20186
Flight crew training programs cost and quality, emphasizing safety and flight simulator application

Professional capabilities ‘activation of flying personnel, discussing psychological training for flight fitness

Flight acceleration stress effects on pathogenesis of illusory sensations and metabolic changes in human body

Effects of psychological conditioning on flight crews and passengers of commercial aircraft [NASA-TT-F-13951]

Crews and prevention of flight stress and evaluation of emotional stability of flying personnel [JRES-5306]

Prolonged space flight effects on auditory-, visual-, and vibrotactile-analyzers of spacecrews

Role of flight surgeon and physician-pilot in evaluation and treatment of jet fighter pilots

Operation of, and medical cases reviewed by, Navy Special Board of Flight Surgeons

Unannmed systems flight testing by test bed vehicle conversion to man operated mode, discussing T-33A jet trainer conversion to drone operation

Crew compartment vibration environment in B-52 aircraft during low altitude, high speed flight [AD-77327]

Automated techniques for measuring flight performance of helicopter trainees and pilots [AD-743155]

NY SPACE FLIGHT STRESS

Flight stress and performance of training in general aviation simulator compared with actual flight

Aircraft safety enhancement by computer controlled flight simulator training of air crews, discussing Boeing 747 program

Facility design for automated flight training systems, considering human factors and informational requirements

Flight crew training programs cost and quality, emphasizing safety and flight simulator application

Factor analysis of grades for successful performance skill identification during undergraduate and graduate jet pilot training

Flight stress and performance of training in general aviation simulator compared with actual flight

Anxiety relation to success or failure in naval flight training program

Pilot landing performance prediction criteria based on day and sight carrier qualification trials and flight training

EEG heart rate recording of helicopter instructor pilots during flight training tasks, administrative work, automobile driving and eating

Effects of instructions on measures of state and trait anxiety in flight students

Professional capabilities activation of flying personnel, discussing psychological training for flight fitness

Problems arising in the transfer of training from simulated to real control systems
Subject Index

Floating

Determination of state and trait anxiety in student drop outs from Naval flight training program

Development and evaluation of C-130 aircrew training program based on systems approach

Cost analysis of training and maintaining air pilots including costs of injuries and fatalities

Operational evaluation of methods for training pilot personnel on T-38 aircraft

Management procedures to improve training, quality, career development, and duty assignment of military pilots

Performance of 67 students receiving basic flight training

Medical elimination of students undergoing primary flight training

Human performance in transfer of instrument flight training with flight simulator

Inflatable and flotation of one man life raft after puncture to main wall

Flow Theory

Flow patterns

Flow rate

Flow velocity

Flow regulators

Flow measurement

Ballistocardiographic measurement of net cranial blood inflow during cardiac ejection

Hyocardial blood flow measurement value in ischemic heart disease assessment, discussing xenon 133 injection into coronary arteries

Xenon 133 method for coronary blood flow measurement during exercise, noting unsuitability for patients with coronary disease

Xenon 133 myocardial clearance method accuracy and reliability in determining high and low left coronary artery blood flow under different hemodynamic conditions

Hyocardial blood flow measurement by xe 133 clearance method after direct application of isotope into subendocardial and subepicardial layer of left ventricle

Coronary blood flow measurement in various hemodynamic conditions by argon technique, determining oxygen consumption and coronary vascular resistance

Reciprocal temperature changes in dogs during constant thermodilution for coronary sinus blood flow measurement

Muscle blood flow relation to oxygen consumption from measurements during bicycle ergometer exercises, using xe 133 clearance method

Electromagnetic velocity and flow measurements techniques application to cardiovascular patients, discussing utilization problems

Alternative heating local heat clearance probes for human muscle blood flow measurement

Ultrasonic Doppler flowmeter for instantaneous measurement of blood vessel flow velocity by averaging frequency shift over received signal power density spectrum

Assessment of regional myocardial temperature changes effect on blood flow measurements by heated cross-thermocouples in dogs

Coronary flow determination in experimental conditions with the use of radioactive xenon.

Cerebral rate role in brain protection against extreme elevations of systemic blood pressure, presenting goat cerebral blood flow measurement procedure

Flow Patterns

0 Flow Distribution

Flow rate

Flow velocity

Flow regulation

Flow measurement

Blood flow mathematical formulation, considering tissue constitutive equations, geometrical configurations, arterial wave propagation, etc

Flow Fields

Flow systems

Blood flow mathematical formulation, considering tissue constitutive equations, geometrical configurations, arterial wave propagation, etc

Flow measurement

Ballistocardiographic measurement of net cranial blood inflow during cardiac ejection

Hyocardial blood flow measurement value in ischemic heart disease assessment, discussing xenon 133 injection into coronary arteries

Xenon 133 method for coronary blood flow measurement during exercise, noting unsuitability for patients with coronary disease

Xenon 133 myocardial clearance method accuracy and reliability in determining high and low left coronary artery blood flow under different hemodynamic conditions

Hyocardial blood flow measurement by xe 133 clearance method after direct application of isotope into subendocardial and subepicardial layer of left ventricle

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Coronary flow determination in experimental conditions with the use of radioactive xenon.

Cerebral rate role in brain protection against extreme elevations of systemic blood pressure, presenting goat cerebral blood flow measurement procedure
Photos trapping in photosystem II of photosynthesis - The fluorescence rise curve in the presence of J-3,4-dichlorophenyl-1,1-dimethyleurea.

Quantitative determination of fluorescence within the eye without disrupting the integrity of the eyeball

Effects of pollutants and nutrients on growth of several freshwater and marine algae

Instantaneous and continuous blood flow velocity measurements by Doppler ultrasonic flowmeter using transcutaneous and implanted probes

Particle energies and angular fluence distributions for calculating dose rate conversions in human radiation exposure

Biodynamic models for monitoring changes in human cardiovascular system caused by impact shocks

Synthesis and application of redox polymers in sorption method for purifying water of organic impurities

Use of gas and liquid filters to sterilize spacecraft

Water soluble filter for trapping airborne microorganisms

Fluid mechanics of blood pulsatile flow applicable to blood flow

Improved hemoglobin concentration measurement in blood

Fluid mechanics of left ventricle model with mitral and aortic valves, showing ring vortex relation to diastole and closure

Fluid mechanical model for thorax response to air blast and impact shock

Performance of fluidic volume-cycled respirator - breadboard model A

Biological cell sorting by differential fluorescence generated electric signals via laser beams illuminated liquid streams

Comparing effects of positive G(+) acceleration on cardiovascular and respiratory functions in dogs under normal respiration in air, and when totally immersed in oxygenated fluorocarbon (NASA-CH-127262) for protection from chlorine trifluoride and elemental fluorine

Biomedical effects on air crew of chemical fire suppression agent Halon 1301 /bromotrifluoromethane/ during simulated aircraft cabin fires

Comparing effects of positive Gy acceleration on cardiovascular and respiratory functions in dogs under normal respiration in air, and when totally immersed in oxygenated fluorocarbon (NASA-CH-127262)

Biomedical effects on air crew of chemical fire suppression agent Halon 1301 /bromotrifluoromethane/ during simulated aircraft cabin fires
Free Energy

Wien intravascular effect on plasma carbon dioxide gradients near pulmonary capillary wall, discussing free energy requirements

Free Fall

Heart and respiration rate response to free fall parachuting, using FM/FM telemetry

Human and animal controlled selfrotating maneuvers during free fall, comparing theoretical motion analysis with photographs of falling cats

Exposure to extreme forces through human accidental and suicidal free falls

Free Radicals

Free radicals participation in cell membrane biopotential generation mechanisms, concerning properties of protein molecules with semiconductors

Biology and molecular biophysics progress review, discussing synthetic insensible systems, molecular pathology, free radicals and longevity

Quantitative evaluation of the kinetics of free-radical processes in animal organs under hypoxic conditions

Freeze-Drying

Rice preparation process consisting of cooking, two freezing-thawing cycles, and then freezing drying (NASA-CASE-ESC-13546-1)

Freezing

Freeze-etching techniques in electron microscopic investigations of biological cells molecular structure


Frogs

Clinical and laboratory examinations of workers exposed to trichlorotrifluoroethane vapor for long range health effects study

Thermal control design for research applications module / RF/ RF shuttle compatible payload carriers, using Freeon 21-water system (ASME PAPER 72-ENAV-31)

Effects of inhalation of Freeon 113 on laboratory animals (NASA-TH-K-67461) (p0087 72-13050)

Frequencies

RF Audio Frequencies

RF Extremely Low Frequencies

RF Low Frequencies

RF Microwave Frequencies

RF Radio Frequencies

RF Resonant Frequencies

RF Sweep Frequency

Frequency Amplifiers

Frequency Measurement

Methods for measuring the RF oscillation frequency in ultrasonic pulses of equipment for diagnostic ultrasonography

Frequency Modulation

RF Pulse Frequency Modulation

Parachuting and aerial towing physiological and force data FM telemetry for biomedical-response assessment leading to human engineered equipment improvement and midair retrieval system development

Respiration rate transmitter with miniature pressure transducer for measuring pneumograph variations in animals over RF-FM telemetry system

Frequency Response

Acoustic impedance of body surface at thorax and at abdomen, showing dependence on frequency and body pressure and position

Subject Index

Free energy system frequency response analysis for chemical regulation of breathing, using time domain method and step functions

Condenser microphones sensitivity and frequency response characteristics measurement at normal and elevated atmospheric pressures in hyperbaric chamber air and helium-air environments

Spatial frequency specificity of edge color aftereffects

Aircraft pilot seating protection from dynamic effects of varying air pressures with active vibration isolation, discussing human frequency response characteristics

Auditory flutter fusion frequency changes in humans during protracted visual deprivation

Linear-nonlinear-linear-transition as a function of frequency in the retinal response to light

Frequency response studies of human and avian respiratory regulation

Calculating the perceived level of light and sound

Friction

RF Flow Resistance

RF Sliding Friction

Friction Measurement

Frictional performance tests on rubber compounds containing additives for use in shoes

Friction Patterns

U Diffusion Patterns

Fruits

Frog Rana temporaria stridulated muscle tension response recording during sudden fiber length alteration, suggesting force generation mechanism

Glycogen content and distribution investigation in frog retina by histochemical analysis with intravascular injection of mixture preventing decomposition

Weightlessness effect on fertilized frog egg growth (DEPT-5003) (p0120 72-1406)

Ionizing radiation effects on response potentials of isolated frog retina to visual stimuli

Acid phosphatase distribution and functional differences of neurons in frog retina

Effect of weightlessness on fertilized eggs of grass frog, Rana pipiens (DEPT-1047) (p0303 72-20060)

Frogs

Development and evaluation of freeze dried vegetables to be used in Apollo food system (NASA-CB-115429) (p0205 72-18105)

Fruits

Chemical properties of carboxypeptidase C taken from orange leaves (NASA-TR-F-14186) (p0253 72-19100)

Fuels

RF Regenerative Fuel Cells

Fuel Consumption

Digital and analog simulation of deep space rendezvous by astronauts using self maneuvering units and considering human reactions and fuel consumption

Fuel Consumption

Chemical potential of antilicing additive for jet fuel

Fuel Economy

U Fuel Consumption

Fuels

RF Jet Engine Fuels

RF Liquid Rocket Propellants

Functional Analysis

RF Harmonic Analysis

RF Integral Equations

RF Vehicle Equations

Binocular eye function characteristics during isometropic and anisometropic vision
GALACTIC RADIATION:
FUNCTIONS (MATHEMATICS)
- DISTRIBUTION FUNCTIONS
- MONOTONE FUNCTIONS
- PROBABILITY DISTRIBUTION FUNCTIONS
- SPACE-TIME FUNCTIONS
- TRANSFER FUNCTIONS
- WEIGHTING FUNCTIONS

GALYAHIC SKIS BESPOHSB
- Classification of two anam strain as
  Aphanothece Taka or Anapis: Hassen
  (NASA-TT-F-14092)
- Examination and identification of microfossil
  growing on various materials in Queensland,
  Australia
  (TE-233)
- Funnel induced detrimental changes in
  human-environmental microfossils during 90 day
  test of advanced regenerative life support system
  (NASA-CR-112018)

GALYAHIC SKIS.
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resistance on breathing dense gas at exercise - Mechanics of breathing. p0511 A72-42489

GAS DETECTORS
Aviator breathing oxygen contaminant detector using gas chromatography and portable IR analyzers p0290 A72-28253
Development of fluoric-electronic system for monitoring concentration of carbon dioxide in respiratory gas en (AD-737003) p0355 N72-22106

GAS DISCHARGE COUNTERS & COMPUTERS
GAS DISSOCIATION
Cardiac output, arterial and mixed-venous O2 saturation, and blood O2 dissociation curve in growing rats adapted to a simulated altitude of 3500 m. p0506 A72-41623

GAS DYNAMICS
Gas dynamics and chemistry of lightning-produced shock waves / thunder/ in postulated polarordial reducing atmosphere, noting amino acid production p0824 A72-36443

GAS EXCHANGE
Acute, short and long term and life long high altitude hypoxia exposure effects on pulmonary gas exchange control and efficiency during physical exercise p0011 A72-10848
Digital computer simulation of circulatory and respiratory systems interaction model for oxygen and carbon dioxide gas exchange between pulmonary blood and alveolar air p0214 A72-22456
Aerobic work capacity indices of gas exchange pulse rate, pulmonary ventilation and acid base balance in runners, determining maximum oxygen utilization p0225 A72-23596
Blood flow stratification effect on alveolar gas exchange in liquid filled lungs in dogs from Xe 133 concentration measurements p0232 A72-24881
Distal changes in gas exchange and metabolic rate under normal and inverted day-night schedule conditions, studying human adaptation to shifted schedule p0328 A72-29318
Man, chlorellas and wheat plant; in life-supporting biological system, showing compatibility relative to gas and water exchange p0365 A72-31026
Pulmonary gas exchange in Andean natives at high altitude. p0425 A72-36570
A model of fluctuation alveolar gas exchange during the respiratory cycle. p0425 A72-36571
Influence of intracellular convection on the oxygen release by human erythrocytes. p0506 A72-41625
Cardiac output, neurodynamic and gas exchange variations as function of basal metabolites during bed rest in hypokinetic recumbent or antithoracotic position p0543 A72-40915
Gas exchange mechanism in lung alveolos and capillaries, discussing cell metabolism for oxygen uptake and carbon dioxide formation p0551 A72-44599
Pathogenesis of prolonged hypoxemia and effect on gas exchange in dogs and rats p0705 N72-11990
Exhalation, gas exchange, and carbon dioxide content in humans during passive orthostatic tests p0708 N72-12001

GAS FLOW
BT AIR FLOW
Method and apparatus for analyzing respiratory gas flow rate and inspiration-expiration frequencies in real time (NASA-CASE-85C-1336-1) p0310 N72-20113

GAS LASERS
NT CARBON DIOXIDE LASERS
Hydrogen monochromatic retinal image diameter estimation during exposure to Ar and He-Ne laser irradiation, using microphotometer scans
GASEHO6 FISSIO6 REACTORS

Cardiac hypertrophy, capillary and muscle fiber density, muscle fiber diameter, capillary radius and diffusion distance in the myocardium of growing rats adapted to a simulated altitude of 3500 m.

Determination of the diffusional capability of gases by the method of delayed respiration

Oxygen diffusion under conditions of cerebral hypoxia

[FAA-AM-72-3]

GASEHO6 FISSIO6 REACTORS

Space crew radiation dosage calculation from mass mission high altitude can core nuclear rocket engine exhaust plane fission fragments

GASES

NITROGEN

UT CARBON DIOXIDE

UT CARBON MONOXIDE

UT GAS MIXTURES

UT HELIUM

UT HYDROGEN

UT INTERSTELLAR GAS

UT LIQUID GASES

UT LIQUID OXYGEN

UT NITROGEN

UT OXYGEN

UT PROXEN

UT RARE GASES

GASTROINTESTINAL SYSTEM

UT INTESTINES

Parenthetically introduced protein hydrolylates and amino acids influence on human pancreas enzyme secretion activity

Age-induced long-term memory changes in animals

Effect of digestive tract receptor stimulation on vestibular acoustic reflex reactions of rabbits

Biotelemetry measurement of rhythms in gastrointestinal system of animals and human beings

Gastric satiety in normal people at rest and during physical exercise

[NASA-TT-F-14207]

GAUSSIAN NOISE

UT RANDOM NOISE

GENEPO6T

Acrylamide polymerization - New method for determining the oxygen content in blood

GENEFLY6

Analyzing manual control maneuvers of Gemini-10 mission to measure describing function of pilot, vehicle and pilot-vehicle combination

GENEFLY6 PROJECTS

Flight summary of biomedical sciences experiments in Gemini Program

[NASA-TT-X-58074]

Radiographic study of bone mineralization in Gemini crewmembers

[EXPT-4006]

GENEFLY6 7 FLIGHT

Metabolic weightlessness effects on calcium and nitrogen balance in skeletal and muscular systems of spacecrew on Gemini 7

[EXPT-4007]

GENERAL AVIATION AIRCRAFT

General aviation patient transportation, investigating military helicopter aircrft performance

Dynamic deceleration anthropomorphic dummy tests of general aviation occupant lap belt/shoulder harness restraint systems

[FAA PAPER 70-328]

Flight stress and performance of training in general aviation simulator compared with actual flight

[FAA-AM-72-3]

FAA program for revision of aviation aircraft maximum allowable control forces specifications, taking into account female pilots capabilities

SUBJECT THREE

General aviation crashworthy personal restraint systems, discussing strap take-up devices, comfort, fit and ease of use

Intoxicating liquor and the general aviation pilot in 1971.

Use of shoulder harness in general aviation aircraft to prevent or minimize injury during crashes

[FAA-AM-72-3]

Performance of fiberglass instrument glare shield an protection against head injury during general aviation aircraft accidents

[FAA-AM-72-7]

Pilot tracking performance during in-flight simulated instrument approaches with single engine general aviation aircraft

GENERIC DYNAMICS MILITARY AIRCRAFT

U MILITARY AIRCRAFT

GENETIC CODE

Molecular evolutionary changes in amino acids of proteins due to random fixation, comparing human and fish hemoglobin chains

[FAA-AM-72-3]

Amino acid code comparisons of polypeptide chains of globins due to mutations during vertebrate evolution from ancestral gene

Site binding model of nucleic acid-protein interactions for chemical evolution and genetic code studies

Nucleic acid, protein and cell primordial sequence, ribosomes and genetic code for life origin, discussing experiments on homopolymers acids reaction with mononucleotides

[FAA-AM-72-3]

Genetic code numerical structure association with logarithmic optimization rule for hierarchy of structures from molecular biology experiments

[FAA-AM-72-3]

Empirical support for a stochastic model of evolution.

[FAA-AM-72-3]

Amino acid substitution correlation with genetic code in human, bovine, ovine, porcine and salmon calmodulins, suggesting mutation occurrence time during evolution

[FAA-AM-72-3]

Recently published protein sequences.

[FAA-AM-72-3]

Inheritance of lactate dehydrogenase and malate dehydrogenase enzymic diseases in human erythrocytes

[NASA-TT-F-14016]

GENETICS

UT GENETIC CODE

UT MUTATIONS

Retinoblast light/darkness responses phylegentic variations, discussing reti nal elements structural and functional development in fishes and amphibians

[FAA-AM-72-3]

Genetic organization emergence, considering pretranslational evolution in nontranslational protein synthnesis, nucleic acid evolution and gene origin

[FAA-AM-72-3]

Evolutionary significance of primary amino acid or nucleotide base sequences of DNA within various phylogenetic groups

[FAA-AM-72-3]

Genetic aspects of the blunted chemoreflex ventilatory response to hypoxia in high altitude adaptation.

[FAA-AM-72-3]

Statistical analysis of erythrocyte acid phosphatase inheritance in French families based on starch gel electrophoresis of hemocytes

[NASA-TT-F-14015]

Anoxia and genetic strain effects on ionizing radiation damage and repair of deoxyribonucleic acid in Escherichia coli

[ST-2004-35]

Enzyme synthesis and genetics

[FAA-AM-72-3]
SUBJECT INDEX

Teratogenic and genetic effects in Drosophila caused by space environment
(TeXp-P-11074) p0302 A72-20052

Genetic effects of space flight and gamma radiation on Neurospora crassa
(TeXp-P-10371) p0304 A72-20668

GEBEBBY SYSTEM
GT BLAEDER
GT TESTES
GT STERUS
GEOBMSOTRCS
U GEOPHYSICS
GEOCHEMISTRY
GT VITERALGEOSCHEMISTRY
GEOECBMS
Analysis of precautionary measures for use with geometer which emits optical beam found to be potential ocular hazard
(AD-729345) p0138 A72-15079

GEOLOGY
GT PETROLOGY
GT VOLCABOLOGY
GEOBECBG EFFECTS
GEOBECBH BOSLATIONS
Geo electromagnetic field perturbation biological effects, studying electromagnetic store field energy levels and magnetic flux variables relation to human sensitivity thresholds
p0289 A72-28210

GEOBMSGIC STORBS
U MAGNETIC STORMS
GEOBMSGICALLY TRAPPED PARTICLES U RADIATION BELTS
GEOBMSGODYNAMICS
U RELATIVITY
GEOBMOS
Book on origin of life by natural causes covering physical geo logy, astronomy, biogenesis and evolution of life stages, orogenetic cycle, fossils, and primaeval atmosphere
p0151 A72-19165

GEOBOPIS
Gravity effects on plant organ orientation with respect to force direction from Chara chizoloid cell statoliths
p0366 A72-31932

GEBDEAB ARC BEATERS
U BSCATING EQUPMENT
GEBDEABICS
Hazards of bed rest as therapeutic measure
( NASA-TE-P-16349) p0563 A72-32116

GEBDEABICS
U BSCACHOCIDES
GEBDEABATION
Chromosome aberrations and germination speed in Sorus 5 carried oat seeds, noting stimulating effect by preflight ethylene treatment
p0102 A72-16777

Relative biological effectiveness of high X ray doses given to radish seeds, studying irradiation rate effect on germination probability
p0214 A72-22524

Chromosome aberrations and germination speed in Sorus 5 carried barley seeds, noting stimulating effect by preflight ethylene treatment
p0177 A72-35280

Physiology of wheat seed germination and seedling growth during orbital flight
(TEmp-P-1008) p0302 A72-20056

Thermal activation and relative humidity effects on spore germination
( NASA-CS-12725) p0438 A72-27077

GEBDEABELIS
Gibberellic acid effects on Chlorella alga growth rates, using algal suspension optical density as measuring technique
p0049 A72-12975

GLANDS (ANATOMY)
GT ADRENAL GLAND
GT HEPATOB OD GLANDS
GT GONADS
GT PANCREAS
GT PARATHYROID GLAND
GT PITUITARY GLAND
GT TESTES
GT THYROID GLAND

Hepatobodical mechanism of high frequencies palestalin discharge of human sweat glands
p0150 A72-19440

GLASS
Dazzle glare effects and acuity recuperation among aviators, noting civil and military aircraft accidents during daytime and nighttime flights
p0177 A72-21272

GLASS
GT GLASS FIBBBS
GLASS FIBBBS
Performance of fiberglass instrument glare shield as protection against head injury during general aviation aircraft accidents
(pAA-AK-72-7) p0366 A72-24095

GLUCONE
Ocular and induced visual effects of systemic and topical drugs in terms of eye neuroanatomy and pharmacology, stressing glaucoma therapy
p0511 A72-42499

GLADE LANDING
Pilot glide slope and localize tracking performance during successive in-flight simulated ILS approaches
p0291 A72-28260

GLOBEBULI
Thyroglobulin content and variations in the proteolytic activity of the thyroid gland tissue in animals under hypoxic conditions
p0465 A72-39727

Effects of the space flight environment on man's immune system. I - Serum proteins and immune system. II - Serum proteins and immunoglobulins.
(p0511 A72-42499

Quantitation of serum proteins on whole blood-electroimmuno diffusion technique applicable to capillary blood
p0511 A72-42495

GLOBEBULI
Acute constriction and release effects on kidney glomerulotubular balance in saline- and water-loaded dogs, studying sodium reabsorption changes
p0175 A72-21084

GLOTTIS
Plethysmographic and laryngoscopic investigation of glottis opening and airway resistance relation to lung volume during panting and continuous slow expiration
p0270 A72-26611

GLOVES
Flight glove material development for mechanical performance characteristics similar to leather, but flameproof and thermally stable
(AD-737099) p0359 A72-23090

GLUCOSE
Short term response of insulina, glucocoe, growth hormone and corticosteron to acute vibration stress in rats
p0014 A72-11289

Hypoxia, hypercapnia and hyperoxia effects on active glucose transport in rat small intestines
p0059 A72-16633

Glucose and fatty acid metabolic response during impending myocardiac infarction in animals
p0162 A72-20175

Dose dependent hyperglycemla and hypolipemia response to pentobarbital sodium infection in rats from plasma glucose and fatty acid analysis
p0175 A72-21187

Measurement of neurovascular excitability variations in course of acute diabetic nutritional imbalance in pigeons
( NASA-TE-P-14035) p0368 A72-10078

Effects of atmospheric composition on intestinal glucose metabolism in rats
p0121 A72-14071
Inhibitory effects of glucose on biosynthetic respiratory adaptation of prothene by yeast (NAS-A-60330) p0435 A72-20055
Evolution of endogenous metabolism of Baker's yeast (Saccharomyces cerevisiae) as function of oxidized exogenous substrate (acetate, ethanol, or glucose) (NAS-A-T7-P-14359) p0470 A72-26073

GLUCOGENES
Acute and chronic hypercapnia's effects on lactate, pyruvate, alpha-ketoglutarate, glutamate and phosphohistidine contents of rat brain p0054 A72-13677

GLUTAMINES
Succinate and glutathione as protective agents against chronic effects of hyperbaric oxygen toxicity in rats p034 A72-31091

GLYCOGENES
Daily prolonged exercises effects on human muscle glycogen utilization, noting reduced lactate accumulation and increased free fatty acid levels p0069 A72-15213
Glycogen content and distribution determination in frog retina by histochemical analysis with intravascular injection of mixture preventing decomposition p011 A72-17987
Biochemical analysis of cat brain regions for gamma-aminobutyric, aspartic and glutamic acids and phosphokinase concentrations during paradoxical sleep deprivation p0367 A72-33559
Muscle metabolites of ATP, CP, glycogen and lactate at rest and during submaximal and maximal exercise p0490 A72-40421
Localization and dynamic changes of glycogen in frog retina adapted to darkness or light, I, II. p0548 A72-44377
Increased glycogen levels in embryonic mice livers after transverse acceleration p0250 A72-19060

GLYCOLYSIS
Anaerobic glycolysis and specific gravity of red blood cells in rats exposed to pure oxygen at 600 torr p0016 A72-11297
Preliminary energy metabolization in biochemical evolution, concerning anaerobic oxidation of pyruvate and acetate to acetate and ATP p014 A72-18799
Yeast glycolytic pathway oscillations related to concentration of diphasophoribose nucleotide and other metabolites, noting analogy to behavioral and physiological rhythms p0158 A72-19581
Substrate utilization and glycolysis in the heart. p0412 A72-39977
Muscle metabolites during isometric exercise performed at constant force. p040 A72-80425
Relation between mitochondria and glycolysis (NAS-A-T7-P-14363) p0033 A72-10072
Glycolysis in fibroblasts of rat embryos infected with adenoviruses, and maxogenic adenovirus type 12 p0087 A72-13062
Lactate-pyruvate and redox state responses of blood and tissue in chronic hypercapnia (AT-730720) p0314 A72-21057
Glycolytic metabolic effects from responses of blood lactate-pyruvate and redox state to chronic exposure to 3 percent CO2 (AT-730712) p0314 A72-21059

GOGGLES
Google device for measuring visually perceptive direction of space (NAS-A-CR-125859) p039 A72-20102

GONADS
Human male gonadotropin secretion relation to sleep stages, using electrophysiological, recording and radioimmunoassay techniques p103 A72-17128
Changes in the pituitary-thyroid and in the pituitary-gonadal systems under conditions of functional loading and of physiological immobilization. p0551 A72-48823

GRADIENTS
NTH PRESSURE GRADIENTS
NTH MAGNETORECEPTORS

GRFETYING
Histological analysis of hypoxia exposure effects on mouse skin homograft reaction due to lymphatic organ function changes p0514 A72-42675

GRAINS (FOOD)

GRATING
Effect of weightlessness on growth and orientation of roots and shoots of wheat seedlings (SEP-T-1020) p0302 A72-25056
Physiological of wheat seed germination and seedling growth during orbital flight (SEP-T-1096) p0302 A72-25056
Biochemical analyses of wheat seedling endosperms under weightless conditions of Biosatellite 2 (SEP-T-1938) p0303 A72-25058

GRAVITATION
Ti leaching from granitic rocks by Penicillium, simplicissimum, discussing extraterrestrial life detection p0495 A72-15809

GRAPHS (CHARTS)
Literature survey and graphs of human ocular aborption in visible spectrum (SEP-1972-8) p0391 A72-28061

GRAVITATIONS
Human effects on human visual resolution of horizontal and vertical gratings resulting from early abnormal visual inputs due to astigmatism p0303 A72-42438

GRAVITATIONAL (SPECIFIC)
Human visual acuity measured by chromatic square wave gratings under luminance conditions (AD-734931) p0351 A72-21063

GRAVITORECEPTORS
BY OCELLUS ORGANS
Soviet book on gravitation receptor covering evolution of structural, cytotoxic, and functional organization in invertebrates /statoctat/ and vertebrates /vestibular apparatus/ p0055 A72-13850
Vestibular system functional relationship to postural reflex mechanism involving labyrinth and gravireceptors responses p0516 A72-42788
OPA A orbital flight recording of bullfrog vestibular gravity sensor nerve fiber pulses for assessing acclimacy of artificial gravity during prolonged weightlessness p0540 A72-43391
Mathematical model for acceleration forces acting on receptor formations in human vestibular analyzer during physiological head movements p0122 A72-14079

GRAVITATION
BY ARTIFICIAL GRAVITY
BY REDUCED GRAVITY
GRAVITATIONAL EFFECTS
Nice tolerance to long term accelerations or supergravities, detailing physiological consequences p0012 A72-10939
Human centrifuge tests for gravisensorial force effect on occular counterrolling in normal and deaf subjects p0022 A72-11956
Gravitational biology theory problems, discussing possibility of applying relativistic phenomena to living organisms in inertial or inertialless systems p0023 A72-12016
Acceleration force simulation for altered weight effect on animal tolerance to restraint, discussing body mass loss, reduced lymphocyte count and disorientation p0064 A72-14866
Soviet book on gravitational effects on animal evolution covering land and aqueous conditions adaptation and weightlessness in space p0109 A72-17128
Simulated gravity environment tests of vertical jump features, recording work performed, body center of gravity upward velocity, potential and kinetic energy changes p0262 A72-27479
Far outerizer design for human subject blood oxygen saturation measurement during increased g-loads.

Tilt table test for gravitational stress effects on human pulmonary capillary blood flow.

Thromboelastographic and coaglographic studies of gravitational effects on blood coagulation in cats under acceleration stress.

Hypergravity effects on beta spatial orientation, noting resistance to head-pelvis and pelvis-head accelerations.

Gravity effects on plant organ orientation with respect to force direction from Chara rhizoid cell-statoliths.

Effects of combined O-G simulation and hypergravity on egg of the nematode, Ascaris lumbricoides.

Vertebral behavior of fish during diminished g-force and weightlessness.

The influence of clinostat rotation on the fertilized amphibian egg.

Hypothermia and resistance of mice to lethal exposures to high gravitational forces.

Animal vessel adaptation to gravitational overloads in head-pelvis direction.

Subgravity effects on sea urchin egg fertilization and development.

Effects of gravity on neurosecretory physiology in fresh water teleost fish.

Hormonal effects of gravitational forces on peripheral dog retina related to conduction velocity groups.

Gravitational stress effects on neurons in the nervous ganglia of cats.

Acceleration, vibration, and subsequent irritation effects on R and P metabolism in digestive system organs of rabbits.

GREAT POLAR CAPS

POLAR CAPS

GREENHOUSE EFFECT

Ozone depletion and chlorine in the atmosphere, liquid water and greenhouse effect source.

GEYERING (BATIONAL REMOVAL)

Prototype and production versions of grinder for biological assay.

GROUND BASED CONTROL

ST AIR TRAFFIC CONTROL

Scheduling factor analysis for flight controllers of long duration massed space flight missions.

GROUND CREWS

Ground and flight crews coordinated effort in Apollo mission operations, noting experts on ground and space crew spot judgments capability.

GROUND RESONANCE

G RESONANCE

GROUND RUSH-UP

GROUND TESTS

GROUND SQUIRRELS

RNA content changes in ground squirrel brain during active and hibernation states.

GROUND SUPPORT EQUIPMENT

Liquid and gaseous oxygen accidents involving space, aircraft, and ground systems.

GROUND TESTS

Program for ground-based manned tests of regenerative life support systems.
Hair

Hair radioactivity as measure of exposure to radionuclides, using both shaved and plucked hair.

Halides

Halogen compounds ( 

Halides: 

Chlorides: 

Fluorides: 

Iodides: 

Isotopes: 

Halogens: 

Isolation of extremely halophilic bacteria, using acid production from various sugars as carbohydrate metabolism index.

Habitability

Future spacecraft habitable compartment layout from psychophysiological viewpoint, considering human visual and motor field parameters and crew members social needs.

Habits

Factors affecting migratory habits and orientation of sea turtles.

Habituation (Learning)

Experiential auditory stimulation frequency effects on human orienting reaction habituation and sleep onset.

Heat acclimatization, work habituation and exercise effects on body thermoregulation, measuring tympanic temperature, sweat rate and oxygen intake.

Visual cortex repetitive stimulation effects on primary response habituation in young normal rabbits and adults with septum pellucidum lesion.
Optimal cylindrical handle size determination by muscle electromyography, considering gripping task, routine performance and fatigue test

Handicapped/non-injured individuals with paraplegia can use<br>controlled oral airway devices during Standard oxygen masks.<br>Appropriate modeling of brain tissue and skull bone mechanics<br>is essential for understanding injury mechanisms in<br>head-impact crashes.

Dynamic response and functional state of-humans<br>subjected to harmonic and random<br>vibrational excitations, discussing biodynamic<br>nonlinear oscillatory system model construction

Generalization of harmonic analysis for detection<br>of loss-permend biohythics from short records.

Analytical model for nonpenetrating impact caused<br>head injuries, evaluating protective device<br>effectiveness via energy absorption characteristics

Topographical distribution of CHV on human scalp<br>during analogous sustained and delayed response tasks

Analytical model for nonpenetrating impact caused<br>head injuries, evaluating protective device<br>effectiveness via energy absorption characteristics

Deceleration attenuation effectiveness of airbag<br>restraint systems compared with seat<br>belt-shoulder harness for aircraft occupants

Effectiveness of restraint equipment in<br>controlling head impact forces and body<br>kinematics in enclosed aircraft areas

Performance of fiberglass instrument glare shield as<br>protection against head injury during general<br>aerial aviation accidents

Mathematical models for impact studies including<br>animal and head injuries

Effects of external impulsive head loads on humans

Mechanical impedance model for human and primate<br>vestibular apparatus from mathematical<br>analysis of human head movements,

discussing notion sickness onset

Position constancy and motion perception tests of<br>head movement feedback calibration of perceived<br>direction of optical motions

Human vestibular stability under frontal and<br>vertical field displacements, discussing eye<br>movements and adaptation learning

Subjectivity and motion perception of<br>head movement feedback calibration of perceived<br>direction of optical motions

Fictive eye movements and the processing of<br>visual information.

Target distance and adaptation in distance<br>perception in the constancy of visual direction.
Clinical response to nitroglycerin therapy
correlation with coronary angiography and
diagnostic test for coronary artery disease in
patients with chest pain

Coronary artery disease and vessel involvement
severity predictions from electrocardiographic
and vectorcardiographic patterns of anterior,
wall myocardial infarction

ECG evidence of myocardial ischemia in patients
without arteriographic evidence of coronary
artery disease, studying myocardial oxygen supply

Idiopathic subvalvular aortic stenosis
characterized by muscular or membranous
obstruction in left ventricular outflow tract,
discussing diagnostic importance for pilots

Abnormal ECG in healthy man due to former disease,
syndrome-like appearance, congenital anomalies,
hereditary disease or functional aberrations

Myocardial infarction effects on drug tolerance
and hemodynamic changes due to digitalis doses,
discussing toxic arrhythmias

Atheromas, chest pain and arrhythmia -
Conference, Brussels, October 1970

Hypertension and blood sugar and lipid level
Coronary artery disease and vessel involvement
Idiopathic subvalvular aortic stenosis
ECG evidence of myocardial ischemia in patients
Clinical reliability and normal variations of
Atheromatosis, chest pain and arrhythmia -
Coronary heart disease - Conference, Frankfurt am
Main, Germany, January 1970

Coronary angiography findings in 261 patients of
different age groups compared with history of
angiographic risk factors and ECG at rest

Exercise ECG correlation to morphological patterns of
selective cinecoronary arteriography and
ventriculography, revealing significant
information on occlusion and stenosis

Myocardial blood flow measurement value in
In ischemic heart disease assessment, discussing
Xenon 133 injection into coronary arteries

Clinical assessment of degree of obstruction from
coronary arteriograms of ischemic and atherosclerotic
heart patients

Ballistocardiographic and angiographic
correlations of ventricular function in patients
with idiopathic hypertrophic subaortic stenosis

Familial cardioamyopathy detection by
electrocardiography noting arrhythmias,
ventricular hyperactivity, abnormal Q waves and
intraventricular conduction defects

Human epicardial arterial circulation platelet
aggregates role in sudden coronary death,
discussing relation to atheroembolic stenosis
and acute thrombosis

Doppler cardiodynamics determination of human
cardiovascular velocities in patients with heart
diseases, discussing impaired left ventricular
function detection

Asymptomatic hypertrophic cardiomypathy symptoms
simulating mitral stenosis, suggesting
electrocardiography, chest X ray and hemodynamic
studies as diagnostic procedures

Sudden death in myocardial infarction, discussing
heart electrical stability, neural arrhythmias and cardiac conduction disturbances

Electrocardiographic age trends in adult healthy
populations, discussing diagnostic implications and
overweight, exercise and latent coronary
artery disease influence

Cardiac murmurs level dependence on blood stream
Revisiting number, tracing cardiac noise origin to
blood turbulence

Aerobic patient postexercise electrocardiograms,
showing S-T segment depression correlation to
subsequent coronary heart disease

Dynamics of DNA, RNA and protein synthesis in
mitochondria and nuclei of heart muscles of rats
during adaptation to high altitude hypoxia

Heart diseases

Peripheral vasoconstrictor tachycardia initiated
by minus beats in patient, observing A-V nodal
conduction delay by ECG and electrophysiological
methods

Ventricular ectopic arrhythmia from treadmill
exercise in patients observed during ECG
monitoring

Incidence rates of myocardial infarction and
sudden death from coronary heart disease for
adult black and white populations in Nashville

Arhythma relations to coronary artery disease,
discussing conduction defects, sudden death
prognosis, heart preservation and digitalis as
antiarrhythmic agent

Coronary heart disease - Conference, Frankfurt am
Main, Germany, January 1970

Coronary angiography findings in 261 patients of
different age groups compared with history of
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cardiovascular velocities in patients with heart
diseases, discussing impaired left ventricular
function detection

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simulating mitral stenosis, suggesting
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overweight, exercise and latent coronary
artery disease influence

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Revisiting number, tracing cardiac noise origin to
blood turbulence

Airplane pilot postexercise electrocardiograms,
showing S-T segment depression correlation to
subsequent coronary heart disease

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correlation with coronary angiography and
diagnostic test for coronary artery disease in
patients with chest pain

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syndrome-like appearance, congenital anomalies,
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Clinical reliability and normal variations of
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Coronary heart disease - Conference, Frankfurt am
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different age groups compared with history of
angiographic risk factors and ECG at rest

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selective cinecoronary arteriography and
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information on occlusion and stenosis

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In ischemic heart disease assessment, discussing
Xenon 133 injection into coronary arteries

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coronary arteriograms of ischemic and atherosclerotic
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correlations of ventricular function in patients
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electrocardiography noting arrhythmias,
ventricular hyperactivity, abnormal Q waves and
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aggregates role in sudden coronary death,
discussing relation to atheroembolic stenosis
and acute thrombosis

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cardiovascular velocities in patients with heart
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function detection

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simulating mitral stenosis, suggesting
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overweight, exercise and latent coronary
artery disease influence

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Revisiting number, tracing cardiac noise origin to
blood turbulence

Airplane pilot postexercise electrocardiograms,
showing S-T segment depression correlation to
subsequent coronary heart disease

Clinical response to nitroglycerin therapy
correlation with coronary angiography and
diagnostic test for coronary artery disease in
patients with chest pain

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severity predictions from electrocardiographic
and vectorcardiographic patterns of anterior,
wall myocardial infarction

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without arteriographic evidence of coronary
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obstruction in left ventricular outflow tract,
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syndrome-like appearance, congenital anomalies,
hereditary disease or functional aberrations

Myocardial infarction effects on drug tolerance
and hemodynamic changes due to digitalis doses,
discussing toxic arrhythmias

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Idiopathic subvalvular aortic stenosis
ECG evidence of myocardial ischemia in patients
Clinical reliability and normal variations of
Atheromatosis, chest pain and arrhythmia -
Coronary heart disease - Conference, Frankfurt am
Main, Germany, January 1970

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different age groups compared with history of
angiographic risk factors and ECG at rest

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selective cinecoronary arteriography and
ventriculography, revealing significant
information on occlusion and stenosis

Myocardial blood flow measurement value in
In ischemic heart disease assessment, discussing
Xenon 133 injection into coronary arteries

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coronary arteriograms of ischemic and atherosclerotic
heart patients

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correlations of ventricular function in patients
with idiopathic hypertrophic subaortic stenosis

Familial cardioamyopathy detection by
electrocardiography noting arrhythmias,
ventricular hyperactivity, abnormal Q waves and
intraventricular conduction defects

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aggregates role in sudden coronary death,
discussing relation to atheroembolic stenosis
and acute thrombosis

Doppler cardiodynamics determination of human
cardiovascular velocities in patients with heart
diseases, discussing impaired left ventricular
function detection

Asymptomatic hypertrophic cardiomyopathy symptoms
simulating mitral stenosis, suggesting
electrocardiography, chest X ray and hemodynamic
studies as diagnostic procedures

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Electrocardiographic age trends in adult healthy
populations, discussing diagnostic implications and
overweight, exercise and latent coronary
artery disease influence

Cardiac murmurs level dependence on blood stream
Revisiting number, tracing cardiac noise origin to
blood turbulence

Airplane pilot postexercise electrocardiograms,
showing S-T segment depression correlation to
subsequent coronary heart disease
HEART FUNCTION

age/obesity parameters

Stress vectorcardiography quantitative analysis of ECG response to treadmill exercise test to establish diagnosis criteria for coronary heart disease

Correlation between ergometry, hemodynamic indices in flight crew personnel

Prognostic value of an electrocardiographic sign

Changes of the mitral echocardiogram with ageing

Interrelationship of hemodynamic alterations of the right atrium and ventricular function

Serum cholesterol, phospholipid and lipoprotein levels relation to atherosclerotic heart disease occurrence in USF personnel

Clonidine treatment for atherosclerotic cardiovascular disease prevention among Sabena flying personnel

Quantitative angiocardiography of abnormal left ventricular function and contractile spectrum in ischemic heart disease patients

Coronary heart disease discriminatory factors from comparison with healthy controls, noting diastolic hypertension significance

Platelet electrophoretic mobility response to adenosine diphosphate /ADP/ in patients with coronary artery disease

Platelet aggregates role in intramyocardial vessel occlusion in patients dying suddenly of coronary artery disease

Serial ECG change detection and description in myocardial infarction survivors, using computer analysis to find best diagnostic discriminants from multiple criteria

Exchangeable potassium in heart disease - long-term effects of potassium supplements and amiloride

Myocardial ultrastructure in acute and chronic hypoxia

Morphological alterations in the ischemic heart

Accumulated complete right bundle branch block without overt cardiac disease - clinical and hemodynamic study of 37 patients

Work capacity and physiological responses to maximum exercise in 54 year old men in relation to heart disease and cardiovascular hazard studies

Correlation between ergometry, ballistocardiography and coronary angiography in 267 patients

Changes of the mitral echocardiograms with ageing and the influence of atherosclerotic risk factors

Echocardiography in the diagnosis of congenital mitral stenosis and in evaluation of the results of mitral valvotomy

The incidence of hypertension and associated factors - the Israeli ischemic heart disease study

Prognostic value of an electrocardiographic sign in acute myocardial infarction

Interrelation of hemodynamic alterations of valvular heart disease and renal function - influences on renal sodium reabsorption

Influence of isotropic alteration on the severity of myocardial ischemia after experimental coronary occlusion

Hemodynamic indices in flight crew personnel during hypotensive sickness and atherosclerosis of coronary arteries

The mitral apparatus - functional anatomy of mitral regurgitation

Relationship of pulmonary artery to left ventricular diastolic pressures in acute myocardial infarction

SUBJECT INDEX

an indirect method for evaluation of left ventricular function in acute myocardial infarction

Vectorcardiographic and electrocardiographic differentiation between our pulmonary and anterior wall myocardial infarctions

The standard 12-lead scalar electrocardiogram - an assessment of left ventricular performance

Continuous recording of His bundle electrogram during selective coronary cineangiography in man

Analysis of intracavitary electrocardiograms through a saline bridge in the diagnosis of cardiac arrhythmias

The scoliosis of congenital heart disease

Clinicalcardioangiographic correlations in aortic pectus with and without myocardial infarction

Longevity and cardiovascular mortality among former college athletes

Clinical and anatomic implications of intraventricular conduction blocks in acute myocardial infarction

Organizational, psychological and physiological stress factors in coronary heart disease among engineering, administrative, and scientific personnel

Application of magnetometer for measuring magnetic signature of human heart and development of magnetocardiograms

Values of blood serum lipids in young men in relation to acute stress situation and regular sports activities

Pathological changes in cell electrolyte balance taken from skeletal and myocardium muscles of sudden death and congestive heart failure patients

Portable equipment for detecting myocardial activity using roentgen videodensitometry

Clinical analysis of coronary heart disease susceptibility in air traffic controller populations

Clinical analysis of coronary heart disease susceptibility in air traffic controller populations

Stress factors in coronary heart disease among high risk populations

Framingham indicators for detecting potential coronary heart disease susceptibility in third class airmen population

HEART FUNCTION

at heart minute volume

Extravascular potentiation of ventricular contraction effect on dog mitral valve function, using roentgen videodensitometry

Computer aided biplane roentgen - videodensitometry system for dynamic circulatory structure studies including blood flow and heart volume determination

Cardiac output and autonomic nervous system role in antinatriuretic response to acute thoracic superior vena cava constriction

Physical exercise effect on ECG atrial recovery

Idiopathic hypertrophic subaortic stenosis

Ballistocardiography, measuring ventricular function by angiography
Regular sinus rhythm bundle branch block effect on ballistocardiogram dynamics

Quotient of arrhythmia relative to physical work load, noting heart rate amplitude and frequency variations

Physical conditioning effect on central and peripheral circulatory responses to anaerobic work, measuring cardiac output at 80 percent maximal aerobic power

Regional myocardial contraction mechanics during transient ischemia and reoxygenation in anesthetized dogs

In vivo investigation of dogs natural atrial valve flow dynamics, developing cardiohemic system physical model for data analysis and electrical analog simulation

Hydrodynamic model of human systemic arterial circulation to test artificial heart pumps

Morelvent 3,5-diethyl-4-bromopyrazol injection effect on rabbit and dog heart during direct extracardiac nerve stimulation

Electrocardiography telescopy system for intense radiation environment, describing electrode and transmitter implantation in monkey and heart signal transmission and reception

Heart pacemaker activity during muscular exertion, developing mathematical model based on system dynamics transient processes analysis

Maximum oxygen intake during exercise on treadmill compared with bicycle ergometer, analyzing circulatory dynamic factors and cardiac output relation to oxygen transport capacity

Stretch activation of myogenic oscillation of isolated contractile structures of heart muscle in ATP salt solution

Atypical ECG of sportsmen, considering repolarization disorders due to ischemia, lesion, excitability and conduction signs

Cardiographic interpretation of computerized apexo-carotid diagram, using heart-rate pump comparison

Myocardium catecholamine level reduction by heart hyperfunction from aortic coarctation during moderate thyroidosis

CO hypoxia effect on oxygen transport during exercise, discussing changes in cardiac and respiratory functions and work capacity

Cardiorespiratory functions in child swimmers and nonathletes during growth, relating training to oxygen transport system dimensions

Cardiovascular analog computing circuits with outputs for left ventricular pressure maximum rise rate, cardiac stroke volume and atrioventricular conduction time

Dyssynchronous sympathetic control of cardiovascular system, studying efficient element link between autonomic vasomotor and cardiac centers and effector cells

Ventricular myocardium contractile function disorder diagnosis by phase coordinate method with intracardial hemodynamics application

Myocardial excitation-contraction mechanics in heart regulation, discussing surface membrane structure and cell action potential

Cardiovascular system model for demonstration of biological system analog simulation and computations, describing component heart pumping action and systemic circulation

Cardiac cycle intervals measurement with multibeam cathode oscilloscope synchronized with multichannel polycardiographic automatic recording machine

Mathematical, physical and engineering aspects of electro- and magnetocardiography, noting heart field nondipolar properties and heart vector determination difficulties

Clinical effects on atrio-ventricular pacing system of electromagnetic weapon detector systems used for air passenger screening at airports in air hijacking prevention efforts

Human left ventricle measurements, modeling, control and simulation for heart monitoring purposes, describing muscle performance mathematical model and stress effect prediction control system

On-line analog display system for cardiovascular functions and heart-by-heart cardiac output derived from single aortic blood flow measurement

Ear densitograph for noninvasive cardiac performance measurements during physical activities, exercise tests, flight conditions and for critical patients long-term monitoring

Electronic and hematocrit devices to investigate cardiohemic system function, interactions between coagulation process, pressure and flow

TV microscopic system for on-line measurement of cat omentum microvessels diameter relative to heart action

Physical training effect on rat cardiac function and metabolic response to hypoxia

Heart and circulatory system functional diagnostics, discussing ECG, blood pressure, x-ray, phonocardiographical and pulmonary examinations

Human cardiovascular function change as indication of hypoxic circulatory stress, using noninvasive cardiographic measurements of cardiac electrophysical time intervals

Acute hypoxia effects on dog coronary blood flow and cardiac function from cardiac beta-adrenergic and hemodynamics study

Case report of pilot near-syncopal episode with bradycardia due to hyperactive right carotid sinus reflex

Cat and rat cardiac and cardiovascular reflexes response to electric pain stimulation of sensorimotor cerebral cortex

Renal clearance studies of left atrial distention effect in dog, indicating antidiuretic hormone inhibition mechanism of diuresis

Autonomic nervous system role in controlling coronary and cardiac responses to hypoxic hypoxia, measuring blood flow with Doppler ultrasonic flow transducer

Cardiorespiratory response to breathing dense sulfur fluoride-oxygen mixture under physical exercise conditions

Heart enzyme activity under experimental myocardial ischemia in rabbit, determined for blood, left and right ventricles and atrium

Coronary system autoregulation patterns and mechanisms from coronary flow shift measurements during circulor flex artery perfusion experiments in dogs

Contractile responses of guinea pig, rat and human isolated ventricular myocardiurn to increased stimulation frequency
Cardiac stroke volume measurements during supine bicycle exercise and recovery period, using indicator-dilution technique

Quantitative aorticcardiography of abnormal left ventricular function and contractile spectra in ischemic heart disease patients

Cardiac output and body temperature response to prolonged intermittent exercise

Human heart physiopathology from cardiac performance analysis, treating heart as pump and muscle

Aerocardiograms and carotid pulse measurements as indicators of cardiac function and myocardial contractility

Indicator dilution methods for ventricular volume measurements from washout curves, discussing intraventricular blood mixing uniformity

Baboon heart endocardial structure dynamic behavior, comparing left ventricle septum and epicardial contractile force and intraventricular pressure changes

Unconditioned /vascular load stimulus/ and conditioned /metronome stimulus/ cardiac reflexes in hypnotic and alert states

Computerized angiographic heart geometry analysis

Non-invasive assessment of prosthetic mitral paravalvular and intravalvular reurgitation

Hemodynamic changes in man during immersion with the head above water

Influence of hyperosmolality on left ventricular stiffness

Metabolism of the hypoxic and ischemic heart: Proceedings of the Symposium, Geneva, Switzerland, June 14-17, 1971. Part 1

Substrate utilization and glycolysis in the heart

The influence of exogenous ATP on cardiac metabolism in acute hypoxia

Cardiac performance and the coronary circulation of man in chronic hypoxia

Effect of chronic hypoxia on the kinetics of energy transformation in heart mitochondria

Effects of hypoxia and ischemia on myocardial contraction — Alterations in the time course of forces and ischemia-dependent inhomogeneity of contractility

Trophic support of cardiac activity

Mathematical models for flow ejection and aorta pressures based on displacement: ballistocardiography and time dependent incompressible flow theories respectively

Some preliminary observations on the correlation of the high frequency/acceleration/direct-body ballistocardiogram with the apex cardiogram, carotid pulse and their derivatives

Computerized simulation of ballistocardiograph subjective evaluation and objective manual measurements, correlating heart beat with ideal pattern

Thermoregulation during positive and negative work at different environmental temperatures

Analysis of left ventricular wall motion by reflected ultrasound — Application to assessment of myocardial function

Evaluation of left ventricular function by echocardiography

Determination of systolic time intervals using the apex cardiogram and first derivative

Echocardiographic determination of left ventricular dimensions, volumes and performance

The mitral apparatus — Functional anatomy of mitral regurgitation

An indirect method for evaluation of left ventricular function in acute myocardial infarction

A modified acetylene method for the determination of cardiac output during muscular exercise

Evaluation of cardiopulmonary function and work in man during caloric restriction

Cortico-visceral studies of spinal cord reticular formation stimulation and destruction effects on electroencephalograms, cardiac activity and interoceptive glycemic reflexes

Cardiac output, arterial and mixed-venous O2 saturation, and blood O2 dissociation curve in growing rats adapted to a simulated altitude of 3500 m

Localization and structural-functional organization of the system of vagus nerve nuclei constituting the 'cardiac center' of the medulla oblongata

Myocardial autoimmunity, excitability, conductivity and contractility under cooling, noting complete inhibition at 9-10 deg C

Heart function and pulmonary circulation in humans suffering from chronic mountain sickness

Specific ATP action on metabolism of isolated heart — Influence of pH, divalent cation concentration and stability of complexes

A rapid assay of dipolar and extradipolar content in the human electrocardiogram

The standard 12-lead scalar electrocardiograms — An assessment of left ventricular performance

Excitation contraction correlates in true ischemia

Cardiac output, haemodynamic and gas exchange variations as function of basal metabolism during bed rest in hypokinetic recumbent or antishockpositive position

Evaluation of the pulse-contour method of determining stroke volume in man

Echocardiographic determination of left ventricular function in chronic mountain sickness

Specific ATP action on metabolism of isolated heart — Influence of pH, divalent cation concentration and stability of complexes

A rapid assay of dipolar and extradipolar content in the human electrocardiogram

The standard 12-lead scalar electrocardiograms — An assessment of left ventricular performance

Excitation contraction correlates in true ischemia

Cardiac output, haemodynamic and gas exchange variations as function of basal metabolism during bed rest in hypokinetic recumbent or antishockpositive position

Evaluation of the pulse-contour method of determining stroke volume in man
HEART RATE

rise rate, cardiac stroke volume and atrioventricular conduction time

Electrically sensed changes in chest and abdomen diameter for tidal volume, respiratory frequency and minute ventilation measurements

Factors limiting the increase in stroke volume obtainable by positive isotropism - Investigations regarding the sufficient heart in the case of prolonged postextrasystolic potentiation

Design of specialized analog computer for on-line means of modified version of pressure pulse contour method (NASA-TN-D-6658)

Factors limiting the increase in stroke volume obtainable by positive isotropism - Investigations regarding the sufficient heart in the case of prolonged postextrasystolic potentiation

Heart rate

Heart rate changes in relation to exercise and resting conditions

Heart rate measurements obtained by the method of the modified version of pressure pulse contour method (NASA-TN-D-6658)

Human tilt tolerance relation to aerobic capacity, weight, height and physical fitness, determining correlation coefficient between heart rate and orthostatic response in humans

Positive acceleration effects on human cardiovascular system during centrifuge tests, studying ECG changes in terms of cardiac rhythms, heart rate and wave parameters

Maximal oxygen uptake and heart rate during laddersill climbing, inclining treadmill running and cycling ergometer tests

Computer assisted monitoring of ECG waveforms and heart sounds frequency spectrums to detect bubble laden blood during decompression sickness

Heart rate

Parachutist biomedical responses in aerial tow at 110-175 knots, determining heart and respiration citese and urinary catecholamines

Physiological evaluation of diastolic mechanism in rat hypertrophied myocardium as function of heart rate, Ca ion concentrations and temperature

Pulse rate studies of human adaptation to 16 hour work-rest cycle, showing persistence of 24 hour cycle

Heart rate changes in relation to exercise and resting conditions

Medical monitoring system for enclosed men, using ultrasonic Doppler-cardiography for heart rate determination

Heart rate diurnal rhythm adaptation to work-rest cycle change, using recumbent and sitting position data parameters

ECG amplifier and cardiocacheter for exercise studies, using digital algorithms for heart rate computation and ECG signal preprocessing for R wave detection

Exercise cardiocacheter with heart rate display on beat to beat basis, R wave recognition circuit and noise linear filtering efficiency

ECG heart rate recording of helicopter instructor pilots during flight training tasks, administrative work, automobile driving and eating

Apexcardiograms and carotid pulse measurements as indicators of cardiac function and myocardial contractility

Cardiac cycle length /HR interval/ and QT interval mathematical relationship from ECG obtained during exercise and recovery periods

Heat, noise and vibration stress combined effects on skin and rectal temperature, heart rate, weight loss and biochemical analysis (AD-746083)

Reproducibility of indirect CO2 Fick method for calculation of cardiac output

Synchronous and asynchronous DAB  body acceleration synchronously with heart beat, effects on hemodynamics and ventilation in dogs and humans

Some preliminary observations on the correlation of the high frequency /acceleration/ direct-body ballistocardiogram with the apex cardiogram, carotid pulse and their derivatives

Tilt table tests for orthostatic tolerance, measuring heart rate, blood pressure and responses of fainters and nonfainters

Reflexive cardiac rhythms changes and arterial tension during hypoxia, noting differences due
In vivo investigation of dogs natural mitral valve
thermal balance in man during 24 hours in a
controlled environment.

Heat strain in hot and humid environments.

Spinal cord heating and cooling effects on body
temperature, respiratory and heart rates and
arterial blood pressure, investigating feeding
and drinking behaviors.

Control parameters of the blood-pressure
regulatory system. I. - Heart rate sensitivity
[AD-72-734283] p0347 H72-25123

Control parameters of the blood-pressure
regulatory system. II - Open-loop gains,
reference pressure and basal heart rate.

Yield of incausal exercise electrocardiograms in
relation to exercise intensity in a normal
population.

Echocardiographic investigation of heart rate, sex
and normal strain effects on mitral valve leaflet
movement in healthy subjects.

The effect of hypoxia on the coronary blood flow
in reperfused dog heart.

Measurement of heart rate and oxygen uptake of
subjects at optimal speed on bicycle ergometer
[AD-729881] p0205 H72-17084

Characteristics of heart rate information, during
sleep, and extracting sleep information from
heart rate data
[AD-728283] p0347 H72-21061

Cardiometer for instantaneous heart rate
measurement

High power radio telemetering of heart rate
detected by ECG
[AD-737111] p0360 H72-23092

Ultrasonic Doppler method for monitoring
biochemical processes of cardiac activity in
enclosed environments.

Adaptation of cardiac contractions to changes in
sleep-wakefulness rhythms.

Pulse modulated biotelemetry system for
determining energy budgets in free-ranging
vertebrates from heart rate and body temperature
measurement.

Heart rate monitor for indicating physical fitness,
level in individuals
[AD-738802] p0403 H72-25123

Rhesus monkey heart rate during exercise
[NASA-Ch-127696] p0871 H72-28060

Framingham indicators for detecting potential
coronal heart disease susceptibility in third
class airman population
[AF-AF-72-26] p0571 H72-33099

Cerebrovascular Insult in Infusion Models
Their Effect on Heart Rate on the Dog
[AF-AF-72-26] p0571 H72-33099

Heart valves

Heart valves in vivo investigation of dogs natural mitral valve
flow dynamics, developing cardiohyactic systems
physical models for data analysis and electrical
analog simulation
[AF-AM-71-HR-B-2] p0096 A72-15949

Single linear measure of systolic pressure
gradient for calculation of aortic valve area in
stenosic severity assessment
p0286 A72-27374

Aortic regurgitation variation with respiratory
sinus arrhythmia and respiratory cycle in dogs
during tachycardia and bradycardia.

Echocardiographic investigation of heart rate, sex
and normal strain effects on mitral valve leaflet
movement in healthy subjects.

Heat acclimatization

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Heat acclimatization
Safe exposure times for men working in high temperature environments, showing hyperbolic heat collapse relationship to environmental severity

Natural acclimatization to work in severe heat.

Physiologic thermoregulatory and sympatho-adrenal responses to heat acclimatization in man during supine and upright position exercise.

Skin temperatures in warm environments and the control of sweat evaporation.

Sweat depression during controlled hyperthermia in man - Effects on the sweat rate and sweat electrolytes.

Comparison of physical, biophysical and physiological methods of evaluating the thermal stress associated with wearing protective clothing.

Influence of high temperature on the onset of motion sickness.

Heat strain in hot and humid environments.

Heat acclimatization by exercise-induced elevation of body temperature.

Physiological response of body temperature to localized ventilation.

Protection of aircrews from high temperatures and heat strain - sweat depression during controlled hyperthermia in man.

Effect of work-rest schedules on human performance.

Heat collapse of men working in thermally severe environments.

Heat strain during exercise in hot and humid environments.

Physiological responses and heat tolerance for work induced heat stress in men wearing liquid cooled garments.

Heat collapse of men working in thermally severe environments.

Relationship between steady sweat flow and temperature regulation mechanism during exposure to heat.

Temperature regulatory adjustment in men in response to work and heat.

Heat Transfer

Biological tissue heat transport dimensionless parameters for steady state and transient analysis of homothermal thermoregulation.

Analytical model for living biological tissue and transient heat transfer, taking into account conductance, storage, generation, and blood flow effects.

German monograph on analog model of thermoregulation in human body at rest and at work, describing heat transfer.

Monograph on hot environments stress covering heat exchange at skin surface, clothing effect, body temperature regulation and sweating control.

Manually activated heat pump for mechanically converting human operator output into heat energy.

Biological models for analyzing heat transfer between artery near skin surface and cooling patch on skin surface.

Biological models and corresponding mathematical models used to analyze thermoregulation and heat transfer in mammals.

Heat Transmission

Heat Convection Heat Transfer

Heat Transfer

Radiative Heat Transfer

Heat Treatment

Heat Strain

Heat Acclimatization

Heat Collapse

Heat Strain

Heat Strain

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HEMATOLOGY

Antibodies red cell mass changes associated with space flight due to space and earth environment differences p0376 A72-33564

Hematologic responses to hypobaric hyperoxia. p0663 A72-39395

Hematological modifications due to acute exposure to heat p0500 A72-61191

Ionizing radiation effects on mitosis and nucleic acid synthesis, noting protective chemical agents and hematological evaluation of radiation damage and marrow regeneration p0508 A72-81986

Physiological and hematological effects of chronic irradiation. p0504 A72-63392

Human blood mononuclein - Stimulators of granulocyte and mononuclear colony formation in vitro p0556 A72-65374

Hematological effects of long-term exposures of dogs and monkeys to carbon monoxide. (AD-727504) p0034 A72-10080

ERNEROLOGIES

Human urine regenerated water in various dilutions effect on fish and rat erythropoiesis p0101 A72-16651

Plasma erythropoietin concentration in men and mice during altitude acclimatization p0154 A72-19440

Suppression effects of hypoxic breathing gases on red blood cell and erythropoietin hormone production following blood loss p0295 A72-26298

Hemopoiesis in the pig-tailed monkey Macaca nemestrina during chronic altitude exposure. p0663 A72-39348

Experimental studies of the production of erythropoietin in relation to the intensity and duration of hypoxia p0500 A72-61190

Studies of renal and extrarenal production of erythropoietin in male and female rats p0500 A72-61190

Preynal injection test for hematopoietic tissue function in dogs, describing response as transient leukopenia followed by pronounced leukocytosis due to bone marrow granulocyte ejection p0542 A72-63911

HAPTOPOLOGICAL SYSTEM

Proliferative blood forming tissue activity under normal and adverse radiation exposure in guinea pigs by quantitative methods, showing myeloid and reticular disturbances of bone marrow p0056 A72-14607

Sublethal radiation effects on rat erythropoietic system during altitude hypoxia acclimatization p0075 A72-15721

Hypoxia effect on diurnal mitotic activity rhythm of narrow erythropoiesis system of guinea pigs in pressure chamber p0099 A72-16631

Mathematical model for blood leukocyte population changes after radiation exposure within Blair model leukocyte hemopoietic to cardiovascular systems transport p0099 A72-16635

Nervous and humeral stimulation and hypoxia effects on erythropoiesis control, studying human blood serum additions to bone marrow cultures p0097 A72-40762

Mathematical model of hematopoietic radiation damage and recovery in human body p0121 A72-14073

Adaptation of cells to aerospace environment of notting cell renewal, regulation, and limitations p0193 A72-16604

Distribution of DNA nucleotide blocks in radiation injury and leukemia in hematopoietic system of rats (NASA-TP-F-14520) p0521 A72-30057

ERYTHROPOIESIS

Extrauterine potential of vesicular contraction effect on dog mitral valve function, using cromatogen videodensitometry
Hemodynamic responses cost

Hemodynamic response to physical exercise stress in dogs with angiotensin-induced acute arterial hypertension

Hemodynamic response to physical exercise stress in dogs with angiotensin-induced acute arterial hypertension

Autonomic nervous system role in controlling coronary and cardiac responses to hypoxic hypoxia, measuring blood flow with Doppler ultrasound transducer

Noninvasive polygraphic technique to assess cardiovascular responses to intravenous glucagon injection

Cardiovascular system functional state elevation during controlled cooling, studying hemodynamic changes

Cardiac output and body temperature response to prolonged intermittent exercise

Hemodynamic changes in man during immersion with the head above water

Hemodynamic thermoregulatory and sympathoadrenal responses to heat acclimatization in man during supine and upright position exercise

Bradycardia diving reflex to apneic face immersion related to physical exercise

Venous responses to stimulation of carotid chemoreceptors by hypoxia and hypercapnia

Synchronous and asynchronous BASH/beta acceleration synchronous with heart beat effects on hemodynamics and ventilation in dogs and humans

Left ventricular dynamics during handgrip stress and extreme effects upon the organism

Systemic haemodynamics in borderline arterial hypertension - Responses to static exercise before and under the influence of propranolol

Influence of isotropic alteration on the severity of myocardial ischemia after experimental coronary occlusion

Relation of the electrocardiogram to hemodynamic alterations in pulmonary embolism

Study of hemodynamics during the action of decoagulation and accelerations

Hemodynamic reflexes during acceleration stresses, considering vessel walls, cardiac rhythms, blood distribution and sinus carotis receptors

Reflective cardiac rhythm changes and arterial tension during hypoxia, noting differences due to animals, controlled respiration and pharmacological effects

Prediction of vegetative reactions in the case of stress and extreme effects upon the organism

Cardiovascular system venous part complications - to central nervous and humoral influences

Effects of coronary arteriography on myocardial blood flow

Changes in certain hemodynamic indices during muscular strain in people with differing capacity to perform work

Induction of hemodynamic deterioration by the hypoxic state - in evaluation of mechanisms and prevention

Effects of prolonged exposure to hypoxia environment on coagulating processes of blood

Subzero cooling method for increasing functional capacity of human cardiovascular system

Effect of space flight on changes in blood composition and body functions

A-191
Lower body negative pressure and acceleration effects on human hemodynamics  p0462 A72-29066

HEMOLOGIES

ET CARBONIC ANHYDROGENESIS

ET OXYHEMOLOGIES

CO hemoglobin concentration measurement in blood of smokers, nonsmokers and deceased crewmembers of crashed aircraft  p0003 A72-10211

Molecular evolutional changes in amino acids of proteins due to mutant random fixation, comparing human and fish hemoglobin chains  p0021 A72-11761

Evolutionary rate of cistrans in vertebrates, discussing hemoglobin and cytochrome c changes involving amino acid mutant substitution  p0021 A72-11762

Amino acid code comparisons of polypeptide chains of globins due to mutations during vertebrate evolution from ancestral gene  p0021 A72-11764

Volumetric analysis of blood oxygen and CO, showing combination with hemoglobin without evident molecular volume increase  p0102 A72-16786

Erythrocyte hemolysate cataphoresis studies of human hemoglobin changes during stepwise adaptation to high mountain conditions  p0028 A72-22880

Light absorption and scattering factors in whole blood related to hemoglobin concentration, discussing oxygen saturation, cardiac output and pathological conditions  p0273 A72-26630

Stepwise altitude acclimatization and subsequent reacclimatization after blood loss caused clinical death effects on dog peripheral blood erythrocytes, reticulocytes, hemoglobin and hematocrit  p0338 A72-30671

Hemoglobin determination in whole blood with Specol-Weiss spectrophotometry, comparing accuracy to cyanmethemoglobin measurements  p0361 A72-30879

Hemoglobin-facilitated diffusion of oxygen - Interfacial and thickness effects.  p0425 A72-36569

Lack of effect of high altitude on hemoglobin oxygen affinity.  p0491 A72-40430

Comparative studies of the respiratory functions of mammalian blood.  p0458 A72-40919

HEMOLOGY

Case report on compensated hemolytic anemia associated with Gilbert syndrome, discussing implication in aviation  p0016 A72-11299

Erythrocyte hemolysate cataphoresis studies of human hemoglobin changes during stepwise adaptation to high mountain conditions  p0218 A72-22880

In vivo hemolysis due to hyperoxia - Role of H2O2 accumulation.  p0557 A72-45651

HEMORRHAGES

Sudden pilot incapacitation and death due to subarachnoid hemorrhage secondary to ruptured intracranial aneurysm  p0228 A72-23742

Influence of prolonged starvation on the frequency of occurrence of decompression-induced pulmonary hemorrhage.  p0409 A72-36545

Effects of vagotomy and increased blood pressure on the incidence of decompression-induced pulmonary hemorrhage.  p0424 A72-36446

HEMORRHAGIC

HEMORRHAGING

Hyperbaric environment decompression effects on human blood and urine chemistry and hemostatic system, showing physiological parameter alteration in presence and absence of bends symptoms  p0363 A72-31087

HEMOLOGY

ET CARBONIC ANHYDROGENESIS

ET OXYHEMOLOGIES

CO hemoglobin concentration measurement in blood of smokers, nonsmokers and deceased crewmembers of crashed aircraft  p0003 A72-10211

Molecular evolutional changes in amino acids of proteins due to mutant random fixation, comparing human and fish hemoglobin chains  p0021 A72-11761

Evolutionary rate of cistrans in vertebrates, discussing hemoglobin and cytochrome c changes involving amino acid mutant substitution  p0021 A72-11762

Amino acid code comparisons of polypeptide chains of globins due to mutations during vertebrate evolution from ancestral gene  p0021 A72-11764

Volumetric analysis of blood oxygen and CO, showing combination with hemoglobin without evident molecular volume increase  p0102 A72-16786

Erythrocyte hemolysate cataphoresis studies of human hemoglobin changes during stepwise adaptation to high mountain conditions  p0028 A72-22880

Light absorption and scattering factors in whole blood related to hemoglobin concentration, discussing oxygen saturation, cardiac output and pathological conditions  p0273 A72-26630

Stepwise altitude acclimatization and subsequent reacclimatization after blood loss caused clinical death effects on dog peripheral blood erythrocytes, reticulocytes, hemoglobin and hematocrit  p0338 A72-30671

Hemoglobin determination in whole blood with Specol-Weiss spectrophotometry, comparing accuracy to cyanmethemoglobin measurements  p0361 A72-30879

Hemoglobin-facilitated diffusion of oxygen - Interfacial and thickness effects.  p0425 A72-36569

Lack of effect of high altitude on hemoglobin oxygen affinity.  p0491 A72-40430

Comparative studies of the respiratory functions of mammalian blood.  p0458 A72-40919

HEMOLOGY

Case report on compensated hemolytic anemia associated with Gilbert syndrome, discussing implication in aviation  p0016 A72-11299

Erythrocyte hemolysate cataphoresis studies of human hemoglobin changes during stepwise adaptation to high mountain conditions  p0218 A72-22880

In vivo hemolysis due to hyperoxia - Role of H2O2 accumulation.  p0557 A72-45651

HEMORRHAGES

Sudden pilot incapacitation and death due to subarachnoid hemorrhage secondary to ruptured intracranial aneurysm  p0228 A72-23742

Influence of prolonged starvation on the frequency of occurrence of decompression-induced pulmonary hemorrhage.  p0409 A72-36545

Effects of vagotomy and increased blood pressure on the incidence of decompression-induced pulmonary hemorrhage.  p0424 A72-36446

HEMORRHAGIC

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Hyperbaric environment decompression effects on human blood and urine chemistry and hemostatic system, showing physiological parameter alteration in presence and absence of bends symptoms  p0363 A72-31087

HEMOLOGY

ET CARBONIC ANHYDROGENESIS

ET OXYHEMOLOGIES

CO hemoglobin concentration measurement in blood of smokers, nonsmokers and deceased crewmembers of crashed aircraft  p0003 A72-10211

Molecular evolutional changes in amino acids of proteins due to mutant random fixation, comparing human and fish hemoglobin chains  p0021 A72-11761

Evolutionary rate of cistrans in vertebrates, discussing hemoglobin and cytochrome c changes involving amino acid mutant substitution  p0021 A72-11762

Amino acid code comparisons of polypeptide chains of globins due to mutations during vertebrate evolution from ancestral gene  p0021 A72-11764

Volumetric analysis of blood oxygen and CO, showing combination with hemoglobin without evident molecular volume increase  p0102 A72-16786

Erythrocyte hemolysate cataphoresis studies of human hemoglobin changes during stepwise adaptation to high mountain conditions  p0028 A72-22880

Light absorption and scattering factors in whole blood related to hemoglobin concentration, discussing oxygen saturation, cardiac output and pathological conditions  p0273 A72-26630

Stepwise altitude acclimatization and subsequent reacclimatization after blood loss caused clinical death effects on dog peripheral blood erythrocytes, reticulocytes, hemoglobin and hematocrit  p0338 A72-30671

Hemoglobin determination in whole blood with Specol-Weiss spectrophotometry, comparing accuracy to cyanmethemoglobin measurements  p0361 A72-30879

Hemoglobin-facilitated diffusion of oxygen - Interfacial and thickness effects.  p0425 A72-36569

Lack of effect of high altitude on hemoglobin oxygen affinity.  p0491 A72-40430

Comparative studies of the respiratory functions of mammalian blood.  p0458 A72-40919

HEMOLOGY

Case report on compensated hemolytic anemia associated with Gilbert syndrome, discussing implication in aviation  p0016 A72-11299

Erythrocyte hemolysate cataphoresis studies of human hemoglobin changes during stepwise adaptation to high mountain conditions  p0218 A72-22880

In vivo hemolysis due to hyperoxia - Role of H2O2 accumulation.  p0557 A72-45651

HEMORRHAGES

Sudden pilot incapacitation and death due to subarachnoid hemorrhage secondary to ruptured intracranial aneurysm  p0228 A72-23742

Influence of prolonged starvation on the frequency of occurrence of decompression-induced pulmonary hemorrhage.  p0409 A72-36545

Effects of vagotomy and increased blood pressure on the incidence of decompression-induced pulmonary hemorrhage.  p0424 A72-36446

HEMORRHAGIC

HEMORRHAGING

Hyperbaric environment decompression effects on human blood and urine chemistry and hemostatic system, showing physiological parameter alteration in presence and absence of bends symptoms  p0363 A72-31087
SUBJECT INDEX

HIGH ALTITUDE ENVIRONNMENTS

Acute, short and long term and life long high altitude hypoxia exposure effects on pulmonary gas exchange control and efficiency during physical exercise.

p0011 A72-10048

Headodynamics, pulmonary gas exchange and circulatory responses to high altitude in subjects with previous history of high altitude pulmonary edema.

p0016 A72-11922

Altitude hypoxia human pulmonary compliance relation between static transpulmonary pressure and inspired volume.

p0023 A72-11958

Unattenuated ventilatory hypoxic drive in ovine and bovine species native to high altitude.

p0155 A72-19485

Stepwise adaptation to high mountain conditions effect on brain and sural muscle oxidation processes in rats.

p0186 A72-22085

USAF custom fit oxygen mask program.

p0190 A72-34559

Technique for predicting etiology of decompression sickness in unpressurized aircraft above 20,000 feet.

p0254 A72-19106

HIGH ALTITUDE ENVIRONMENT

Radiation exposure during high altitude flights, considering normal radiation levels due to galactic radiation and short term increases due to solar flares.

p0053 A72-13234

Physiological and clinical effects of long distance flight in pressurized commercial planes with similitude altitudes over 1500 feet.

p0283 A72-27486

Native highlander and lowlander chemoreflex ventilatory response to transient carbon dioxide inhalation at low and high altitudes.

p0286 A72-27728

Concentrated and extended learning effects on formation rate and retention degree of conditioned reflexes during mice adaptation to high altitude hypoxia.

p0325 A72-28770

Insecticide dichlorvos vapor toxicity in aircraft cabin atmosphere at 8000 ft, studying plasma cholinesterase activity, erythrocytes, dark adaptation and bronchial resistance.

p0342 A72-31082

High temperature and altitude combined effects on performance of tracking, monitoring and mental arithmetical complex task.

p0345 A72-31155

Blood coagulation changes at high altitude predisposing to pulmonary hypertension.

p0607 A72-34222


p0512 A72-42583

Adaptive processes responsible for natural acclimatization of human organism to low ambient pressures at high altitudes.

p0512 A72-42584

Hormonomic evaluation of changes in lung structure due to high altitude.

p0512 A72-42585

Transarterial leakage - a possible mechanism of high altitude pulmonary oedema.

p0513 A72-42588

The carotid body in animals at high altitude.

p0513 A72-42589

HEREDITY

Biological experiments on plants, animals and bacteria aboard space probes, noting flight conditions effect on physiological functions and hereditary structures.

p0267 A72-25941

Cytoplasmic heredity theory linking mitochondria origin to bacteria.

p0654 A72-38589

Statistical analysis of erythrocyte acid phosphatase inheritance in French families based on starch gel electrophoresis of hemolysates.

p0033 A72-10067

Volterra integral equations for analyzing biomechanical heredity processes.

p0190 A72-16009

HEMORHEOLOGIC METHODS

Problems of complex object modeling based on heuristic self-organization.

p0556 A72-65590

Invariant transformation of the control laws in ergotic systems.

p0556 A72-65590

Artificial intelligence and heuristic programming research.

p0046 A72-11102

HEMORHEOLOGY

Effect of potassium ion injection on quanethidine, bretteyll, and hexamethonium control of hypertension in rats.

p0239 A72-18061

HEMIBRENNATION

Book on hibernation and hypothalamus covering central nervous system regulating mechanisms, biologic rhythmicity, migration, thermoregulation, torpor, human implications, etc.

p0003 A72-10169

RNA content changes in ground squirrel brain during active and hibernation states.

p0112 A72-18058

Satellite system for telemetering environmental and physiological data from winter dens of hibernating black bear, discussing instrumentation and equipment performance.

p0159 A72-19913

Thermoregulation in deeply hibernating rodents during separate chilling and steady hibernation temperature maintenance of skin and brain.

p0287 A72-27827

Seasonal rhythms of endocrine system in hibernating mammals, discussing central and peripheral biological clocks in relation to hypothalamus and pancreas/thyroid gland.

p0377 A72-33100

Electrocardiographic and histochemical changes in brains of hibernating animals.

p0356 A72-23071

HEMORHEOLOGY

Genetic code numerical structure association with logarithmic optimization rule for hierarchy of structures from molecular biology experiments.

p0062 A72-14794

HIGH ACCELERATION

Plasma protein concentration, volume and hemocrit changes during exercise, bed rest and high forward acceleration.

p0295 A72-28296

HIGH ALTITUDE

Effects of high altitude and oxygen deficiency on psychomotor performance of flight crews.

p0162 A72-72-03

Physiological evaluation of disposable jet transport passenger oxygen mask at high altitude.

p0208 A72-25513

Conferences on biophysical approaches to solving problems of ionizing and nonionizing radiation effects during high altitude flights, manned space flight, and ground based equipment.

p0431 A72-26045

Dynamics of RNA, DNA and protein synthesis in mitochondria and nuclei of heart muscles of rats during adaptation to high altitude hypoxia.

p0521 A72-30059

HIGH ALTITUDE BREATHING

Acute, short and long term and life long high altitude hypoxia exposure effects on pulmonary gas exchange control and efficiency during physical exercise.

p0011 A72-10048

Biophysical approaches to solving problems of ionizing and nonionizing radiation effects during high altitude flights, manned space flight, and ground based equipment.

p0431 A72-26045

Dynamics of RNA, DNA and protein synthesis in mitochondria and nuclei of heart muscles of rats during adaptation to high altitude hypoxia.

p0521 A72-30059

HIGH ALTITUDE ENVIRONMENT

Biological experiments on plants, animals and bacteria aboard space probes, noting flight conditions effect on physiological functions and hereditary structures.

p0267 A72-25941

Cytoplasmic heredity theory linking mitochondria origin to bacteria.

p0654 A72-38589

Statistical analysis of erythrocyte acid phosphatase inheritance in French families based on starch gel electrophoresis of hemolysates.

p0033 A72-10067

Volterra integral equations for analyzing biomechanical heredity processes.

p0190 A72-16009

HEMORHEOLOGIC METHODS

Problems of complex object modeling based on heuristic self-organization.

p0556 A72-65590

Invariant transformation of the control laws in ergotic systems.

p0556 A72-65590

Artificial intelligence and heuristic programming research.

p0046 A72-11102

HEMORHEOLOGY

Effect of potassium ion injection on quanethidine, bretteyll, and hexamethonium control of hypertension in rats.

p0239 A72-18061

HEMIBRENNATION

Book on hibernation and hypothalamus covering central nervous system regulating mechanisms, biologic rhythmicity, migration, thermoregulation, torpor, human implications, etc.

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Dynamics of RNA, DNA and protein synthesis in mitochondria and nuclei of heart muscles of rats during adaptation to high altitude hypoxia.

p0521 A72-30059
HIGH ALTITUDE FLIGHT

Superoxidase influences on hypoxic ventilatory control.

Effects of high pressure on physiocochemical systems in animals and plants.

SUBJECT INDEX

HIGH ALTITUDE FLIGHT

Effects of simulated high altitude on renin-aldosterone and Na homeostasis in normal man.

HIGH ALTITUDE PRESSURE

Human factors relation to pressurized cabin environmental control. Discussing aircraft safety, high altitude tests, pressure loss predictions and cabin altitude selection.

High pressure oxygen exposure.

HIGH ALTITUDE TESTS

The effects of chronic erythrocytic polycythemia and high altitude upon plasma and blood volumes.

Effects of high altitude on cellular and energy metabolism in rats.

HIGH REACTIVES

U. EXPOSIVES

HIGH GRAVITY (ACCELERATION)

High altitude flight and development of life support systems for civil aircraft environmental control.

HIGH GRAVITY ENVIRONMENTS

High altitude flight and development of life support systems for civil aircraft environmental control.

HIGH ALTITUDE PRESSURE

Effects of high pressure on physiocochemical systems in animals and plants.

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HIGH ALTITUDE FLIGHT

Superoxidase influences on hypoxic ventilatory control.

Effects of high pressure on physiocochemical systems in animals and plants.
High temperature and altitude combined effects on performance of training, monitoring and mental arithmetic complex task

Water loss replacement effect during rent and exercise in high temperature environment

Thermoregulation experiment

Monograph on heat environments stress covering heat exchange at skin surface, clothing effect, body temperature regulation and sweating control

Effects of NaCl drinks on working efficiency in high temperature environments

Experimental investigation of acclimatization of human subjects to high temperature environments

Effects of high temperature on pilot performance as determined in flight simulator during simulated instrument flight

Hiller military aircraft

Hindrance

Hippocampus

Hippocampus electric activity and cardiac rhythms variations responses to various intensity electric stimulation of central gray matter

Hippocampus neuron reactions and memory function realization with incoming information and stored imprints comparison by brain

Neuronal spike activity changes in rabbit visual and sensorimotor neocortex and hippocampus during EEG activation

Electric stimulation of rabbit brain limbic formations /colums, amygdala, hippocampus/ showing effect on emotional response motor and vegetative components

Hippocampus morphology and physiology in relationship to emotion and memory mechanisms, time lines, visceral activity and motivations and endocrine control

Changes in the overall electrical activity of the mesencephalic reticular formation, the hippocampus, and the cerebral cortex under the influence of hydrocortisone and DOCA

Histamine

Inherited histamine effects on intracranial pressure and systemic blood pressure in Macaca mulatta monkeys

Histogas

Neural systems short-latency paired interactions detection method, obtaining histogram for action potentials

Histology

Electron microscope examination of freeze-etched air-filled lung alveoli extracellular lining layer, discussing sample preparation techniques

Clinical death period and reanimation concepts, noting erroneous interpretations of irreversible histological alterations, revival attempt period and organism self reanimation potential

Enzyme activity and ascobic acid concentration as index of rat thyroid gland tissue functional activity during hyperthermia

Succinic dehydrogenase activity in rabbit eye ciliary epithelium during electric stimulation of hypothalamic, using histochemical techniques

The carotic body in animals at high altitude

Histologic analysis of hypoxia exposure effects on mouse skin homograft reaction due to lymphatic organ function changes

Influence of x-ray irradiation in 25- and 250-r doses on the transplant immunity in mice differing by weak and strong histoincompatibility systems

Collagen in human myocardium as a function of age

Localization and dynamic changes of glycogen in frog retinas adapted to darkness or light, I, II

Automatic histocompatibility testing of cells

Personal observations of 360 fatal aircraft accidents for confirmation of lacerations to victims

Bioelectric and histochemical changes in brain of hibernating animals

Homeostasis

MT case histories

Holograph

Holographic measurement of red blood cell rotation in osific flow, transforming orientation into form distribution data

Hologram data treatment comparison to human brain function, discussing recognition signals, Pavlovian qualities and intelligence function

Hormones

Biological tissue heat transport dimensionless parameters for steady state and transient analysis of homeostasis thermoregulation

Evidence for a metabolic limitation of survival in hibernating animals

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Hormones
Changes in hormonal activity in humans and rats during hypokinesia

Hormone secretion in normal and stimulated human subjects, including sleep

Hypothyroidism and thyroid hormone effects on calcium metabolism of rat bones

HOSPITALS

Computerized EEG data acquisition and transmission system for large hospitals with multiple critical care patient monitoring units, noting telephone access from outside

Automated hospital information management system operations manual and system program listing

Application of aerospace technology to medical equipment, and cleaning and diagnostic procedures of earth health care systems

HYPOTHALAMIC ABNORMALITIES

Aortic flow disturbances in vivo study by hot-filane anemometry, considering peak flow velocity and pulse rate effects

Arterial velocity profile measurement in dogs thoracic aorta by hot-filane probe, relating flow disturbances and turbulence to Reynold's number

HYPOTHALAMIC ABNORMALITIES

Hot thermistor and hot-wire anemometer principles for photocaloratic transducer design, using theory of hydraulic amplification with high SNR

HOSPITALS

Open type urine receptacle with tubular housing

HUGHERS MILITARY AIRCRAFT

U MILITARY AIRCRAFT

Operant conditioning for producing gross motor responses, discussing application to physical medicine and rehabilitation with mentally retarded down syndrome children

Conditioned reflex as component of artificial conditioned-natural unconditioned reflex system controlling adaptive behavioral patterns, noting contribution to complex nervous activity understanding

Rhythmoesis as fundamental life characteristic analogous to homeostasis, discussing human circadian rhythm and cycle desynchrony during air travel

Human behavior analysis based on nine component functional brain model, discussing information transmission mechanisms via nerve path channels

Soviet papers on human higher nervous activity physiology covering conditioned reflexes and adaptive behavior, neurotropic substance effects, mathematical and structural modeling, etc

Human nervous system properties responsible for individual behavioral differences, discussing methodological problems in future research from biological criteria viewpoint

Cortical synthesis and information handling properties of evoked potential in human normal and pathological behavior

Human biodynamic and behavioral response to whole air travel

EEG measurement of sleep behavior patterns, discussing sleep stages, temporal patterns, circadian rhythms, intrasleep processes stability and age factor

Passenger behavioral reaction in survivable aircraft accidents, augmenting maladaptive behavior counteraction by leadership and/or training
Ideas of individual on group members majority behavior in various situations, noting non-concept confirmation from psychological tests on reference groups (p0325 772-28796)

Russian book - Eye movements as the basis of spatial vision and as a model of behavior (p0416 772-35459)

Behavioral properties of somatosensory-motor interhemispheric transfer (p0418 772-35463)

Error arising from experimenter influence on subject behavior and performance, discussing expectancy effects on stimulus presentation and IQ and success-failure judgments (p0427 772-36907)

Self-paced ergometer performance - Effects of mental resistance, motivational contingency and inspired oxygen concentrations (p0427 772-36911)

Vicarious influence effect on eliciting pain in individuals subjected to previously reported nonpainful electric shocks (p0428 772-36916)

Behavioral characteristics of men in the performance of some decision-making task components (p0465 772-39005)

Two explanations of temporal changes in ability-skill relationships - A literature review and theoretical analysis (p0499 772-41015)

Some contributions to the theory of linear models describing the control behaviour of the human operation (p0503 772-41819)

The functional organization of object-directed human intended-movement and the forming of a mathematical model (p0504 772-41822)

Effect of low concentrations of carbon monoxide on human behavior and performance (p0505 772-10086)

Developing center for computer-based behavioral studies for studying and analyzing national policies and problems (p0505 772-10086)

Group dynamic behavior in simulated panic situation (p0520 772-17051)

Daily behavior of ten aquanauts teams in underwater habitat and correlation analysis (p0526 772-19177)

Design and operation of TBMBS (p0405 772-25183)

Human behavior in control system and game theory (p0436 772-26083)

Noise stress effects on human life (p0522 772-30063)

HUMAN BEINGS
Human biology, including evolution, organism structure, organizations of people, degeneracy, interactions with environment and philosophical concepts (p0114 772-18315)

Pigeon role as ideal experimental animal in human biomedical research, discussing investigations to emphasize similarities (p0428 772-36440)

Phylogenetic streptococcal flora transfer between human subjects isolated for 15 days (p0075 772-11594)

Effects of very low calcium diets on human calcium metabolism and osteoporosis development (p0090 772-12017)

Benefit-risk analysis in determining effects of radiation dosage on human beings (p0122 772-15193)

Respiratory perception and behavioral responses of man and animals to gas composition changes (p0198 772-17032)

Safety zone of ultrasonic radiation dosage for human beings (p0142 772-15193)

Effects of partial and whole body radiation on biochemistry and physiology in humans (p0258 772-19110)

Linear acceleration of impact type, causing human injuries - conferences (p0258 772-19110)

[AGARD-CP-88-71] Theoretical mechanics for expressing kinematics of human impact acceleration, using two coordinate systems (p0255 772-19119)

Clinical observation of massive injury causing acute death in man after crash accidents (p0258 772-19138)

Radiation effects of total and partial body irradiation in humans (p0307 772-20091)

System for detecting natural body burdens of radionuclides using scintillation crystal and lead shadow-skleid (p0352 772-22086)

Critical review of research on assimilation of nitrogen by higher organisms (p0393 772-24075)

Policy making process governing medical research on humans (p0442 772-32059)

Biological effects of UHF electromagnetic radiation emissions on human organisms (p0432 772-26053)

Existence of hypocalemic factor in human thyroids (p0438 772-27079)

Laser microsensory analysis of inorganic and metallic components and pigmentation mechanisms in insects and man (p0529 772-30116)

Low level microwave radiation effects on central nervous system and vestibular apparatus (p0530 772-31095)

Mechanical compression strength of vertebrae and intervertebral discs in humans (p0561 772-32101)

HUMAN BODY
Human body dynamics, discussing configuration, modeling techniques, kinematics, equations of motions and various limb motions examples (p0001 772-10110)

Anatomical-physiological, optical and behavioral-visual similarities of nonhuman and human primates (p0505 772-13069)

Human body movements basic kinetics, measuring static forces, angle and tangential acceleration of horizontal arc swings (p0509 772-14707)

Human body kinematics numerical analysis, obtaining space-time resolution by photographic restitution and electronic data processing of photogranic recordings (p0509 772-14707)

Calorimetric measurements of human body internal temperature and of hot saline solution drinking effects on sweating rate (p0223 772-23400)

Calorimetric study of sweating man response to drinking hot saline solution as function of temperature, volume and salinity of ingested liquid (p0223 772-23441)

Skeletal bones ash content in man and primates, implying differences due to adaptive physiological function (p0227 772-23736)

Human body calorimetry with water cooled garment for dynamic and continuous recording of heat dissipation from surface over extended time (p0233 772-24885)

Human body efficiency in paced and unpaced performance as function of age (p0234 772-24987)

German papers on human body energy balance and temperature control-covering energy conversion processes, chemical secretions, muscle activity, etc (p0268 772-26071)

Thermodynamics of human body metabolism, discussing energy conversion calorimetric measurements, body size, food intake, age, sex, endocrine and nervous effects (p0268 772-26072)

Human body thermoregulatory processes under varying environmental conditions and metabolic...
Stabilograph for stability determination of stance and fine adjustments to body equilibrium (AD-791265) p0565 W72-32128

Human centrifuge tests for gravito-inertial force effect on ocular counterrolling in normal and deaf subjects p0022 W72-11956

Human centrifuge tests for semicircular canal gyroscopic stimulation during deceleration, discussing angular acceleration detection thresholds p0064 W72-15865

Acceleration tolerance increase by static forearms muscular contraction exercise comparison to q-seat protection during human centrifuge tests (AD-739063) p0171 W72-20887

Positive acceleration effects on human cardiovascular system during centrifuge tests, studying ECG changes in terms of cardiac rhythms, heart rate and wave parameters p0267 W72-26015

Human centrifuge studies of high positive acceleration effects on blood oxygenation and arterial oxygen and carbon dioxide tension p0294 W72-762087

Involuntary head movement and helmet motion displacements during human centrifuge runs to 6 Gz from photographic recordings p0294 W72-28288

Pilot pursuit tracking performance under acceleration stress, simulating high performance aircraft dynamics via human centrifuge equipped with simulated head-up predictive guidance systems p0294 W72-28320

Human physiological responses to high magnitude short duration positive accelerations, considering peripheral vision loss as a function of time p0558 W72-45660

Effects of G and target position on static helmet sighting using human centrifuge (AD-731720) p0195 W72-16059

Human centrifuge tests to determine aircraft pilot disorientation during aircraft catapult launches p0393 W72-25037

Human factors engineering of aircraft cockpit data entry keyboards on area navigation control and display units p0003 W72-11138

Book on human factors engineering covering systems design requirements and interface equipment for man machine interaction implementation p0050 W72-13023

Human factors relation to presurized cabin development, discussing aircraft safety, high altitude tests, pressure loss predictions and cabin altitude selection p0066 W72-19869

ALSEP human engineering design criteria for crew interface, describing astronaut trainer p0068 W72-15100

Fatigue accident, human factors investigation by roentgenography, noting flight environment factors, injury pattern relation to aircraft design and traffic identification p0111 W72-17880

Maximal aerobic power response and oxygen consumption to training stimulus by intensity, duration and frequency, using bicycle ergometer exercise p0148 W72-16965

Human computer dialogue, considering human factors effects on interaction course p0150 W72-19128

Instructor station design for automated flight training systems, considering human factors and informational requirements p0152 W72-19277

Book on physiological approach to ergonomics covering muscular system, performance, work and fatigue, working efficiency and environment, man machine systems, etc p0159 W72-19875

Helmet systems for head protection from concussion and deformation, discussing design and testing p0180 W72-21568

Crashworthy upper torso restraint systems for general aviation, incorporating strap type devices p0190 W72-21578

Helmet systems in navigation, discussing problems of interest with high speed and high capacity electromechanical systems with allowance for human weaknesses and abilities p0216 W72-22777

Anthropotechnical aspects of V/STOL aircraft control, discussing instrument and control systems concepts based on development and flight tests of experimental Do-31 VTOL aircraft p0217 W72-22784

ATC tasks workload assessment - Conference, Darmstadt University of Technology, June 1971 p0218 W72-23126

Time analyses of ATC approach controller tasks, developing flow diagram for task component sequencing and quantifying p0219 W72-23133

Multichannel automatic data acquisition and processing in ergonomic measurements of radar controller work from EEG, ECG and respiration p0219 W72-23136

Ergonomic simulators for testing individual mental working capacity, using stress-strain and fatigue relation p0220 W72-23140

Human operator role in space systems reliability, suggesting approaches to system design and program planning to exploit human potential (AIAA PAPER 72-1226) p0230 W72-24439

Space maintainability experiment aboard submersible during 30 day drift mission, noting application to Skylab manpower distribution (AIAA PAPER 72-3212 p0231 W72-24442

Fatigue factors in aircraft related to work and technological advances, considering implications for industry and work-rest cycles (AD-742988) p0235 W72-25114

Medical evaluation of manned space flight physiological effects, considering Mercury, Gemini and Apollo programs p0269 W72-26100

Aircraft pilot seating protection from dynamic effects on interaction coarse, discussing human factors characteristics p0269 W72-26391

Weightlessness effects on human organs, discussing physiological changes, artificial gravity by spacecraft rotation and exercise to counter adverse reactions p0278 W72-26891

Human, technical and environmental factors in accidents of naval F-101 squadrons, considering temporal distribution of accidents and pilot physical condition p0286 W72-27820

Change in Naval Flight Officer operational role due to modern equipment design in weapons systems, sensors and navigational aids p0294 W72-28291

FAA process for revision of aviation standards, maximum allowable control forces specifications, taking into account female pilots capabilities p0294 W72-28325
Influence of stick efficiency on tracking error
Display device design and human operator training
Anthropotechnics /human engineering/ approach to
Design of vibration absorbers minimizing human
discomfort.
Display device layout based on human operator
human machine system optimization, discussing task
allocation and adaptations of machine dynamics,
displays and controls to human operator
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discomfort.
Anthropotechnics /human engineering/ approach to
human machine system optimization, discussing task
allocation and adaptations of machine dynamics,
displays and controls to human operator
Display device layout based on human operator
manual control interface requirements, consideration, discussing functional categories, motion compatibility, indicators relation and integration
Display device design and human operator training based on visual and auditory sensation and perception principles, emphasizing fitting between man and information
Human operator decision making role in information presentation system determined by experiments using laboratory performance and test measures, field observation, electrical and biochemical measures.
Man machine system input via human controller output transformation, illustrating with spacecraft lateral position manual control problem
Manual workload determination by control characteristics, control-display relationships, demands for dexterity and sensitivity and speed and accuracy requirements
Human engineering requirements in aircraft system development.
Applied research into the effects of vibration upon displays.
A new concept of flight displays compatible with digital airborne computers.
Influence of stick efficiency on tracking error applying two slightly different control elements.
A psychologist's laboratory approach to a human factors problem.
Human organism and space flight stress endurance limits and manned space mission rescue capabilities requirements, considering cabin decompensation, anoxia, radiation, shading, illness, etc.
Spacecraft food synthesis, using carbon dioxide and water from chemically regenerated human metabolic and waste products
Mathematical description of a human operator in
ergonomic control systems

Algorithmic description of the generalized
operational characteristic of a human operator

Estimation of the operational efficiency of a human operator in the follow-up mode of a closed-loop control system

Methodological aspects of studies of ergatic
differential-game systems

Introduction to experimental psychology including methods in perception, learning, sociology, and diagnostics

Measurement of motivation in human factors engineering by psychological tests

Methods of measuring visual fatigue of workers engaged in tasks involving visual display(s) (VPL-1599)

Subjective parameters related to human factors in training operators of night observation devices (AD-72657)

Performance and acceptance tests of oxygen and protective masks (AD-72540)

Design and fabrication of impact and vibration
test equipment for biodynamic research (AD-72619)

Protection of aircraft crews from high temperatures and water-cooled garment for heat balance studies in man

Analysis of international aviation standards for colors and color perception required for civil aircraft pilots

Human engineering design data for reduced gravity conditions for use during development and design of manned spacecraft - handbook

Technological forecasting of future pilot-aircraft interface requirements

Analysis of toxicity of various organic chemicals and development of safety measures for human subjects

Biological applications of radiation processing, radiation protection, metabolic studies, and radiation effects research

Development and evaluation of space activity unit assembly for extravehicular activity applications

Bibliography of basic references to multivariate analysis using response surface methodology and application to human factors engineering

Development and characteristics of instruments to monitor physiological reactions of deep sea divers

Comparison of operator performance from nose of aircraft with performance from side of aircraft during aerial reconnaissance operations

Human factors characteristics for evaluating electronic equipment

Aerospace medical and exobiological factors of manned space flight

Guidelines to utilization of human factors in testing general supplies and equipment

Modal of human subject and ejection seat used to calculate aerodynamic and dynamic forces, deflections, and trajectories for zero speed and high speed ejections

Human factors engineering to determine performance of human subjects in monitoring systems to insure proper operation

Analysis of physiological changes associated with hyperbaric pressure to determine acclimatization
or adaptation to nitrogen narcosis
[AD-729289] p0138 H72-15077
Development of methods for analyzing data and
determining factors engineering to determine visual
anthropometry of flying personnel in Boyal Swedish
significance of impulse noise exposure in military
analysis of models and explanations for temporally
USSR space programs on selection and training of
human perceptual characteristic data relating to
energy absorption and safety properties of
principles of construction of complexes for
Human centrifuge tests to determine aircraft pilot
Human factors engineering viewpoint of
Human factors engineering to determine visual
discrimination of helicopter pilot and effect on
Helicopter control
[AD-730500] p0140 H72-15087
Analysis of human subjects to determine skeletal
configurations of operator in pulling or pushing
heavy loads
[AD-729627] p0143 H72-15106
Significance of impulse noise exposure in military
human engineering research
[AD-731185] p0145 H72-15118
Behavioral, psychologic, and sociologic problems of
long-duration space missions
[NASA-TK-58067] p0190 H72-16016
Conference on research at Institute for Human
Factors Engineering optimization of man machine
systems, Nockhem, Gossam, Jan. 1970
[AMTHROBOPTECH-79] p091 H72-16019
Research facilities and mission of the German
Research Institute for Human Factors Engineering
[AD-729627] p0191 H72-16020
Tests to determine sound attenuation achieved by
several Air Force ear protector devices
[AD-731123] p0195 H72-16054
USSR space programs on selection and training of
comosants, psychological and physiological effects of
space flight, and space missions
planning
[JPRBS-55100] p0201 H72-17056
Analysis of models and explanations for temporally
decreasing predictive relationship between
ability measures and complex motor task
performance
[AD-732612] p0248 H72-18126
Principles of construction of control systems for
continuous control of human subjects and
automatic normalization of body states
[AD-734604] p0248 H72-18127
Anthropometry of flying personnel in Royal Swedish
Air Force for application in design of cockpits
and aircraft equipment
[AEF-LE-TRANS-1502] p0252 H72-19497
Analysis of human factors problems associated with
air traffic control systems with emphasis on
impact caused by automation
[NASA-CA-1957] p0253 H72-19502
Health hazards and efficiency reductions of
personnel exposed to simulated nuclear shock
waves in protective shelters
[AD-727977] p0257 H72-19136
Energy absorption and safety properties of
dilatent suspension systems used in ejection
seat cushion materials
[AD-734623] p0263 H72-19181
Human Resources Research Organization bibliography
of publications as of 30 June, 1971
[AD-735415] p0309 H72-20101
Analysis of pedal operation by seated operator
with application to design of foot controls for
automobiles and other equipment
[AD-735515] p0318 H72-21009
Human perceptual characteristic data relating to
individual electronic flight display design
[AD-735622] p0355 H72-22622
Colors for elements of multicolored aircraft
display to insure minimum number of instrument
reading errors
[AD-736422] p0355 H72-22642
Human reaction time tests to determine ability to
perform binary choice task while subjected to
coriolis simulation
[AD-747197] p0385 H72-24090
Use of computer technology for solution to
temperatures problems in cybernetics
[JPRBS-55931] p0389 H72-24126
Human process of classification and formation of
concepts analyzed by construction of model of
brain as learning system
[AD-736422] p0390 H72-24130
Human centrifuge tests to determine aircraft pilot
discrimination during aircraft catalysis
launchees
[AD-736422] p0393 H72-25037
Development of theory concerning human reactions
to whole body motion and explanation of
individual differences to motion effects
[AD-739944] p0395 H72-25044
Behavior of gluteal region of human body subjected
to varying loads in sitting position
[AD-737225] p0401 H72-25110
Human factors engineering to determine effects of
weapon noise on military personnel and
development of criteria for performance
prediction of personnel after exposure to noise
[AD-738135] p0402 H72-25145
Performance of human model in controlling
attacking fighter aircraft
[AD-739944] p0435 H72-26077
Man machine systems and control, and engineering
psychology
[JPBS-56297] p0436 H72-26088
Steady state and transient temperature
distributions in human thigh covered with
cooling pad
[NASA-CB-127523] p0439 H72-27084
Conference on portable life support systems for
human protection
[NASA-SP-302] p0442 H72-27106
Portable air supply and monitoring system for
personnel working on offshore platform piloting
[AD-739437] p0446 H72-27137
Response time to vibrotactile stimulus in relation to
signal amplitude and frequency variation
[AD-739433] p0446 H72-27139
Human research reports on psychology and man
machine relationships
[JPRBS-56351] p0468 H72-28038
Human factor considerations in developing
automated air traffic control systems
[AD-745156] p0574 H72-30118
Human engineering survey of Canadian YFR air
traffic training base capacity
[AD-745158] p0574 H72-30120
Power assisted breathing device for reducing gas
tank resistance
[AD-740463] p0486 H72-29993
Effects of training in ocular pursuit tracking on
subsequent performance
[AD-741246] p0486 H72-29994
Human factors models for aiding diagnostic
and therapeutic monitoring of neuromuscular diseases
[AD-740643] p0527 H72-30110
Pilot describing function technique for analyzing
secondary task influence on tracking performance
[UTIAS-178] p0530 H72-30118
Soviet research in military human factors
ingineering
[JPBS-56653] p0530 H72-30119
Decision tree for use in human resources data in
systems engineering design
[AD-741768] p0530 H72-30120
Measurement of maximal isometric forces male
subjects can exert at six locations of hand
operated aircraft controls
[AD-740643] p0530 H72-30122
Multiple schedule of reinforcement used to
determine differential behavioral effects of
breathing air and helium-oxygen at three to ten
atmospheres
[AD-741691] p0532 H72-31108
Comparison of two methods of gisting messages
[AD-743185] p0533 H72-31111
Human factor evaluation of cold weather face masks
[AD-740807] p0573 H72-33127
Performance tests to evaluate proficiency of
maintenance personnel in trouble shooting and
repairing OH-1 helicopter
[AD-741516] p0574 H72-33129
Development of job performance tests to determine
proficiency of maintenance personnel in trouble
shooting and repairing OH-1 helicopter
lighting equipment
[AD-746519] p0574 H72-33131
Human factors laboratories
[AD-745087] p0574 H72-33131
Human annoyance reactions to sonic booms,
discussing field and laboratory findings
[AD-741768] p0222 H72-23321
Conference on research at Institute for Human Factors Engineering optimization of man-machine systems, Neckohlen, Germany, Jun. 1976
[AHRBHOPROBEC-470] p0151 A72-15019
Psychological measurements and methods in human factors laboratories p0192 A72-16027

HUMAN PATHOLOGY
Myokinese activity determination as diagnostic test for human myocardial infarction, comparing to creatine phosphokinase activity test p0098 A72-16388
Book on experimental brain hypoxia covering changes in hemodynamics, energy metabolisms, electrolyte and water movement and cerebral and peripheral venous blood sera proteins p0114 A72-22238
Vagus nerve regeneration in humans after stomach cancer surgery p0325 A72-20779
Human heart physiopathology from cardiac performance analysis, treating heart as pump and muscle p0368 A72-32493
Place of tropical pathology in medical assessment of aircrce p0452 A72-37862
Pathology of the cardiovascular system in terms of the theory of cortico-visceral interrelations p0496 A72-40756
Hazard rate of recurrence in germinal cell tumors of the testis, p0511 A72-42948
Chronic altitude sickness pathology based on anatomical and histological findings in abnormal mountain inhabitants autopsies, comparing with cardiovascular system morphology in normal people p0515 A72-42586
Time series analysis of meteoropathological disturbances of human regulation mechanisms, investigating annual variations of diurnal rhythms p0519 A72-42977
Psychopathology among French Air Force flying personnel p0127 A72-18112
Disturbance or absence of light invoked potentials in electroretinogram and electroencephalogram in diseases of the human visual system, p0134 A72-15047
Effect of nonspecific stimuli on inhibition of pathological processes [NASA-TG-F-651] p0252 A72-19098
Human physiological reactions and pathology in Antarctic acclimatization p0433 A72-26063
Pathological analysis of decompression caused lesions in nervous system [VILL-DEC-MANS-2790-3623.66] p0570 A72-33095

HUMAN PERFORMANCE
NT ASTRONAUT PERFORMANCE
NT BLACKOUT PERFORMANCE
NT OPERATOR PERFORMANCE
NT PILOT PERFORMANCE
Human exercise capacity assessment from maximal oxygen intake estimates and Harvard step test p0092 A72-10116
Optimal psychomotor performance in relation to thermal comfort conditions in man, using complex dual tests and subjective rating scales p0022 A72-10117
Human touch deficiency in artificial patters recognizers regarding handwriting, speech and patters recognition involving nonwords p0035 A72-10464
Sensory psychological invariance formation for perceptual functions in human visual system p0052 A72-10468
Sensoriomotor preconditions of single image impression in human binocular vision p0046 A72-10477
Optimal flash rate and duty cycle for flashing visual indicators, testing observer ability to determine indicator state p0067 A72-10565
Age and physique effects on human continuous work capacity, monitoring heart rates during task performance p0067 A72-10568

SUBJECT INDEX
Psychological threshold for successesiveness, calculating probabilities for correct guesses of stimuli order p0008 A72-10713
Methodological problems in multidimensional information transmission involving circular light identification tasks p0009 A72-10716
Human pattern analysis by stabilized retinal image fragmenting as function of fade frequencies for angle and line stimuli in different orientations p0009 A72-10721
Threshold stimulus for visual motion discrimination as function of velocity and luminance p0009 A72-10722
Skill acquisition in performance of three phase code transformation task p0013 A72-11193
Time sharing three phase code transformation multitask effects on sustained performance p0013 A72-11194
Body cooling effect on human vigilance in hot environments, testing reaction time to visual stimuli and auditory signal detection rate p0015 A72-11290
Human mental and psychomotor performance measurements in compressed oxygen-helium atmosphere pressure chamber for dive between 100 and 1500 feet p0018 A72-11701
Aerospace vehicle acceleration effects on human performance noting visual, motor and intellectual impairment levels relation to physiological tolerance limits p0018 A72-11702
Human postural control system dynamic model, discussing stick and pitch axis dynamics digital simulation and difficulties in linearization equations of motion p0015 A72-13163
Human mental working capacity estimation relation to functional state, discussing brain performance tests p0054 A72-13721
Psychological tests of airmen with performance error histories, considering psychic characteristics for limited assignment adjustment p0054 A72-13723
Bioengineering - Conference, Enschede, Netherlands, August 1969 p0059 A72-14703
Human taste papillae sensitivity to chemical stimuli, showing stable quality and intensity response patterns p0103 A72-17129
Human visual system selective adaptability to speed, size and orientation, suggesting motion analysis by visual cortex neural subsystems p0106 A72-17603
Motivation in vigilance, studying effects of subject self evaluation and experimenter knowledge of results/ controlled feedback p0106 A72-17711
Human immediate memory adaptation to speed, size, and orientation, discussing response time and performance accuracy relationship to stimuli complexity and input speed p0107 A72-17716
Transcendental flight psychological effects on airmen, discussing anxiety, stress, circadian rhythm disruption and sleep loss effects on performance deterioration p0108 A72-17816
Terminal area ATC specialists and trainees jet attitude and motivation from questionnaire on challenge, tasks, salary, work schedule, etc p0109 A72-17865
Color defective vision performance predictions during day and night tests of aviation color signal light discrimination p0109 A72-17871
Biosensor performance in simultaneous auditory and visual verbal information recognition demonstrating integrative action between hearing and vision p0111 A72-17949
Book on sustained attention /vigilance/, discussing effects of signal frequency, magnitude and distribution, task complexity, noise, age, intelligence, etc

Eastbound and westbound transaural flights on human attention and work performance, predicting model from remanency to exercise and environmental stresses, considering circulation, thermal regulation, work load and oxygen pressure effects

Acoustic tests of jet aircraft noise and sonic boom effects on sleep patterns and human performance, using EEG analysis

Human performance and exhaustion predictive model from remanency to exercise and environmental stresses, considering circulation, thermal regulation, work load and oxygen pressure effects

Noise effects on human attention and work efficiency in introverted and extroverted individuals

Loudness function correlations to illusory spiral aftereffect persistence, motion sickness susceptibility and auditory reaction time in individuals

Heat and activity patterns effect on space crews well-being and operational effectiveness during prolonged extraterrestrial missions, noting work load effect on long-haul transport aircraft

Stochastic models of human performance effectiveness functions reliability and correctness, data generated by tracking and vigilance tasks

Human performance prediction dependence on task and equipment variables effects, using experimental data for performance classification system

Human biodynamic and behavioral response to whole body vibration, discussing subjective judgment of vibration intensity and effects on performance

Choice reaction task times for responses to signals by middle, little and index fingers

Human body efficiency in paced and un paced performance as function of age

Anisotropic responses to dot and line visual stimuli, obtaining judgments on apparent straightness for various visual field locations and dot densities

Human performance under intense noise, measuring effects on muscle tension, metabolism, respiration rate, visual accommodation, saccadic eye movement and dark adaptation

Diurnal rhythm and loss of sleep effects on human efficiency - Conference, Strasbourg, July 1970

Human performance dependence on time of day, discussing circadian and physiological rhythms relation and environmental change effects

Sleep deprivation effects relation to work duration, time of day, circadian rhythms, memory function, task performance, environmental factors, drug use and age

Sleep loss effect on reaction and movement times during information processing in step tracking task

Time displacement effects on human physiological and psychological functions, discussing circadian rhythm phase shift and performance deficits

Mental performance tests in sleep deprived subjects for indication of recuperative function of slow wave and REM sleep stages

Cumulative partial sleep deprivation effects on human performance in auditory vigilance, routine addition and running digit span tests, observing circadian rhythms

Sleep, lack of sleep and circadian rhythms effects on psychomotor test performance

Sleep interruption, sleep deprivation and continuous darkness effects on circadian rhythms in human performance

Sleep loss and work-rest cycle effects on combat efficiency, considering psychomotor reactivity, vigilance and decision making capacity

Cumulative sleep deficit, preceding night on wakefulness period duration and body temperature effects on reaction time in multiple choice visual task

Human functional level performance characteristics, noting relationship between spontaneous rhythm diurnal variations in psychic and physical performance

Sleep deprivation effect on circadian rhythms in human performance, psychological fatigue ratings, catecholamine excretion and urine flow

Circadian rhythms effects on introverts and extroverts biochemistry, physiology and performance, suggesting arousal mechanism differences

Project Pegasus vigilance tasks for mental performance aspects of time zone change effects on human circadian rhythms

Time zone transition induced circadian rhythm disturbance effect on military personnel mental and physiological performance

Auditory flutter fusion frequency changes in humans during prolonged visual deprivation

Jet aircraft noise effect on sleeping EEG and subsequent waking performance, showing presence of carry-over effects

Parachutist biomedical responses in aerial tow at 110-175 knots, determining heart and respiration rates and urinary catecholamines

Periodic, continuous and aperiodic white noise effects on human performance, psychological fatigue ratings, catecholamine excretion and urine flow

Self estimated distractibility in subjects related to attention lapses during perceptual motor performance, indicating psychophysiological changes

EEG diurnal rhythms during 72 hour insomnia, considering adaptation to altered day-night cycle in subjects with stable and unstable brain activity rhythms

Human flexible processing accomplishment in speeded recognition task with visual stimuli dimensions relevancy contiguous upon other dimension stimulus values

Statistical periodic analysis of cyclic activity in human perceptual-motor performance

Divided attention effect localization, effect on choice tracking task reaction times in sequential stage model for human information processing

Vigilance effects for noise or vibration stimuli, duration judgment model of slow and REM sleep stages

A-203
**Subject Index**

- **Noise and vibration stress combined effects on human mental performance as function of time of day, taking into account circadian rhythm factor.**
- **High temperature and altitude combined effects on performance of tracking, monitoring and mental arithmetic complex task.**
- **White background noise intensity effects on human visual target detection performance considering display difficulty levels, target location, detection time and error.**
- **Momentary velocity measurement of human walking in forward movement by frequency response of signal on magnetic tape.**
- **Hypokinesis and motor activity of humans in industrial societies, noting prolonged inactivity and posture maintaining effects.**
- **Predictive model for human operator performance in short term visual information processing based on psychological research to obtain decision accuracy and response time.**
- **Auditory display in dual-axis compensatory tracking task, discussing performance measures in term of squared error integral and human operator describing functions.**
- **Altitude effects on decision making performance of cognitive, psychomotor and complex tasks.**
- **Possibilities and dangers during long working periods in space rescue.**
- **Natural acclimatization to work in severe heat.**
- **The effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation.**
- **Error arising from experimenter influence on subject behavior and performance, discussing rate effects on stimulus presentation and IQ and success-failure judgments.**
- **Psychological tests to judge maximum and minimum nonphysical subjective attraction forces between two parallel bars.**
- **Theoretical models for speed-accuracy tradeoff during difficult visual discrimination tasks under time pressure.**
- **Psychological tests for visual variations of human visual discrimination threshold by varying test object illumination level.**
- **Psychophysical information content evaluation of aerial photographic images by human viewer for photointerpretation and search in reference library.**
- **Behavioral characteristics of men in the performance of some decision-making task components.**
- **Evaluation of cardiopulmonary function and work performance in man during caloric restriction.**
- **Threshold detection model for foreal viewing by human observers using naked eye.**
- **Night vision performance-measure based on object recognition experiments with optical instruments, noting improvement in visual image intensifier.**
- **The visibility range when observing an aircraft with and without field-glasses.**
- **Vestibular and optical stimuli interaction in human orientation, testing via Barany chair on rotating platform surrounded by optokinetic drum.**
- **USA aerospace medical research on human capabilities as limiting factor in defense system development, discussing environmental simulators and human test facilities.**
- **Two explanations of temporal changes in ability-skill relationships - a literature review and theoretical analysis.**
- **Team size and decision rule in the performance of simulated monitoring teams.**
- **Error search reading tasks to investigate practical applicability of blinking display coding techniques, noting reading speed reduction compared to steady display.**
- **Body orientation under vertical sinusoidal vibration.**
- **Manual workload determination by control characteristics, control-display relationships, demands for dexterity and sensitivity and speed and accuracy requirements.**
- **Human engineering requirements in aircraft system development.**
- **Applied research into the effects of vibration upon displays.**
- **The foot as input device for control operation.**
- **The influence of a prediction display on the human transfer characteristics.**
- **Changes in certain hemodynamic indices during muscular strain in people with differing capacity to perform work.**
- **Content and time aspects of short and long term memory operation theories, relating attention and memory spans.**
- **Carbon monoxide exposure effects on human sleep patterns and psychomotor performance involving time estimation, mental arithmetic, tracking, and vigilance under moderate or high workloads.**
- **Effect of low concentrations of carbon monoxide on human behavior and performance.**
- **Effects of low CO concentrations on learned behavior patterns using human subjects.**
- **Tests and transducer record analysis of daisy track human tolerance tests.**
- **Effects of environmental stresses on attack helicopter crew task performance in NATO theater.**
- **Effect of differential payoff matrices to induce motivation in vigilance performance involving detection of visual signals.**
- **Teaching and training innovations and technological improvements for augmenting human cognition.**
- **Effects of background radio chatter on performance of pilots in training.**
- **Performance reference scale for maneuvers in T-37B pilot training.**
- **Optical vision testing unit for testing eyes and visual system of human subject.**
- **Decision making and operator functions of control of highly automated systems.**
- **Information processing of short and long term human memory - bibliography.**
- **Selectivity in human adaptation to Coriolis, linear, and swinging accelerations.**
**HUMAN PERFORMANCE CONTD**

<table>
<thead>
<tr>
<th>Subject Index</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronoreflectometric determination of human eye accommodation time and visual acuity in fitting of optical glasses</td>
<td>p0136 W72-15062</td>
</tr>
<tr>
<td>Flash perception period measurements for determining human visual thresholds</td>
<td>p0136 W72-15063</td>
</tr>
<tr>
<td>Binocular eye function characteristics during isometric and anisometric vision</td>
<td>p0136 W72-15064</td>
</tr>
<tr>
<td>Human decision making performance concerning ambiguity tolerance</td>
<td>p0136 W72-15075</td>
</tr>
<tr>
<td>Experimental investigation of acclimatization of human subjects to high temperature environments</td>
<td>p0140 W72-15088</td>
</tr>
<tr>
<td>Topographical distribution of CNV on human scalp during analogous sustained and delayed response tasks</td>
<td>p0142 W72-15099</td>
</tr>
<tr>
<td>Effect of work-rest schedules on human performance in hot climates</td>
<td>p0143 W72-15105</td>
</tr>
<tr>
<td>Static and dynamic tests of human tracking efficiency after alcohol ingestion</td>
<td>p0144 W72-15111</td>
</tr>
<tr>
<td>Performance tests of underwater breathing apparatus at simulated depth of 600 feet during seven day saturation dive</td>
<td>p0144 W72-15113</td>
</tr>
<tr>
<td>Human identification of threat symbols on simulated ECM display scopes while performing compensatory tracking tasks</td>
<td>p0146 W72-15117</td>
</tr>
<tr>
<td>Track initiation and maintenance in single operator semi-automated radar surveillance system</td>
<td>p0146 W72-15117</td>
</tr>
<tr>
<td>Effect of sleep inhibiting drugs on human operator performance</td>
<td>p0146 W72-15117</td>
</tr>
<tr>
<td>[BRR-LID-TRANS-1607] Color perception tester for testing color code perceptiveness of individuals</td>
<td>p0169 W72-16004</td>
</tr>
<tr>
<td>Processing of human performance data in man machine systems</td>
<td>p0190 W72-16015</td>
</tr>
<tr>
<td>Comparison of human eye controlled and hand controlled tracking tasks</td>
<td>p0206 W72-16706</td>
</tr>
<tr>
<td>Effects of fixed, intense beam of sunlight on human performance in space-station-like environment</td>
<td>p0207 W72-16706</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subject Index</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects of partial sleep deprivation on basic information and energy costs in human daily circadian work-rest cycle</td>
<td>p0140 W72-15088</td>
</tr>
<tr>
<td>Experimental investigation of acclimatization of human subjects to high temperature environments</td>
<td>p0140 W72-15088</td>
</tr>
<tr>
<td>Topographical distribution of CNV on human scalp during analogous sustained and delayed response tasks</td>
<td>p0142 W72-15099</td>
</tr>
<tr>
<td>Effect of work-rest schedules on human performance in hot climates</td>
<td>p0143 W72-15105</td>
</tr>
<tr>
<td>Static and dynamic tests of human tracking efficiency after alcohol ingestion</td>
<td>p0144 W72-15111</td>
</tr>
<tr>
<td>Performance tests of underwater breathing apparatus at simulated depth of 600 feet during seven day saturation dive</td>
<td>p0144 W72-15113</td>
</tr>
<tr>
<td>Human identification of threat symbols on simulated ECM display scopes while performing compensatory tracking tasks</td>
<td>p0146 W72-15117</td>
</tr>
<tr>
<td>Track initiation and maintenance in single operator semi-automated radar surveillance system</td>
<td>p0146 W72-15117</td>
</tr>
<tr>
<td>Effect of sleep inhibiting drugs on human operator performance</td>
<td>p0146 W72-15117</td>
</tr>
<tr>
<td>[BRR-LID-TRANS-1607] Color perception tester for testing color code perceptiveness of individuals</td>
<td>p0169 W72-16004</td>
</tr>
<tr>
<td>Processing of human performance data in man machine systems</td>
<td>p0190 W72-16015</td>
</tr>
<tr>
<td>Comparison of human eye controlled and hand controlled tracking tasks</td>
<td>p0206 W72-16706</td>
</tr>
<tr>
<td>Effects of fixed, intense beam of sunlight on human performance in space-station-like environment</td>
<td>p0207 W72-16706</td>
</tr>
</tbody>
</table>

**SUBJECT INDEX**

<table>
<thead>
<tr>
<th>Subject Index</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory simulation of weightlessness in order to develop methods for preventing harmful effects to human subjects</td>
<td>p0082 W72-12033</td>
</tr>
<tr>
<td>Annotated bibliography on noise pollution and associated effects on human performance</td>
<td>p0087 W72-13078</td>
</tr>
<tr>
<td>Taxonomic structure for classifying behavioral studies in human performance reliability data systems</td>
<td>p0118 W72-16052</td>
</tr>
<tr>
<td>Information and energy costs in human daily circadian work-rest cycle</td>
<td>p0122 W72-14077</td>
</tr>
<tr>
<td>Effects of noise on human performance</td>
<td>p0128 W72-14121</td>
</tr>
<tr>
<td>Early attitude-achievement discrepancies as predictors of voluntary withdrawal from naval aviation training</td>
<td>p0130 W72-14130</td>
</tr>
<tr>
<td>Development of semi-automatic tracking concepts and control of complex systems</td>
<td>p0131 W72-14135</td>
</tr>
<tr>
<td>Determination of optimal work-rest cycle for individuals and crews to yield high performance in man machine effectiveness</td>
<td>p0131 W72-14139</td>
</tr>
<tr>
<td>Human factors engineering to determine performance of human subjects in monitoring systems to insure proper operation</td>
<td>p0132 W72-14193</td>
</tr>
<tr>
<td>Mathematical model for human color vision process simulation</td>
<td>p0132 W72-15028</td>
</tr>
<tr>
<td>Mathematical model of psychophysiological relationship between sensation and stimulus in human color perception</td>
<td>p0132 W72-15030</td>
</tr>
<tr>
<td>Grassman algebras for functional model of color vision statics in human perception</td>
<td>p0132 W72-15031</td>
</tr>
<tr>
<td>Phased development of human visual color perception</td>
<td>p0133 W72-15032</td>
</tr>
<tr>
<td>Minimum time interval in human visual discrimination of successive optical stimuli</td>
<td>p0133 W72-15039</td>
</tr>
<tr>
<td>Therapeutic irradiation effects on visual perception times in humans with optical nerve diseases</td>
<td>p0133 W72-15041</td>
</tr>
<tr>
<td>Psychophysiological fatigue effect on human visual analyzer during microscopic assembling of semiconductor devices</td>
<td>p0133 W72-15042</td>
</tr>
<tr>
<td>Experimental aerospace effects on human visual physiology</td>
<td>p0134 W72-15043</td>
</tr>
<tr>
<td>Weightlessness effects on achromatic and chromatic visual perception in humans</td>
<td>p0135 W72-15050</td>
</tr>
<tr>
<td>Speed of motion and tracking time effects on human visual acuity in perception of moving objects</td>
<td>p0135 W72-15053</td>
</tr>
<tr>
<td>Statistical analysis on restoration time of human visual acuity after temporary blinding by light flashes</td>
<td>p0135 W72-15055</td>
</tr>
<tr>
<td>Restoration time for light sensitivity in human subjects exposed to light flashes and dark adaptation</td>
<td>p0135 W72-15057</td>
</tr>
</tbody>
</table>
HUMAN REACTIONS

SUBJECT INDEX

Human muscular electrical activity in various body positions, noting potentials during natural and unaccustomed postures

Human neurovascular coordination control optimization, discussing preprogrammed open-loop control with feedback monitoring loop

Daily prolonged exercises effects on human muscle glycogen utilization, noting reduced lactate accumulation and increased free fatty acid levels

Human vestibulo-ocular responses to oscillatory rotational stimulation during various sleep and arousal states, discussing Sysi-Opex reflex system mathematical model

Blink reflexes in man during sleep and wakefulness, discussing electrogoniometrically recorded orbicularis ocularis monosynaptic responses to mechanical stimuli

External biodynamic models for human mechanical responses to environmental forces, emphasizing injury mechanisms

Human trace responses generation and storage under experimental psychological stresses and effects

Successive visual motion illusion during perception of rotating kymograph drum by human eye

Human reaction to inhalation of gas mixtures with 3-9 percent carbon dioxide, measuring respiratory rates, air intake breathing volume, heart rates, arterial pressures, etc.

Jet airport surrounding communities survey on attitudes toward aircraft noise, noting daily activity disturbance, emotional reactions, economic effects, noise abatement awareness, etc.

Crew members handling of emotionally disturbed aircraft passengers

Electroencephalogram study of antagonistic muscles reactions to aches and torrid perception or whole body sudden motion via test stand jerking

Acid base balance in arterialized capillary blood positions, noting potentials during natural and unaccustomed postures

Human temperature regulation during upright and supine exercise, showing nonlinear relationships between perspiration and skin and core temperatures

Botenors pool fraction determination in human nonsynaptic responses of healthy and neuropathological subjects, comparing diagnostic methods

Fast and slow human muscle fiber temporal response characteristics, using tensiometric recording

Human muscular electrical activity in various body positions, noting potentials during natural and unaccustomed postures

Human neurovascular coordination control optimization, discussing preprogrammed open-loop control with feedback monitoring loop

Daily prolonged exercises effects on human muscle glycogen utilization, noting reduced lactate accumulation and increased free fatty acid levels

Human vestibulo-ocular responses to oscillatory rotational stimulation during various sleep and arousal states, discussing Sysi-Opex reflex system mathematical model

Blink reflexes in man during sleep and wakefulness, discussing electrogoniometrically recorded orbicularis ocularis monosynaptic responses to mechanical stimuli

External biodynamic models for human mechanical responses to environmental forces, emphasizing injury mechanisms

Human trace responses generation and storage under experimental psychological stresses and effects

Successive visual motion illusion during perception of rotating kymograph drum by human eye

Human reaction to inhalation of gas mixtures with 3-9 percent carbon dioxide, measuring respiratory rates, air intake breathing volume, heart rates, arterial pressures, etc.

Jet airport surrounding communities survey on attitudes toward aircraft noise, noting daily activity disturbance, emotional reactions, economic effects, noise abatement awareness, etc.

Crew members handling of emotionally disturbed aircraft passengers

Electroencephalogram study of antagonistic muscles reactions to aches and torrid perception or whole body sudden motion via test stand jerking

Acid base balance in arterialized capillary blood positions, noting potentials during natural and unaccustomed postures

Human temperature regulation during upright and supine exercise, showing nonlinear relationships between perspiration and skin and core temperatures

Botenors pool fraction determination in human nonsynaptic responses of healthy and neuropathological subjects, comparing diagnostic methods
Physiological effects produced by rotation of human subjects in sagittal plane at various rates of rotation and accelerations p0208 72-17073

Bibliography with abstracts dealing with reaction time in selected human information processing tasks [AD-734771] p0247 72-18124

Equipment designed for accurately and rapidly determining mechanical response of man during impact p0259 72-19185


Human Resources Research Organization bibliography of publications as of 30 June, 1971 p0309 72-20101

Human reactions to long term spaceflight [NASA-CR-152526] p0309 72-20103

Mathematical models for analyzing sequential and continuous motor behavior in humans [AD-734681] p0314 72-21060

Changes in external respiratory rate of men exposed to increased CO2 concentrations [NASA-TG-F-16259] p0362 72-24064

Human reaction time tests to determine ability to perform binary choice task while subjected to cyclic stimulation [IZF-1971-19] p0385 72-24090

Development of theory concerning human reactions to whole body motion and explanation of individual differences to motion effects p0393 72-25044

Application of methods of simulation of instrument flying as means of reducing occurrences of spatial disorientation in flight p0394 72-25046

Physiological and psychological effects of low and high magnetic fields on man [NASA-CR-127049] p0432 72-26055

Nonlinear oscillator system models for representation of reactions of human operators to harmonic and random vibrational action [NASA-TG-F-16259] p0436 72-26085

Tests of broadband high intensity noise on human equilibrium [AD-737826] p0440 72-27093

Nonlinear mathematical models for determining human dynamic response to low frequency vibrations [AD-749662] p0527 72-30100

Reaction of subjects to simulated indoor sonic booms and comparison with reaction to noise of subsonic and supersonic aircraft [NASA-CR-2106] p0529 72-30112

Dark adaptation recovery of human eye after exposure to single light pulses [AD-743164] p0533 72-31113

Attitudes of air force pilots returning from Vietnam [AD-742665] p0535 72-31113


HUMAN TOLERANCES

Harmful influence of random vibrations on human organism, discussing Fokker-Planck analysis and amplitude and frequency variation effects p0115 72-18720

Dynamic response and functional state of human operator subjected to harmonic and random vibrational excitations, discussing biomechanical nonlinear oscillator system model construction p0115 72-18728

Human external respiration characteristic changes during increasing hypercapnia, relating carbon dioxide concentration rate to compensatory mechanisms and endurance p0116 72-22086

Circadian adrenal periodicity of plasma corticosteroid levels in man under random living schedule p0215 72-22463

Safe exposure times for men working in high temperature environments, showing hyperbolic heat collapse relationship to environmental severity p0235 72-24990

Pathophysiology of exposure to UV, IR, coherent, microwave and RF radiations, discussing potential hazards, damage, human tolerance threshold, protection guides and safety standards p0288 72-27963

Centrifugation tolerance reduction after 14 days bed rest with moderate exercise, determining rehydration effects p0295 72-28295

Physiological and subjective responses of physically fit young men to combined exercise-carbon dioxide stress tests p0297 72-28311

Pilot and back-seat man physiological responses during high-g aerial combat maneuvers in F-10 aircraft, discussing ECS, respiratory rate and minute volume p0298 72-28317

Valsalva and n-f maneuvers acceleration tolerance protective effects during high-g centrifuging with and without anti-g suits p0298 72-28318

Human acceleration stress tolerance monitoring techniques for temporal, brachial and radial arterial blood flow and indirect systolic and diastolic blood pressure measurement p0299 72-28328

Miniature swine as human analog to investigate physiological response to high positive acceleration, comparing human and animal tolerances p0299 72-28329

Low pressure chamber as aerospace medical diagnostic tool for flying personnel, examinations regarding oxygen deficiency, low air pressure and air pressure fluctuations tolerance p0341 72-30819

Crank energy absorption for prevention of fatal injuries, considering human deceleration tolerance with respect to required energy absorber force-deceleration relationship p0370 72-32630

Individual functions and intersubject differences of noise annoyance susceptibility, noting relationship to Korschach test p0371 72-32987

A new model for estimating space proton dose to body organs. p0417 72-35354

Hemodynamic theroregulatory and sympathoadrenal responses to heat acclimatization in man during supine and upright position exercise p0420 72-35963

Respiratory frequency and alveolar oxygen and carbon dioxide tension relationship to hypercapnia in man p0421 72-35965

Skin temperatures in warm environments and the control of sweat evaporation. p0421 72-35969

Human tolerance to high, sustained +Gz acceleration. p0455 72-38702

Comparison of irregular vibrations of a limited frequency range with sinusoidal vibrations in regard to their effect on man p0108 72-17765
FUNCTIONAL ADAPTATION, THERMOREGULATION, AND WATER BALANCE DETERMINATION FOR MINI WORKERS UNDER HOT AND HUMID CONDITIONS

ACCELERATION TOLERANCE OF MAN AFTER A LASTING EXPOSURE TO CONDITIONS SIMULATED WEIGHTLESSNESS

EFFECT OF PSYCHOTROPIC SUBSTANCES ON HUMAN RESISTANCE TO ACCELERATION

STUDY OF HEMODYNAMICS DURING THE ACTION OF DECOMPRESSION AND ACCELERATIONS

INFLUENCE OF HIGH TEMPERATURE ON THE ONSET OF MOTION SICKNESS

INFLUENCE OF PROLONGED LONGITUDINAL ACCELERATIONS ON CONTROL HABITS

ADAPTIVE PROCESSES RESPONSIBLE FOR NATURAL ACCELERATION OF HUMAN ORGANISMS TO LOW AMBIENT PRESSURES AT HIGH ALTITUDES

HUMAN ORGANISM AND SPACE FLIGHT STRESS ENDURANCE LIMITS AND MANNED SPACE MISSION CAPABILITIES REQUIREMENTS, CONSIDERING CABIN DECOMPRESSION, ANOXIA, RADIOACTIVE SHOT, ONBOARD ILLNESS, ETC.

RELATIONSHIP OF SODIUM DEPLETION TO FLY ACCELERATION TOLERANCE

HUMAN PHYSIOLOGICAL RESPONSES TO HIGH ALTITUDE SHORT DURATION POSITIVE ACCELERATIONS, CONSIDERING PERIPHERAL VISION LOSS AS FUNCTION OF TIME

CHANGES IN ACTIVITY OF ASPARAGINE TRANSAMINASE AND MITOCHONDRIAL MEMBRANES IN MALE HUMANS AND RATS EXPOSED TO TRANSVERSE AND CENTRIFUGAL ACCELERATIONS, RESPECTIVELY

EFFECTS OF PULSATILE VENOUS PRESSURE ON CARDIOVASCULAR CONDITIONING TO POSTFLIGHT ORTHOSTATIC INTOLERANCE PRODUCED BY WATER IMMERSION

HUMAN VENTILATORY TOLERANCES IN ROTATING CHAIRS AT DIFFERING HEAD TILT POSITIONS

EXPERIMENTAL INVESTIGATION OF ACCELERATION TOLERANCE OF HUMAN SUBJECTS TO HIGH TEMPERATURE ENVIRONMENTS

DEVELOPMENT OF DIVING TABLES AND PROCEDURES FOR SWIMMER DELIVERY VEHICLES AND VARIOUS UNDERWATER RESCUE OPERATIONS

REGRESSION ANALYSIS TECHNIQUE FOR DETERMINING HUMAN SENSITIVITY TO NOISE AND NOISE ANNOYANCE (NASA-CR-1958)

ESTABLISHMENT OF MAXIMUM PERMISSIBLE VALUES FOR INTERNAL RADIATION DOSES BASED ON UPTAKE AND RETENTION OF RADIATION-DAMAGED HUMAN BODY ORGANS

HUMAN TOLERANCE TO ACUTE HYPOXIA AND ACCELERATION FOLLOWING EXPOSURE TO HYPERBARIC ATMOSPHERE

EFFECTS OF SPACE FLIGHT ON DEVELOPMENT OF STAPHYLOCOCCAL INFECTION IN HUMAN SUBJECTS AS DETERMINED BY EXTENDED BED REST AND PARTIAL OR COMPLETE ISOLATION

ANALYSIS OF MEDICAL AND BIOLOGICAL PROBLEMS ASSOCIATED WITH LIFE SUPPORT SYSTEMS REQUIRED FOR EXTENDED HUMAN SUBJECTS DURING PROLONGED SPACE FLIGHTS

HUMAN TOLERANCE TO ABDOMINAL IMPACT INJURY IN MOTOR VEHICLE ACCIDENTS

HUMAN TOLERANCE AND PHYSIOLOGICAL CHANGES CAUSED BY ACCELERATION AND EJECTION STRESSES

HUMAN RESOURCES RESEARCH ORGANIZATION BIBLIOGRAPHY OF PUBLICATIONS AS OF 30 JUNE, 1971

DETERMINATION OF RADIATION INTENSITY NEEDED TO CAUSE PERMANENT RETINAL DAMAGE IN HUMANS

ANALYSIS OF HUMAN TOLERANCE TO RANDOM AND MILLINSODIAL VIBRATIONS

MEDICAL ASPECTS OF HUMAN ACCOMMODATION TO COLD STAY IN POLAR REGIONS

HUMAN PHYSIOLOGICAL REACTIONS AND PATHOLOGY IN ANTIMICROBIAL ACCELERATION

CLINICAL EVALUATION OF HUMAN PHYSIOLOGICAL ACCELERATION TOLERANCES IN ANTARCTICA

PHYSIOLOGICAL CHARACTERISTICS OF HUMAN COLD ACCLIMATIZATION IN ANTARCTICA

PSYCHOPSYHLOGICAL FACTORS OF HUMAN ADAPTATION TO ANTARCTIC LIFE

SLEEP PATTERNS OF HUMAN ADAPTATION TO ANTARCTIC LIFE

PULMONARY FUNCTION AND GENERATION OF ARTIFICIAL GRAVITY DURING PROLONGED SPACE FLIGHT

PHYSIOLOGICAL EVALUATION OF THORAL INSULATION PROPERTIES OF CASUAL HAIR SUITS FOR HUMAN ARCTIC STAY

RESPONSE OF HUMAN SUBJECTS TO REDUCED LEVELS OF WATER CONSUMPTION UNDER SIMULATED CIVIL DEFENSE SHELTER CONDITIONS

HUMAN TOLERANCE TO EXTERNAL RESPIRATORY RESISTANCE FOR DESIGN OF BREATHING APPARATUS

PHYSIOLOGICAL BODY WEIGHTNESS MODULATION PARAMETERS AND GENERATION OF ARTIFICIAL GRAVITY DURING PROLONGED SPACE FLIGHT

HUMAN TRANVERSE ACCELERATION TOLERANCE AFTER PROLONGED EXPOSURE TO SIMULATED WEIGHTLESSNESS

STIMULANT AND TRANQUILIZER EFFECTS ON HUMAN ACCELERATION TOLERANCE

DEVELOPMENT AND CHARACTERISTICS OF CONTROLLED ATMOSPHERES ADEQUATE FOR HABITATION WHICH WILL NOT SUPPORT COMBUSTION

BIOHYDRAULIC MODELLING OF AIRCRAFT SPACE SYSTEMS TO DETERMINE HUMAN TOLERANCES TO SUDDEN EJECTION

TOXICOLOGY AND FLAMMABILITY HAZARDS OF INSECTICIDE VAPOR IN AIRCRAFT CABIN ENVIRONMENTS

CALCULATION METHOD FOR ESTIMATED RATE OF ONSET AND SEVERITY OF PULMONARY OXYGEN TOXICITY OF THE LUNGS

ANALYSIS OF EFFECTS OF EXTERNAL AND INTERNAL ENVIRONMENTS ON INFORMATION RETRIEVAL PROCESS IN
HYDROGEN

Effect of flight conditions and prolonged ground storage on viability and radiosensitivity of hydrogen bacteria cells

HYDROGEN CHLORIDES

VT HYDROCHLORIC ACID

HYDROGEN COMPOUNDS

VT HYDROGEN HYDRIDES

VT HYDROGEN PEROXIDES

Air pollution tests of plants exposed to gaseous hydrogen chloride

[AD-72195]

HYDROGEN CARBIDES

Atmospheric model for proteins abiogenesis, considering heteropolypeptides formation from hydrogen cyanide and water

HYDROGEN PEROXIDES

Hydrogen peroxide formation relationship to lipid peroxidation and seizures in brain during high pressure/oxygen exposure

In vivo benson due to hyperoxia - Role of $\mathrm{O}_2$ accumulation

HYDROGENS

Kinetinics of heat inactivation of phosphorylase kinase in soluble fraction from hydrogenomonas facilis

Influence of Cosmos 368 space flight conditions on radiation effects in yeasts, hydrogen bacteria and seeds of lettuce and peas

HYDROLYSIS

Solar activity effects on biomass chloride hydrolysis tests from statistical results following solar flares

HYDROMETABOLIC

VT HYDROGENS

VT HYDROSPHERE (Earth)

G EARTH HYDROSPHERE

HYDROSTATIC PRESSURE

Hydrostatic pressure and temperature effects on growth of psychrophilic marine bacteria, emphasizing inhibited amino acid transport and respiration

Electrolyte hydrostatic pressure measurement in limited volume biological compartments by fluid-filled glass micropipette used in microtransducer capacity

Lover-body negative pressure as a method of preventing shifts associated with changes in the hydrostatic pressure of blood

Effects of hydrostatic pressure on viscosity of whole blood systems

[AD-74005]

HYDROXICOSTEROID

HT CONTISONE

Peritid fluid 17-hydroxycortico steroid level relation to hyperthermia stress at various heat levels during thermal environmental testing

HYDROXYL COMPOUNDS

VT ALCOHOLS

VT ALCOHOL

Hydroxypropline isotropic and anisotropic elastic properties compared with experimentally observed anisotropic behavior of bone

HYGIENE

Zero-g showers for long duration space flight crews benevolent, describing flexible mesh bag and truncated conical shell design

Clinical observation of constant diet, minimal oral hygiene, and simulated weightlessness on microbial populations in human dental plaque

[AD-735275]

BTOXICINE

Effectiveness of benzenactamide hydrochloride and other antisickness drugs combined with scopoline

[AD-737220]

SUBJECT INDEX

HYPERBARIC CHAMBER

Hyperbaric chamber tests for hemodynamic response to oxygen inhalation at 1 and 2 atm pressure for myocardial infarction treatment assessment

Decompression sickness treatment in USDF

Hyperbaric oxygen chambers

Physiological and biochemical response of Parasmucium capsulatum to hyper- and hyperbaric stress, discussing protoplasmatic inactivation by high oxygen pressure

Noise effects of monitoring radiation loss to divers and hyperbaric chamber personnel

Effects of oxygen atmosphere in high pressure diving chamber simulation on human body

Hyperbaric air and corneal vasculization caused by hyperoxia

Comparative effects of hyperoxia and hyperbaric pressure in treatment of primary blast injury in air-driven shock tube, using guinea pigs and rabbits

Visual evoked potential changes of chloralose anesthetized cats in hyperbaric atmospheres

Development and tests of sensitive methodologies for measuring sensory and motor impairment in hyperbaric environments

Whole body plethysmograph system for use in measuring airway resistance under ambient hyperbaric conditions for normal breathing patterns

Calculation method for estimated rate of ascent and severity of palomary oxygen toxicity of the lungs

Multiple schedule of reinforcement used to determine differential behavioral effects of breathing air and helium-oxgen at three to ten atmospheres

Data systems for studying hyperbaric physiology of human and animal subjects

HYPERCAPNIA

Intracranial pCO$_2$ prime regulation in rat brain during acute and sustained hypercapnia, discussing cellular bicarbonate accumulation

During acute and sustained hypercapnia, discussing cellular bicarbonate accumulation

Hyperoxia, hypercapnia and hypercapnia short period effect on rat brain oxygen supply, measuring blood gas values, tissue oxygen partial pressure, time variations, etc

Acute hypercapnia neurotropic effect in rabbits, describing carbon dioxide inhalation period, preanarctic and narcotic stages and recovery phase

Acute and chronic hypercapnia effect on lactate, pyruvate, alpha-ketoglotarate, alanine and phosphocreatine contents of rat brain

Severe reaction to inhalation of gas mixture with 3-9 percent carbon dioxide, measuring respirations rate, minute breathing volume, heart rates, arterial pressures, etc

Hyperoxia, hypercapnia and hypoxia effects on active glucose transport in rat small intestines

Confinement, physical deconditioning and hypercapnia effects on human skeletal muscle protein by chromatographic method for quantifying urinary peptides and free amino acids

Arterial chemoreceptor deafferentation influence on rat respiratory response to hypoxic and hypercapnic gas mixture breathing

Human external respiration characteristics changes during increasing hypercapnia, relating carbon dioxide concentration rate to compensatory mechanism and endurance
Hypokinetic effects on neurosecretory system of rat hypothalamus and hypophysis, noting increased antidiuretic hormone contents in blood.

Rat tissue autolysis rate during hypokinetic, discussing relation to free amino acid background changes.

Abdominal injected barbaryl somnifacient and toxic effect on mice subjected to hypokinaxis and isolation.

Functional condition of rabbits cerebrum prefrontal arteries during hypertension produced by intravenous noradrenaline infusion, discussing hypo and hypokinesia.

Pathochemical studies on gas exchange in dogs and rats prolonged hypokinesia studied with acetylene and oxygen.

Delayed growth of rats carcasses and skeletal muscles during prolonged hypokinaxis, comparing effects on flexor muscles to ankle joint extenders.

Hypokinesia effect on fluid and electrolyte metabolism change patterns in rabbits from blood plasma studies.

Human organism readaptation after prolonged hypokinesia and weightlessness, discussing coordination disturbances, vegetative and vascular system instabilities, reduced orthostatic stability and asthenia.

Hypokinaxis and motor activity of humans in industrial societies, noting prolonged inactivity and posture maintenance effects.

Effect of hypoxia on the condition of skeletal muscles in rats under hypokinesia.

The effect of space flight conditions and prolonged hypokinaxis on the kidney function in man.

Functional insufficiency of the neuromuscular system caused by weightlessness and hypokinesia.

Adrenal morphology changes in rats subjected to hypokinesia.

Influence of a preliminary exposure to carbon monoxide on the development of hypokinetic disturbances in albinos rats.

Health condition changes in test subjects during space flight in hypokinetic antrostathotic bed rest and antrostathotic position subject to lower body negative pressure.

Cardiac output, hemodynamic and gas exchange variations as function of basal metabolism during bed rest in hypokinetic antrostathotic position.

Ophthalmoscopic, photocalibrometric and ophthalmodynamometric examinations of test subjects visual acuity during bed rest in hypokinetic antrostathotic position.

Otobinolaryngological organ response during hypokinetic antrostathotic bed rest for control, exercising and muscular electric-stimulated groups.

Cerebral blood filling reduction and blood vessel tone deterioration during 120 day clinostatic hypokinaxis of healthy male subjects.

Effects of spacecraft environmental conditions on humans, and space biomedical problems.

Pathogenesis of prolonged hypokinaxis and effect on gas exchange in dogs and rats.

Minute blood volume changes in humans during prolonged hypokinaxis studied with acetylene.
HYPOTERMIA

Central cooling and warning effects of preoptic/anterior hypothalamic region on thermoregulatory activity of neuroendocrine, cardiovascular and neurosensory systems

Thermoregulatory hypothalamic and body sites for behavioral temperature regulation in squirrel monkey

Cat mean renal nerve activity modification by hypothalamic stimulation and baroreceptor reflex interactions, discussing mean arterial pressure variation effects

Hypokinesia effects on neurosecretory system of rat hypothalamus and hypophysis, noting increased antidiuretic hormone contents in blood

Thermal stability variations in blood serum protein after electrical stimulation of rabbit hypothalamic structures

Hypothalamic stimulation conditioned negative fear reflex in cats before/after meocortex isolation

Hypothalamus increased noradrenaline turnover activity characterized by single nonrhythmical hypothalamus in conscious cat and monkey, using histochemical techniques

Adrenocortical response to prolonged high altitude exposure and seasonal variations

Hypothalamic single neuron unit discharge pattern response to nociceptive, light and somato-sensory stimulation in cats

Adreno-cortical response to prolonged high altitude hypoxia in hypothalamic-deafferented rats, showing rapid neural stimulation with delayed hormonal activation

Serotonin precursor 5-oxypyrophan effects on hypothalamic-hypophysial-adrenal complex under complete deafferentation of medial-basal hypothalamus

Cat cerebellum cortex evoked response impulses after electrical stimulation of rabbit hypothalamic structures

Cat cerebellum cortex evoked response impulses interaction during stimulation of hypothalamus and peripheral nerves

Succinic dehydrogenase activity in rabbit eye ciliary epithelium during electric stimulation of hypothalamus, using histochemical techniques

Thermal relationship between truncaal brain and hypothalamus in conscious cat and monkey.

Effect of a magnetic field on experimental tumors (direct and via nervous system)

Influence of thermal, osmotic, and chemical stimulations on food and water intake

Trophic support of cardiac activity

Influence of cooling of the somatomotor region of the cerebral cortex on the neurons of the mesencephalic reticular formation

Effects of chloralose-urethan anesthesia on temperature regulation in dogs.

Hypothalamic control of the electrical activity of the spinal cord

Role of the hypothalamus and limbic system in the regulation of the motor and secretory functions of the digestive apparatus

Role of the hypothetropic region of the hypothalamus in the adaptation activity of the organism

Hypothalamic control of the systemic activity of sensory and motor circulation and functional significance of this control

Cat hypothalamic regions neurons background activity characterized by single nonrhythmical spikes with large interspike intervals, noting frequency of discharge bursts

Role of the dorso-medial area of the posterior hypothalamus in thermal regulation and its functional relationship with the anterior hypothalamus

Analysis of changes in thermal regulation after destruction of the medial preoptic area of the hypothalamus

Pulse activity of neurons in the thermal regulation center of the anterior hypothalamus during chill shivering

Temperature-sensitive neurons in the brain stem - Their responses to brain temperature at different ambient temperatures.

Hypokinesia effects on neurosecretory system in cats

Hypothalamic-stimulation conditioned negative fear response to photic stimulation of rabbit retina

HYPOTERMIA

Hypothermia induced by hypoxia in rats, discussing colonic temperature during high altitude exposures and seasonal variations

Hypoxic hypothermia effects on endocrine organs hemodynamic parameters during chronic hypoxic hypoxia

Hypothermia, asphyxia and ionizing radiation in the adaptation activity of the organism, cardiovascular and neurosensory systems

Temperature-sensitive neurons in the brain stem - Their responses to brain temperature at different ambient temperatures.

Hypothalamic-hypophysial neurosecretory system in rats

Hypothalamic-stimulation conditioned negative fear response to photic stimulation of rabbit retina

Hypothermia induced by hypoxia in rats, discussing colonic temperature during high altitude exposures and seasonal variations

Hypoxic hypothermia effects on endocrine organs hemodynamic parameters during chronic hypoxic hypoxia

Hypothermia, asphyxia and ionizing radiation in the adaptation activity of the organism, cardiovascular and neurosensory systems

Temperature-sensitive neurons in the brain stem - Their responses to brain temperature at different ambient temperatures.

Hypothalamic-stimulation conditioned negative fear response to photic stimulation of rabbit retina

Hypothermia induced by hypoxia in rats, discussing colonic temperature during high altitude exposures and seasonal variations

Hypoxic hypothermia effects on endocrine organs hemodynamic parameters during chronic hypoxic hypoxia

Hypothermia, asphyxia and ionizing radiation in the adaptation activity of the organism, cardiovascular and neurosensory systems

Temperature-sensitive neurons in the brain stem - Their responses to brain temperature at different ambient temperatures.

Hypoxia effects on hypothalamic-hypophysial neurosecretory system in rats

Hypothermia induced by hypoxia in rats, discussing colonic temperature during high altitude exposures and seasonal variations

Hypoxic hypothermia effects on endocrine organs hemodynamic parameters during chronic hypoxic hypoxia

Hypothermia, asphyxia and ionizing radiation in the adaptation activity of the organism, cardiovascular and neurosensory systems

Temperature-sensitive neurons in the brain stem - Their responses to brain temperature at different ambient temperatures.

Hypothalamic-stimulation conditioned negative fear response to photic stimulation of rabbit retina
on peripheral chemoreceptor sensitivity

Acute hypoxia effects on dog coronary blood flow and cardiac function from cardiac beta-adrenergic and hemodynamics study

High altitude hypoxia preadaptation effects on left ventricle myocardial nonadrenergic concentration in rats with experimental visual corids

Exercise role in ventilatory acclimatization to graded hypoxia in goats from carbon dioxide response curve measurements

Adrenocortical response to prolonged high altitude hypoxia in pathophysiology deacclimated rate, showing rapid neural stimulation with delayed humoral activation

Ascorbic acid influence on blood coagulation and anticoagulation systems in dogs with acute hypoxia, discussing plasma recalcification time and heparin tolerance

Hypoxia effect on aircraft pilot performance, using Link G-1 simulator and controlled exposure to altitude conditions for simulated ill-advised approaches

Autonomic nervous system role in controlling coronary and cardiac responses to hypoxic hypoxia, measuring blood flow with Doppler ultrasonic flow transducer

Pressure chamber training effects on rats chain motor reflexes hypoxia adaptation, noting sinoatrial and receptors importance in compensatory-adaptive reactions

Concentrated and extended learning effects on formation rate and retention degree of conditioned reflex during mice adaptation to high altitude hypoxia

Piloting aptitude evaluation from ECS during hypoxia, considering right intraventricular conduction and ventricular repolarization anomalies

High altitude natives cerebral arterial-venous oxygen difference measurement during ascent air and oxygen breathing, showing chronic hypoxia effect on cerebral blood flow

Low pressure chamber as an aerospace medical diagnostic tool for flying personnel examining reactions regarding oxygen deficiency, low air pressure and air pressure fluctuations tolerance

Russian book on functional morphology under extremal space flight conditions covering overloads, hypoxia and hyperxia effects on organism and cellular structure and metabolism

Mountain inhabitants cardiocirculatory adaptation to chronic hypoxia, studying coronary flow and myocardial oxygen consumption and efficiency

Hypoxia and peripheral visual stimulus position effects on response time during monitoring of centrally located stimulus light

Ventilatory peripheral chemoresponse or response to hypoxia during physical exercise in native highlanders and altitude-acclimated lowlanders

Effect of acetazolamide /Diamox/ at different dose levels on survival time of rats under acute hypoxia and on Na+/K+-ATPase activity of rat tissue microsomes


Beautenlogenetic studies of the effects of rapid decompression and hypoxia on the gall bladder in cats.

Thyroglobulin content and variations in the proteolytic activity of the thyroid gland tissue in animals under hypoxic conditions

Hypercapisia with relief of hypoxia in normal individuals with increased work of breathing.

Regional lung function during early acclimatization to 3,100 m altitude.

Effect of hypoxia on the condition of skeletal muscles in rats under hypoxia

SUBJECT INDEX

system

The effects of acute hypoxia on lipid synthesis in the heart.

Myocardial protein synthesis in acute myocardial hypoxia and ischemia.

Acute hypoxia of the myocardium - Ultrastructural changes.

Extracellular acid-base changes in the dog myocardium during hypoxia and local ischemia, measured by means of glass micro-electrodes.

Changes in energy stores in the hypoxic heart.

The influence of exogenous ATP on cardiac metabolism in acute hypoxia.

Myocardial ultrastructure in acute and chronic hypoxia.

Myocardial metabolic changes in chronic hypoxia.

Role of the synthesis of nucleic acid and proteins in the adaptation of the organism to altitude hypoxia.

Anoxic tolerance of the heart muscle in different types of chronic hypoxia.

Cardiac performance and the coronary circulation of man in chronic hypoxia.

Effect of chronic hypoxia on the kinetics of energy transformation in heart mitochondria.

Effects of hypoxia and ischemia on myocardial contraction - Alterations in the time course of force and ischemia-dependent inhomogeneity of contractility.

Interaction of chronic hypoxia and hypercapnia upon blood gases and acid base status.

Venous responses to stimulation of carotid chemoreceptors by hypoxia and hypercapnia.

Functional development of the altitude convulsion mechanism in mice and rabbits /Research note/.

Role of the autonomic nervous system in the hypoxic response of the pulmonary vascular bed.

Hypoxic theory for atherosclerosis formation, noting blood plasma protein concentration effects on oxygen diffusion

Hypoxia, acid base contents in cholinergic and adrenergic spinal cord nerves and in their glial satellite-cells during hypoxic hypoxia and a post-hypoxia period

Hypoxic acid effects on blood coagulation and fibrinolysis

Boeutenlogetic studies of the effects of rapid decompression and hypoxia on the gall bladder in cats.

Thyroiglobulin content and variations in the proteolytic activity of the thyroid gland tissue in animals under hypoxic conditions

Hypercapisia with relief of hypoxia in normal individuals with increased work of breathing.

Regional lung function during early acclimatization to 3,100 m altitude.

Lack of effect of high altitude on hemoglobin oxygen affinity.

Effect of hypoxia on the condition of skeletal muscles in rats under hypoxia

a-216
IMAGE CONTRAST

Contrast reversal or distance paradox in temperature perception aftereffect

Contrast vision enhancement in Hermann grid with variable figures-ground ratio, using Baumgartner receptive field hypothesis

Simultaneous brightness contrast under scotopic conditions, investigating fovea rod and cone systems interaction in subjects with normal color vision

Objects visual detection probability distribution as a function of angular size, contrast and search time, comparing binocular and monocular searches effectiveness

Psychological aspects in aerial photointerpretation, discussing importance of perception of image contrast, contours and aerial distribution

Foveal luminosity magnitude estimations validity, measuring relative effects of preadaptation and contrast

Spatial characteristics of equal energy visual stimuli in metacostant design for targets and masks of constant separation and varying width, deriving weighting functions

In absorbent effects on evaporographic image contrast performance based on photometric study, presenting color photographs

Gain control and contrast sensitivity in the vertebrate retina

The effect of target contrast variation on dynamic visual acuity and eye movements

The influence of the modulation transfer function of the dioptric apparatus on the acuity and contrast of the retinal image in Rana esculenta

Peripheral contrast thresholds for moving images

The relative importance of contrast and motion in visual detection

Complete assimilation of briefly presented lines

Phase correlation between two sources formed on a diffusing surface - Application to the human retina

Line length detectors in the human visual system - Evidence from selective adaptation

The effects of simultaneous and successive contrast on perceived brightness

Perception smear suppression during saccadic eye movements in terms of metacostant determined by post-saccadic accumulated luminance relation to stimuli masking

IMAGE INSENSIBILITIES

Human vision sensitivity to covert In illuminators for image intensification during night observation

Night vision performance measure based on object recognition experiments with optical instruments, noting improvement with image intensifier

IMAGE INTENSIFIERS

NT AERIAL PHOTOGRAPHY
NT CHROMOGRAPHY
NT COLOR PHOTOGRAPHY
NT HLOGOGRAPHY
NT PHOTOMICROGRAPHY
NT RADAR IMAGERY
NT RADIOGRAPHY
NT STEREOPHOTOGRAPHY
IMAGES
NT AFTERIMAGES
NT REFLEX IMAGES

SUBJECT INDEX

Visual and acoustic image processing rates during letter sequencing tasks, suggesting implicit verbal control involvement

Effect of reproduction scale on probability of image recognition

IMAGING TECHNIQUES

Ventricular function determination by computer graphic techniques for increasing speed, accuracy, reliability and scope of angiocardioangiographic analyses determining human heart dimensions

Image processing of diagnostic echocardiogram by ultrahigh speed analog to digital converter interfacing digital computer

The imaging properties of the positron camera

Mathematical methods for improving the significance of scintigrams

The airborne visual simulation as an electronic display

The precise simulation of image transfer systems with the aid of an optical convoluation obtained with a rotating slit of prescribed form

Spot size scanning system for analyzing thermal infrared military targets

IBLBS

Data management techniques and designs for integrating OMS with IBLBS for manned space flight

Equipment specifications for general purpose bioassembler for use in Integrated Medical, Behavioral, and Laboratory Measurement System

Design and operation of IBLBS

Design of optical couplers for use in IBLBS hardwire mode

Testing preliminary design of respiratory measurement element of B-4 IBLBS

THERMO

Chromosome aberrations and germination speedup in Soybean 5 carried barley seeds, noting stimulating effect by preflight ethylene oxide treatment

IMERSION

SUBMERGING

IMEALIBILITY

ELECTRICAL IMPEDANCE

Immobilization hypercalciuria, discussing treatment by diet-induced extracellular volume depletion and possible pathophysiologic mechanism of intercompartmental fluid and electrolyte shift

Inhibitory effect of immobilization on urinary catecholamine excretion and blood plasma thyroxine levels in rats

Calcium and phosphorus excretion relation to bone density changes in immobilized Macaca nemestrina monkeys

Calcium metabolism under stress and in reponse

Changes in the pituitary-thyroid and in the pituitary-adrenal systems under conditions of functional loading and of physiological immobilization
## SUBJECT INDEX

**Bone atrophy caused by inactivity in guinea pigs**
[AD-704049] p0525 N72-30091

**Inmunobiology**

- Antitoxin /biological protectant/ effect on natural immnunobiology state of dogs exposed to chronic gamma irradiation simulating space flight environment
  p0335 A72-30380

- Inmunobiological reactivity in dogs protected by antitoxin
  p0347 N72-24101

**Impact testing machineries**

- Computer program for analyzing impact damage to skull-brain system models
  [AD-739396] p0370 N72-20087

**Impact loads**

- Finite element elastic analysis for determining craniocerebral trauma in aircraft accidents
  [AD-722-N72-14081]

- Prediction of human impact in sled acceleration test
  [PP-203717] p0246 N72-18116

**Impact acceleration**

- Impact acceleration tests using rhumus monkeys to determine human injury potential as function of plateau acceleration and pulse duration for spinal column
  [AD-731148] p0253 N72-19104

- Biodynamic models for determining suitability of energy absorber in protective seated man from high acceleration aircraft impacts
  [AD-740487] p0804 N72-29077

**Impact damage**

- Human craniofacial trauma dependence on impact conditions, giving cause histories
  p0100 A72-16643

- Analytical model for simulating impact caused head injuries, evaluating protective device effectiveness via energy absorption characteristics
  p0269 N72-32602

- Lethal head injuries to man swimming underwater caused by detonation of firecracker
  p0257 N72-19135

- Necropsy and radiographic observation of spinal fracture and articular facet disengagement patterns in rhesus monkeys
  [ABRL-TW-717-17] p0259 N72-19139

- Computer program for analyzing impact damage to skull-brain system models
  [AD-739396] p0370 N72-20087

- Response of anesthetized rhumus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts
  [AD-740460] p0529 N72-30085

- Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso
  [AD-740462] p0525 N72-30088

- Feasibility analysis for use of anthropomorphic dummies, animals, and man in biodynamic modeling and scaling for impact damage prediction
  [AD-740483] p0525 N72-30089

- Mathematical models for impact studies including spinal and head injuries
  [AD-740485] p0527 N72-30103

**Impact deceleration**

- U deceleration

- U impact acceleration

- U impact loads

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IMPACT TESTS

Impact tests on anthropomorphic dummies for protection effectiveness evaluation of lap belt, Air Force shoulder harness-lap belt and airbag-lap belt restraints [AD-741530].

A re-evaluation of material effects on microbial release from solids.

Pulse and transducer record analysis of dairy track human tolerance tests (PB-201265).

Impact force of human volunteers dropped from low heights, and mathematical model [0040 NT-10119].

Impact tests to obtain skull fracture data for Federal Motor Vehicle Safety Standards (PB-204239).

Computerized simulation of human impact in sled acceleration test (PB-203717).

Crash injury research, including pathology and protection (P0257 NT-19132).

Theoretical mechanics for expressing kinematics of human impact acceleration, using two coordinate systems.

Equipment designed for accurately measuring mechanical response of men during impact (P0259 NT-19145).

Acceleration protection system design, impact testing of restraint harnesses and ejection seat cushions, and implications (P0260 NT-19157).

Mechanical impedance model for human and primate head injury due to linear impacts [AD-780478].

IMPACT TOLERANCES

Effect of diurnal bone atrophy on spinal impact tolerance in rhesus monkeys (AD-780453).

Effect of impact angular acceleration on human body under emergency conditions-aircraft ejection (P0561 NT-12100).

IMPEDANCE

MT ACOUSTIC IMPEDANCE

MT ELECTRICAL IMPEDANCE

MT ELECTRICAL RESISTANCE

MT MECHANICAL IMPEDANCE

MT RESPIRATORY IMPEDANCE

MT SKIN RESISTANCE

Acoustic impedance of body surface at thorax and at abdomen, showing dependence on frequency and body pressure and position.

Human head-arm system vibration characteristics, describing mechanical impedance measurements for mathematical modeling.

Human body or dummy mechanical impedance calculation by acceleration measurement at two point reference system with circular spring supporting mass.

Measurement of specific mechanical impedance of the skin - effects of static force, site of stimulation, area of probe, and presence of a surround.

Plethysmograph for measuring human body impedance changes during space flight (AD-740866).

IMPENETRABILITY

IMPLOSION

Electrocardiograph telemetry system for intense radiation exposure, describing electrode and transmitter implantation in monkey and heart signal transmission and reception (P0102 NT-16678).

Cerebro-spinal fluid pressure remote monitoring by intracranially implanted radio pressure transducers, describing receiver-detector-recorder system (P0159 NT-19911).

Electrode design and implantation method for chronic experiments, discussing information loss.
INFLATABLE DEVICES

BY TUBERCULOSIS
ECG P-wave-like deflections caused by strong diaphragmatic action potentials in obese woman with fever and erysipelas

The magnetic field, infection and immunity

Determination of bacterial ATP as measure of urinary tract infection using enzymatic colorimetric assay technique [NASA-CASE-GSC-11092-2]

Clinical investigations of cancer prevention, infections, chemotherapeutics, body fluids, and electrophoresis

NT GAS BAGS

Results of development tests performed on portable clean room for controlling surgically induced infections

[NASA-CR-124619]

Portable clean room, ventilation systems, human factors, electrical subsystems, and material compatibility tests of prototype experimental systems for control of surgically induced infections

[NASA-CR-124762]

Operating and maintenance instructions for experimental systems used to control surgically induced infections

[NASA-CR-125097]

Effects of sudden flight on development of staphylococcal infection in human subjects as determined by extended bed rest and partial or complete isolation

[NASA-CR-127641]

Design, fabrication, and evaluation of prototype experimental systems for controlling surgically induced infections

[NASA-CR-127649]

INFLATABLE DEVICES

U INFLATABLE STRUCTURES

INFLATABLE STRUCTURES

NY GAS BAGS

Deceleration attenuation effectiveness of airbag restraint systems compared with seat belt-shoulder harness for aircraft occupants

[PB-201264]

Impact sled tests on inflating restraint systems of passenger vehicles

[PB-200085]

Automobile crash tests to determine effectiveness of inflatable occupant restraint systems

[PB-200095]

Test procedures and resulting data from preliminary vehicle tests of inflatable occupant restraint systems — Vol. 2

[PB-200076]

Graphs illustrating dummy accelerations and other data obtained in preliminary vehicle tests of inflatable occupant restraint systems

[PB-200077]

Photographs of vehicles used in preliminary tests of inflatable occupant restraint systems

[PB-200080]

Test procedures and instrumentation used in preliminary vehicle tests of inflatable occupant restraint systems

[PB-200097]

Analytical and experimental evaluation of pilot chin-airbag system utilizing inflatable collar to protect head against violent rotation and loss of consciousness during crashes

[AD-726949]

INFLATING

Inflatability and flotation of one man life raft after puncture to main wall

[NASA-CASE-LAE-10267-1]

CORPORAL OPERATIONS

Cortical somatosensory and information handling properties of evoked potential in human normal and pathological behavior

[PB/182 A72-21840]

Control center relation to process control computers in production engineering, discussing information flow and communication in man

A-224

SUBJECT INDEX

machine systems

[PB/0454 A72-38310]

Man machine system functions and display and control role descriptions by flow diagrams, giving examples of keysing and task in guided weapon systems

[PB/0503 A72-41415]

INFORMATION MANAGEMENT

Automated hospital information management system operations manual and system program listing

[PB/0049 A72-10077]

Human operator performance optimization in industrial machine processes and data systems

[JPR/55215]

Formation scheme for automatic control of information resources and document display systems for managerial personnel

[PB/0026 A72-19166]

FORMATION RETRIEVAL

Formation scheme for automatic control of information resources and document display systems for managerial personnel

[PB/0026 A72-19167]

Human performance reliability data system for documentation and retrieval of information obtained from general behavioral and man machine specific studies

[AD-738322]

Analysis of effects of external and internal environmental stresses on subject and application for determining human reliability

[AD-704666]

Comparison of two methods of listing messages

[AD-730081]

Linguistic interactions and logic applied to models of cognition, education, and information retrieval

[AD-704666]

FORMATION SYSTEMS

Instructor station design for automated flight training systems, considering human factors and information requirements

[PB/0152 A72-19277]

Human operator decision making role in information presentation systems determined by experiments using laboratory performance and test measures, field observation, electrical and biochemical measures

[PB/0052 A72-41408]

Developing center for computer-based behavioral studies for studying and analyzing national policies and problems

[AD-731859]

Indexing procedures and thesaurus of indexing terms for QDS

[PB/0050 A72-17050]

Development of data support system with models for predicting factors affecting human performance

[AD-704665]

Instrumentation requirements of regenerative life support systems

[PB/0053 A72-30113]

INFORMATION THEORY

EEG parameters estimation and statistical uncertainty calculation by computer program

[PB/0001 A72-10073]

Two element matrix patterns generation with different degrees of internal constraint, developing objective complexity measures based on information theory or symmetry and grouping considerations

[PB/0008 A72-10715]

Methodological problems in multidimensional information transmission involving circular light identification tasks

[PB/0009 A72-10718]

Conformal electron interactions in biologic and hypermolecular biological systems, discussing calcium ions effects, enzyme activity, muscle contractions and information theory

[PB/0747 A72-18803]

ATC operator stress factor evaluation from information theory analysis of radio telecommunication information content

[PB/0119 A72-23139]

Information aspects in visual perimeter, obtaining memory requirement for control computer in
INSENSITIVITY

INTROSPECTION

INSTRUMENTS

INTEGRITY

INTEGRAL EQUATIONS

INTELLIGENCE

INTEGRATION

INTERCEPTION

INTERCEPTOR AIRCRAFT

INTERCONTINENTAL BALLISTIC MISSILES

INTERCRANIAL CIRCULATION

INTERFACES

INTERFACES
SUBJECT INDEX

INTERFACIAL ENERGY
  Acceleration stress tolerance dependence on electron or ion transport across cell surface activation energy barrier, studying rat survival times
  p0425 A72-36488

INTERFERENCE GRATINGS
  Retina visual acuity testing by zero and first order moire amplitude gratings
  p0288 A72-27953

INTERPROGRAMS
  INTERPERSONAL

  Phase correlation between two sources formed on a diffusing surface - application to the human retina
  p0548 A72-44379

INTERPERSON
  Blood self purification enteral mechanism in dogs, determining leukocyte population changes before and after feeding and intravenous interferon injections
  p0148 A72-18867

INTERSTELLAR
  ET MULTILAYER INSULATION

  INTERNAL STRESS

  U RESIDENTIAL PRESS

INTERSTELLAR COOPERATION
  Planetary quarantine cost and mission success constraints, formulating mathematical models for international goals and implementation systems
  p0070 A72-10819

Collaboration of World Health Organization and various international astronomical organizations for space technology applications to man-environment relationships and medical and communication sciences
  p0165 A72-20300

International cooperation in biophysics, cosmic rays, heavy ions, and radiation effects research
  p0192 A72-16035

Exobiology research emphasizing oxygen supply, experiments on leeches, and international cooperation
  p0193 A72-16038

Recommendations of Joint Working Group on Space Biology and Medicine for NASA and USSR
  [NASA-NWS-BESEALS-72-157]
  p0483 A72-29073

INTERNATIONAL RELATIONSHIP
  ET INTERNATIONAL COOPERATION

INTERPLANETARY PROPULSION
  U INTERNATIONAL SPACECRAFT

INTERPLANETARY SPACECRAFT
  JUPITER PROBES

  MARS PROBES

  VIKING-LANDER SPACECRAFT

INTERPLANETARY SPACE PROBES
  Receptorine physical-chemical life-support systems for prolonged space flights
  [NASA-TT-F-16211]
  p0262 A72-19171

Computer program for predicting microbial burden of unmanned planetary spacecraft
  [NASA-CS-17967]
  p0469 A72-28048

INTERPRETATION
  Man-machine systems communication ambiguities due to information misinterpretation involving means organs, previous experience and expectational bias
  p0064 A72-14850

Pupil diameter variations for measuring mental process involved in interpreting aircraft instruments
  [AD-763727]
  p0569 A72-33089

INTERSTELLAR COMMUNICATION
  Life beyond solar system, discussing planetary location and prebiological organic chemistry developments and interstellar communication
  p0184 A72-22016

Extraterrestrial life search, noting lack of contact with civilizations, biosignatures, Martian conditions and physicochemical experiments
  p0339 A72-30699

Biological aspects of communications with extraterrestrial intelligence, discussing life existence possibility on wandering planets
  p0553 A72-45127

INTERSTELLAR GASES
  Interstellar formaldehyde and ammonia molecules effects on prebiological amino acids evolution
  p0032 A72-12846

INTERNATIONAL BAND
  Review of NASA Ames Research Center 1971 conference on interstellar molecules and origin of life
  p0216 A72-22685

INTERNATIONAL SPACE
  Cosmic sources of organic compounds from chemical evolution viewpoint, discussing comets, interstellar space, prestellar nebulae and cool stellar atmospheres
  p0184 A72-22014

INTERNATIONALS
  Prolonged jet flight effect on passenger interstitial and intracellular fluid volumes from placebo, extracellular and total body water measurements, noting dehydration and foot swellings
  p0109 A72-17866

INTERNET
  Mechanical compression strength of vertebrae and intervertebral disks in humans
  [NASA-77-P-14566]
  p0561 A72-32101

INTERNETED
  Hypoxia, hypercapnia and hyperoxia effects on active diocese transport in rat small intestines
  p0099 A72-16633

Intestinal disbiotaization and methanogenesis occurrence in guinea pigs and rats under magnetic field effect, noting Escherichia population changes
  p0101 A72-16647

Dog mesentery terminal venous microvessel distensibility characteristics from response to arterial and venous pressure changes
  p0113 A72-18196

Bacterial chamber medico-engineering experiment for long term isolation effects on human intestinal microflora, showing reduction and disappearance of certain microbe populations
  p0328 A72-29232

Effects of atmospheric composition on intestinal glucose metabolism in rats
  p0121 A72-14071

Magnetic field effect on dysbacteriosis development in guinea pigs and rats during confinement
  p0123 A72-14085

Compositional changes in E. coli in human intestines during confinement
  [JPPS-55191]
  p0252 A72-19096

Influence of closed microbial ecology on modification of natural intestinal flora of ferrets in closed environmental system
  [NASA-CS-115678]
  p0469 A72-28047

Changes in enzyme activity in small intestine of rodents deprived of drinking water and subjected to high temperatures and intense solar radiation
  [NASA-TT-F-14521]
  p0521 A72-30058

INTOXICATION
  Effect of neurohormonal phospholipids associated with other substances on experimental intoxication by asymetrical dimethylaziridine, II - Biochemical aspects of the pyridoxine-phospholipid association
  p0501 A72-61195

Intoxicating liquor and the general aviation pilot in 1971.
  p0558 A72-45662

Procedure for determining cases of mild intoxication based on postrotational fixation nystagmus
  p0393 A72-25039

Alcohol-induced postrotatory fixational nystagmus and detection of alcohol intoxication in pilots
  p0396 A72-25060

Graf driving machine for determining sobering effect of caffeine and perkalin on intoxicated individuals
  [NASA-TT-F-14564]
  p0561 A72-32099

INTRACRANIAL CAVITY
  Sudden pilot incapacitation and death due to subarachnoid hemorrhage secondary to ruptured intracranial aneurysm
  p0222 A72-23742

INTRACRANIAL PRESSURE
  Cerebro-spinal fluid pressure remote monitoring by intracranially implanted radio pressure transducers, describing receiver-detector-recorder system
  p0159 A72-19911
INTRAOCULAR PRESSURE

Russian book - Intracranial blood circulation under conditions of accelerations and weightlessness p0418 A72-35460

INTRAOCULAR PRESSURE

Isotopic labeled microspheres for cat uveal and retinal blood flow and oxygen consumption determination, studying increased intraocular pressure and carbon dioxide tension effects p0207 A72-27841

INTRAOCULAR SYSTEM

Dog mesentery terminal venous microvasculature distensibility characteristics from response to arterial and venous pressure changes p0113 A72-18196

Microcirculation study of intravascular erythrocyte aggregation /blood clodge/ in rats p0158 A72-19686

Intravascular pressure and extravascular structure effects on radial and longitudinal distensibility of arterial microvessels in dog mesentery p0166 A72-20426

Wall intravascular effect on plasma carbon dioxide gradients near pulmonary capillary wall, discussing free energy requirements p0172 A72-20890

Interactions between gas bubbles and components of the blood - Implications in decompression sickness. p0557 A72-45652

INTRAVENTRICULAR ACTIVITY

Electrostatic adhesive devices for zero-g intra/extraventricular activities, noting applications to astronaut and cargo maneuvering, weightless restraint, tool and equipment tie-down, etc p0233 A72-24650

Russian astronaut training in aircraft for IVA and EVA in space [NASA-R-54649] p0087 A72-13076


INTRAVENTRICULAR PROCEDURES

Blood self purification enteral mechanisms in dogs, determining leukocyte population changes before and after feeding and intravenous interferons injections p0148 A72-18067

INTRANASAL

Noise effects on human attention and work efficiency in extraverted and introverted individuals p0106 A72-22137

Circadian rhythm effects on introvert and extravert biochemistry, physiology and performance, suggesting arousal mechanism differences p0276 A72-26693

INVALIDITY

U VIEWS

INVERSIONS

WT CENTRIFUGING STRESSES

Coordination of circadian rhythms with human respiration rate during inverted work-rest cycle p0388 A72-24111

INVERTEBRATES

WT ANCEPS

WT ASTEROPODS

WT BEES

WT BEETLES

WT CRABS

WT DEEOPHILA

WT DEZELLATA

WT INSECTS

WT MOLLUSKS

WT PECOLNTA

WT PHOTOBRA

WT PONTIOA

WT POTA

WT SEA ORCHIS

WT SPORES

WT TRIBOLIA

WT WORKS

Experiments with invertebrates, plants, and cellular systems on Biosatellite 2 flight p0301 A72-20048

INVESTIGATION

WT AIRCRAFT ACCIDENT INVESTIGATION

SUBJECT INDEX

INVALIDITY

U VISIBILITY

INCOMPLETE ASSURANCE

U IRRESPONSIVE ACTIONS

INCOMPLETE ACTIONS

Involuntary eye movements effects on visual images, ocular drift and tremor effects on spatial frequency distortion p0102 A72-16674

Involuntary head movement and body motion displacements during human centrifuge runs to 6 Gz from photographic recordings p0294 A72-28288

IODINE

WT IOIDINE ISOTOPES

IODINE ISOTOPES

Direct and indirect cyclotron production of I-123 for radiation therapy [NASA-TE-F-67294] p0137 A72-15068

ION BEAMS

Depth ionization properties and biological effects of bevatron produced heavy ion beams, discussing utilization in tumor therapy, space biology and radiobiology p0054 A72-13690

Visual perception of accelerated nitrogen nuclei interacting with the human retina. p0545 A72-26390

Radiobiological studies of vivo mouse systems using 970 KeV helium ion beams (LBL-314) p0198 A72-17035

ION CHARGERS

IONIZATION CHARGERS

ION CONCENTRATION

Electroretinographic illumination potentials dependence on extracellular chloride ion concentration in isolated frog retinas. p0368 A72-32491

Intracellular potassium in cells of the distal tubule. p0555 A72-85231

ION CURRENTS

WT ION BEAMS

Qualitative microscopic model for biologic postperistaltic mouse with tunneled chemical bonds, noting selective ionic conductivity as function of electric field p0324 A72-28769

ION DISTRIBUTION

Potassium, sodium and calcium ion distribution in skeletal muscle subcellular organeloids, discussing lipid, protein and nucleic acid binding p0338 A72-30670

ION EXCHANGE MEMBRANE ELECTROLYTES

Exchange diffusion process contribution to human red blood cell transmembrane cation movement from sodium tracer influx studies p0371 A72-32746

Bioelectrode hydration mechanism of Na-K ion pump of living cell based on fractionation at air-sea interface p0424 A72-36441

ION EXCHANGE RESINS

Water disinfection by Ag coated filters obtained by silver nitrate reduction with ascorbic acid, hydroquinone, formaldehyde and sodium tartrate activated carbon and ion exchange resin surfaces p0100 A72-16637

ION EXCHANGING

Water decontamination by silvered filters that create silver ion concentrations in solutions p0121 A72-14075

ION EXTRACTION

Primitive earth model of ion selective enzymatic asymmetric synthetic membrane for accelerated nutrients and metabolites transfer studies p0062 A72-14787

ION IRRADIATION

WT PROTON IRRADIATION

Visual perception of accelerated nitrogen nuclei interacting with the human retina. p0545 A72-63940

ION SELECTIVE ELECTRODES

Intravascular potassium in cells of the distal tubule. p0555 A72-65231


A-228
Clinical assessment of degree of obstruction from coronary arteriograms of ischemic and rheumatic heart patients.

Regional myocardial contraction mechanics during transient ischemia and reoxygenation in anesthetized dogs.

ECG evidence of myocardial ischemia in patients without arteriographic evidence of coronary artery disease, studying myocardial oxygen supply.

Atypical ECG of sportsmen, considering repolarization disorders due to ischemia, lesions, excitability and conduction signs.

Hypertension and blood sugar and lipid level increase as ischemic heart disease risk factors.

Triglyceridemia relation to age, relative weight and ischemic cardiopathy probability from ECG, anthropometry and lipid and glucid metabolism studies.

Heart enzyme activity under experimental myocardial ischemia in rabbits determined for blood, left and right ventricles and atria.

Quantitative angiography of abnormal left ventricular function and contractile spectrum in ischemic heart disease patients.


Myocardial protein synthesis in acute myocardial hypoxia and ischemia.

Extracellular acid-base changes in the dog myocardium during hypoxia and local ischemia, measured by means of glass micro-electrodes.

Ion alterations during myocardial ischemia.

Morphological alterations in the ischemic heart.

Effects of hypoxia and ischemia on myocardial contraction - alterations in the time course of force and ischemia-dependent inhomogeneity of contractility.

The incidence of hypertension and associated factors - The Israeli ischemic heart disease study.

Influence of isotropic alteration on the severity of myocardial ischemia after experimental coronary occlusion.

Field of ischemic exercise electrocardiograms in relation to exercise intensity in a normal population.

Excitation contraction correlates in exercising myocardium.

SOMATIC MODEL

U MATHMATICAL MODELS

ISLANDS

Ecogenesis of volcanic island of Surtsey after 1967 lava eruption, discussing terrestrial and marine littoral and sublittoral biomes.

ISOLATION

MT SOCIAL ISOLATION

Human electrophysiological changes during perceptual isolation from EEG, EKG, vertical eye movements and electrodermal measurements.

Effects of space flight on development of staphylococcal infection in human subjects as determined by extended bed rest and partial or complete isolation.

ISOPHORES

MT VIBRATION ISOLATORS

ISOTROPICITY

Force-velocity relations in cat papillary muscles isotropic relaxation, discussing effects of preloads and afterloads, temperature and stimulation frequency.

SUBJECT INDEX

ISOTOPES

BT CARBON ISOTOPES

BT CALCIUM ISOTOPES

BT DIOXIDE ISOTOPES

BT FLUORIDE ISOTOPES

BT RADIOACTIVE ISOTOPES

ISOTOPE LABELING

Human left ventricular volume determined by peripheral venous scintillation angiocardio graphic isotope method, comparing with X ray method.

Myocardial blood flow measurement value in ischemic heart disease assessment, discussing with 1 radionuclide xenon 133 injection into coronary arteries.

Xenon 133 method for coronary blood flow measurement during exercise, noting unsuitability for patients with coronary disease.

Xenon 133 myocardial clearance method accuracy and reliability in determining high and low left coronary artery blood flow under different hemodynamic conditions.

Myocardial blood flow measurement by 133 clearance method after direct application of isotope into subendocardial and subepicardial layers of left ventricle.

Muscle blood flow relation to oxygen consumption from measurements during bicycle ergometer exercises, using 133 clearance method.

Isotopic labeled microspheres for cat aorta and retinal blood flow and oxygen consumption determination, studying increased intracellular pressure and carbon dioxide tension effects.

Radiocardiography method for ventricular volume measurements, recording subclavian vein-injected radiou isotopic passage through cardiac cavities.

Exchange diffusion process contribution to human and red blood cell transmembrane cation movement from sodium tracer influx studies.

Cell proliferation in lungs of mice exposed to elevated concentrations of oxygen.

The uptake, metabolism and release of C/14-/2H1-taurine by rat retina in vitro.

Rat pulmonary lipid metabolism during feeding and fasting from studies of lung lactic acid half life after C/14-palmitate and N-3/D-glucose injection.

Needle type solid state detectors for in vivo measurement of tracer activity.

Some aspects of the use of small needle-shaped needle-like or isotrope detectors in the determination of regional distribution and transport of labelled compounds.

Coronary flow determination in experimental conditions with the use of radioactive xenon.

Regional lung function during early acclimatization to 3,100 m altitude.

New cancer therapy treatment techniques using space dosimetric concepts.

Simultaneous determination of blood plasma volume and corpuscle counts by chromium 51 tagged erythrocytes and iodine 131 labeled human serum albumin [HoSA-TP-F-14070].

Hydroxyapatite isotropic and anisotropic elastic properties compared with experimentally observed anisotropic behavior of bone.

HYDROXY

MT ISOTROPIC MEDIA
Local necrosis, parenchyma incisions and 
vacularization of rabbit liver tissue under 
pulsed and continuous laser beams 

Effect of helium-neon and YAG laser radiation on 
retinas of rabbits at levels below those 
required to produce visible lesions 

Precautionary measures for use with 
photometer which emits optical beam found to be 
potential ocular hazard. 

Effects of laser radiation on tissues and organs 
of animals and measures for protection from 
effects of laser radiation 

Medical science research projects involving cell 
structure, malaria, hepatitis, hemolytic 
streptococcus, acute renal failure, and effects 
of lasers 

Effects of radiation fromruby and neodymium 
lasers on components of human eye and 
effects to correct physical defects in eye 
structure 

Biological effects of unfocused laser radiation on 
DNA and RNA synthesis and cell activities in 
thyamine dependent E. coli strain 

Biological cell sorting by differential 
fluorescence generated electric signals via 
lasers beams illuminated liquid streams 

Biological effects of laser radiation on eyesight, 
skin, and other body organs 

Laser ues in experimental biology 

Eye protection against laser visible and near IR 
radiation, using explosive mirror assembly 

Biophysical and cytological studies with laser 
microbeams 

KWIC index and bibliography on biological effects 
related technology of lasers and light 

Ocular laser protective filter with narrowband 
absorption, luminescent transmission, and optical 
density of 3.5 

Effects of lasers on human skin 

Naval research on laser caused visual acuity 
decrement in monkeys and ocular injury in humans 

Safety codes for operators using laser equipment 

Revised safe laser radiation exposure levels for 
Air Force personnel working in visible and near 
infrared region 

Laser microscopic analysis of inorganic and 
metallic components and pigmentation mechanisms 
in insects and man 

Method for testing lyric, hyperopic, 
emmetropic, and astigmatism using speckle 

Laterality 

G REACTION TIME 

Launchers 

NT AIRCRAFT LAUNCHING DEVICES 

Launchers and Bases 

NT CAPE KENNEDY LAUNCH COMPLEX 

Lava 

Eruption of volcanic island of Surtsey after 

1967 lava eruption, discussing terrestrial and 
marine littoral and sublittoral biomes 

Laws 

NT SCALING LAWS 

Lavatories 

Display device layout based on human operator 
manual control information requirements 

consideration, discussing functional categories, 
interaction compatibility, indicators relating and 
integration 

Lead (Metal) 

Lead, cadmium, and sulfur dioxide contamination of 
vegetation and affected animals 

Lead, cadmium, and arsenic concentrations in human 
scalp hair and environmental sites in Montana 

Lead Poisoning 

Experimental studies on the alkali-acid 
equilibrium in the blood gases under the chronic 
action of low concentrations of lead. 

Leakage 

Quantitative photometric leakage measurements on 
human dust respirators in aerosol test chamber 

Learning 

NT CONDITIONING (LEARNING) 

NT PROBLEM SOLVING 

NT TRANSFER OF TRAINING 

Neural rehearsal and physical practice related to 
learning rate for rotary pursuit tracking skill 

Relationship of visibility fluctuations in set of 
lasers circles to verbal response latency for 
each circle, showing word association influence on 
stimuli perception 

Response-dependent electric shock punishment 
schedule preference during response sequence in 
food-deprived pigeons 

Some data on the interrelations of conscious and 
unconscious reactions 

Four in-depth studies of flight training skill 
trial and error vs prompted learning evaluated on 
efficiency transfer, and stress 

Learning Machines 

Signal processing and operational mechanism of 
parallel recognition device 

One of perceptions to recognize patterns generated 
by audio preprocessor modeled after cat cochlear 
system 

Learning Theory 

Learning and solving complex problems of reasoning 
- a text-theoretical investigation of the 
complexity of compound problems of predictive 
logic 

Leather 

Chamois leather mechanical response, comparing 
stress relaxation and frequency response 
characteristics to human skin for applications 
in anthropometric dummy construction 

Leaves 

Chemical properties of carboxypeptidase C taken 
from orange leaves 

Leg (Anatomy) 

Leg cooling effect improving tolerance to positive 
headward acceleration in sitting position 

Peripheral thermoregulation in arctic canines, 
showing subzero bath-immersed foot temperature 
maintenance above tissue freezing point 

Anatomy, pathology, etiology, diagnosis and 
therapy of posterior tibial nerve compression 
lesion, discussing tarsal tunnel syndrome 

A-233
The foot as input device for control operation. Mathematical model for stability and control of locomotion systems (AD-727806).

Atrophy of rabbit leg muscles caused by prolonged hypovascularity and hypokinesia. Analysis of motion of legs and center of gravity of torso in walking (AD-740870).

Legibility of cold cathode, side illumination and alphanumeric characters for small TY type raster displays, describing legibility experiment for character height optimization.

LEAK (LUNAR MODULE)

LEAKS

Crystalline lens optical structure in human eye, representing on and off axis imaging characteristics by mathematical model. Effect of spherical spectacle lenses on the monochromatic aberration of the eye.

LEPTONS

WT ROOKS

LESIONS

WT PULMONARY LESIONS

Acute hypoxia of the myocardium - Ultrastructural changes. Local necrosis, parenchyma incisions and vascularization of rabbit liver tissue under pulsed and continuous laser beams. Pathological analysis of decompression caused lesions in nervous system (NIH-002C-TR285-2790-3623.66).

LHYMENAL

Sudden death in myocardial infarction, discussing heart electrical stability, neural control, arrhythmias and cardiac conduction disturbances. Effects of long periods of clinical death from drowning or lethal blood loss on higher nervous activity in resuscitated dogs. Hypothermia and resistance of mice to lethal exposures to high gravitational forces. Temperature effects on destruction of Bacillus subtilis as function of relative humidity in spacecraft sterilization.

LETTERS (SYMBOLS)

U SYMBOLS

LEUKEMIAS

Increased tolerance of leukemic mice to arabinosyl cytosine with schedule adjusted to circadian system.


LEUKOCYTES

WT LEUKOCYTES

Carbohydrate metabolism, glycolytic ferment activities and leukocyte size under ionizing radiation, showing compensatory bone marrow cell formation with leukopenia. Blood self purification enteral mechanisms in dogs, determining leukocyte population changes before and after feeding and intravenous interferon injections.

Subject Index

Crowding phenomenon effect on blood cell oxygen consumption, using calcium ion techniques for polymorphonuclear leukocyte, lymphocyte and platelet measurements.

EEG investigation of circadian variations in qualitative and quantitative NMA content in human leukocytes, noting changes during sleep.

Pyrogenal injection test for hematopoietic tissue function in dogs, describing response as transient leukopenia followed by pronounced leukocytosis due to bone marrow granulocyte ejection.

Synergistic effect of zero gravity and radiation on human leukocytes and Neurospora crassa.

Mathematical model of hematopoietic radiation damage and recovery in human body.

Gamma irradiation effects on functional activity of leukocytes in dogs.

LEUKOPENIA

Pyrogenal injection test for hematopoietic tissue function in dogs, describing response as transient leukopenia followed by pronounced leukocytosis due to bone marrow granulocyte ejection.

LEVEL (QUANTITY)

U EFFECTIVE PERCEIVED NOISE LEVELS

LIFE (BIOLOGY)

LIFE (DIAMONTRITY)

LIFE DETECTORS

LIFE MODULAR".

LIFE SCIENCES

Physical and biological sciences approaches to attainment of knowledge, noting indeterminateness in organic realm.

Living organisms defense and preservation via refrigeration and vacuums combined use in lyophilization technique.


Flight summary of biomedical sciences equipment in Gemini Program (NASA-TE-F-58074).

Capability of space shuttle sortie mode for performing biological and medical research experiments (NASA-TE-F-12566).

Identification of payloads and subsystems required to conduct life sciences research projects.
During space missions - Vol. 1

[NASA-CR-123739] p0075 A72-28087
Identification of payload research requirements, equipment, and subsystems for conducting biomedicine research projects during space missions - Vol. 2

[NASA-CR-123739] p0075 A72-28088
Detailed design information on equipment, subsystems, and payload required for conducting biomedical research during space mission - appendix

[NASA-CR-123737] p0075 A72-28089
Environment control and life support subsystems guide for space biology payload definition and integration study


LIFE SPAN

Erythrocyte life span in mice under normal atmospheric pressure and various degrees of hypoxia acclimatization, using radiocative labeled diisocaryl phosphorofluoridate

[HASA-CB-123739] p0220 A72-26608
Assessment of life span age difference relations in visual perceptual tasks, taking into account maturational and generational differences

[ASBE PAPEB 72-EHAV-21] p0461 A72-39158
Natural aging and radiation-induced life shortening in Drosophila melanogaster

[HASA-CB-123739] p0555 A72-45279
Lowarity and cardiovascular mortality among forker college athletes.

[ASBE PAPEB 72-231] p0558 A72-45689

LIFE SUPPORT SYSTEMS

ATMOSPHERES

[HASA-CB-123739] p0179 A72-21567
Extravehicular life support systems for Shuttle, space station, lunar base and Mars missions, considering thermal control, carbon dioxide control and oxygen supply subsystems

[NASA-CB-123737] p0221 A72-29441
Life support equipment and pressure suit operational requirements from viewpoint of flight crews and test pilots

[USAF custom fit oxygen mask program] p0283 A72-27516

Electrochemical carbon dioxide concentrator materials compatibility to space shuttle life support environment, comparing with high method

[ASBE PAPEB 72-10768] p0009 A72-10768
Custom fit oxygen mask for life support of crew members

[HASA-CB-123739] p0179 A72-21567
Extravehicular life support systems for Shuttle, space station, lunar base and Mars missions, considering thermal control, carbon dioxide control and oxygen supply subsystems

[ASBE PAPEB 72-231] p0221 A72-29441
Life support equipment and pressure suit operational requirements from viewpoint of flight crews and test pilots

USAF custom fit oxygen mask program

[ASBE PAPEB 72-36595] p0410 A72-36595
Lunar horticulture possible role as life support system of earth independent lunar colony

[ASBE PAPEB 72-35938] p0420 A72-35938
Continuous flow general aviation oxygen masks.

[SAR AS 1224] p0425 A72-36536
Space station prototype environmental/thermal control and life support system - A current overview.

[HASA PAPER 72-ENAV-35] p0459 A72-39143
Design criteria for the modular space station environmental control and life support system selection.

[HASA PAPER 72-ENAV-25] p0460 A72-39152
Space station atmospheric revitalization system design, covering temperature, humidity, carbon dioxide, contaminant and oxygen generation and composition control and vehicle configuration

[HASA PAPER 72-ENAV-24] p0460 A72-39153
Potential applications of NASA-developed technology to problems of the environment.

[HASA PAPER 72-ENAV-23] p0460 A72-39154
Environmental control and life support subsystem conceptual design studies for shuttle launched 6-12 man crew modular space station

[HASA PAPER 72-ENAV-22] p0460 A72-39155
Significant factors in environmental and thermal control/life support system design for space shuttle orbiter

[HASA PAPER 72-ENAV-21] p0460 A72-39156
Optim shuttle research applications module (RAM)/environmental control and life support system for sortie missions

[HASA PAPER 72-ENAV-20] p0460 A72-39157
Comparative evaluation of environmental control and life support systems for the space shuttle orbiter.

[ASBE PAPEB 72-ENAV-10] p0541 A72-39158
Space shuttle environmental temperature control-life support system program changes, discussing air cooled electronic equipment, cryogenic stores, crew size and mission duration

[ASBE PAPEB 72-ENAV-18] p0561 A72-39159
Modular environmental control/life support system design for low cost shuttle launched space station, evaluating humidity, carbon dioxide, water and waste management

[ASBE PAPEB 72-ENAV-17] p0561 A72-39160
Bosch CO2 reduction unit research and development

[ASBE PAPEB 72-ENAV-10] p0561 A72-39167
Bosch carbon dioxide reduction process for manned spacecraft oxygen recovery, analyzing carbon and water forming reactions with iron as catalyst

[ASBE PAPEB 72-ENAV-9] p0561 A72-39168
Integrated water vapor electrolysis oxygen generator and hydrom depolarized carbon dioxide concentrator development.

[ASBE PAPEB 72-ENAV-7] p0562 A72-39170
Integration of an automated onboard data management system with a manned spacecraft environmental thermal control and life support system.

[ASBE PAPEB 72-ENAV-6] p0562 A72-39171
Six-month test program of two water electrolysis systems for spacecraft cabin oxygen generation.

[ASBE PAPEB 72-ENAV-5] p0562 A72-39172
Functional reliability of the biological component of a life support system

[ASBE PAPEB 72-40444] p0582 A72-40444
Biochemical and physiological evaluation of nutrient intake of subjects feeding on dehydrated products in test chamber with regenerative life support system, discussing metabolic data and hormone function

[ASBE PAPEB 72-45128] p0554 A72-45128
Mathematical model for life support system optimization in terms of reduced mass minimization as quality criteria for energy conversion and metabolic processes

[ASBE PAPEB 72-45133] p0554 A72-45133
R and D on environmental and thermal control/life support system application to lunar base mission, discussing reliability and food regeneration

[ASBE PAPEB 72-45164] p0554 A72-45164
The Space Station Prototype Program - The development of a regenerative life support system for extended-duration missions

[ASBE PAPEB 72-45193] p0554 A72-45193
Spacecraft food synthesis, using carbon dioxide and water from chemically regenerated human metabolic and waste products

[ASBE PAPEB 72-45277] p0555 A72-45277
Analysis of regeneration processes in 12-month experiment with ground complex simulation of space environment life support systems

[AD-727264] p0540 A72-10121
Program for ground-based manned tests of regenerative life support systems - [NASA-CR-112000] p0588 A72-12046
Preliminary plan for testing regenerative life support systems

[ASBE PAPEB 72-11599] p0588 A72-12047
Checkout of space station environmental control and life support systems

Operational test and evaluation of regenerative life support system with four adult subjects in space station simulator for 90 day period

Biotechnical life support systems for simulation of vital substances needed by man on prolonged space flights

[NASA-77-14102] p0512 A72-15100
Life support, aerospace medical, and environmental and research facility aspects of space stations and Skylab

[NASA-TX-67506] p0512 A72-16033
Exobiology research emphasizing oxygen supply, experiments on life forms and international cooperation

[AD-732163] p0519 A72-16058
Performance and support requirements of life support systems for aircraft flight crews

A-235
Light (Visible Radiation)  
HPT Disturbances  
Lift Disturbations  

Development and evaluation of method for producing potable water from condensates and poorly mineralized water  
- P024 NT2-1707S

Analysis of medical and biological problems associated with life support systems required for extended human subjects during prolonged space flights  
[NASA-TP-P-14165] P024 NT2-16076

Environmental control and life support systems for aircraft crews  
- P024 NT2-18101

Problem areas defined for university research in astronaut life support systems involving extravehicular guidance and stabilization  
[NASA-CR-1919] P026 NT2-19168

Recreational physical-chemical life-support systems for prolonged space flights  
[NASA-TP-P-14211] P026 NT2-19171

Open loop life support subsystem using breathing bag as control for EVA  
[NASA-CASE-MSC-12411-1] P038 NT2-20096

Physiological effects of high altitude flight and development of life support systems for civil aircraft environmental control  
[JSRS-55454] P039 NT2-20107

Space plant growth as means of providing life support during prolonged missions  
[NASA-TP-7084] P035 NT2-22075

Optimization trends and operating parameters of integral molecular sieve bed heat exchanger for CO2 control in life support systems for manned orbital laboratories  
[NASA-CR-112021] P035 NT2-22099

Analysis of behavior of aerosols in high pressure helium-oxygen environment and removal of harmful aerosols from environment  
[AD-735960] P037 NT2-23706

Specific aspects of Apollo health and quarantine programs considered for potential application to broad program requirement for protection of life and health of US astronauts in future manned space flight  
[NASA-TP-D-6956] P040 NT2-25100

Environmental control/life support system for four-man, seven-day orbital shuttle  

Development of regenerable or partially regenerable life support systems use in EVA protective systems  
[NASA-CR-114382] P040 NT2-25133

Service life and performance of one man electrochemical CO2 concentrator  
[NASA-CR-114426] P040 NT2-25134

Identification of payload research requirements, equipment, and subsystems for conducting biomedical research projects during space missions - Vol. 2  
[NASA-CR-123739] P045 NT2-28088

Evaluation of flow control and thermal pumping systems for integrated environmental control/life support resistor jet control system  
[NASA-CR-112104] P047 NT2-28101

Description of astronaut space suit used during EVA  
P047 NT2-28104

Environmental control and life support subsystems guide for space biology payload definition and integration study  
[NASA-TP-K-6756] P080 NT2-29050

Principles for operating Soviet life support systems  
P085 NT2-29059

Instrumentation requirements of regenerative life support system for providing indications of malfunctions  
[NASA-CR-12105] P052 NT2-30113

Principles for life support systems for advanced extravehicular protective systems  
[NASA-CR-1321] P052 NT2-30118

Lift Distribution  

Lighting (Visible Radiation)  
MT COBE LIGHT  
MT LIGHT BEAMS  
MT SOLARLIGHT  

Structural lipids role in accumulating light energy during photosynthetic evolution, using conductance studies in lipid-chlorophyll-water system  
- P061 NT2-18779

Blue green algae cyanobacteria photosynthesis after Co 60 gamma radiation exposures, using white and red light  
- P023 NT2-27109

Visible and invisible nonionizing radiation produced human injuries, considering visual and retinal effects and induced thermal stresses  
- P028 NT2-34300

KWIC index and bibliography on biological effects related technology of lasers and light  
[PB-205091] P031 NT2-21707

Litter survey and graphs of human ocular absorption in visible spectrum  
[ISP-1972-9] P048 NT2-24661

Characterization and orien light flashes seen by astronauts onboard Apollo 11, 12, 13, and 14  
[NASA-TM-X-68819] P038 NT2-24676

Polar light regime effects on human blood system during Antarctic life  
- P049 NT2-26068

Revised safe laser radiation exposure levels for Air Force personnel working in visible and near infrared region  
- P052 NT2-30073

Light Absorption  

Electromagnetic Absorption  

Light Adaptation  
Sensitization by angular surrounds, tracing early light and dark adaptation curves  
- P056 NT2-13936

Visual adaptation to light and dark in humans and animals, discussing cellular mechanisms  
- P017 NT2-17720

Human vision light adaptation effects on dichromatic color matches for bipartite, centrally fixated circular matching field  
- P015 NT2-19033

Computerized simulation from model of human pupillary motor behavioral response to light, accommodation and fusional inputs  
- P015 NT2-19310

Steroscopic acuity for photometrically matched background wavelengths at scotopic and photopic levels, plotting variable depth errors as function of retinal illuminance  
- P029 NT2-24269

Average evoked potentials correlates of two flash percentual discrimination in cats, discussing parallel changes as function of interflash intervals and peripheral level  
- P026 NT2-25170

Porealin luminosity magnitude estimations validity, measuring relative effects of preadaptation and contrast  
- P026 NT2-25179

Flicker adaptation, discussing intermittent light effect on apparent brightness  
- P026 NT2-25181

Gain control of cat retina rapid light adaptation process to attenuate signals reaching retinal ganglion cells from photoceptors  
- P026 NT2-27299

Physiological effects of intense anticollison flash light backscatter pulses on instrument rated pilots  
- P026 NT2-28303

Illumination intensity effects on circadian periodicity and behavioral thresholds in Rhesus monkey, demonstrating exception to Aschoff rule  
- P033 NT2-29804

Opponent color responses of monkey optic tract fibers to monochromatic lights, using chromatic adaptation and microelectrode recording  
- P032 NT2-31369

Colorimetric photometric matching tests, showing subject differences in parafoveal spectral sensitivity indicated by photopic curve peaks  
[AD-742267] P051 NT2-34802

Linear-nonlinear-linear transition as a function of frequency in the retinal response to light  
- P051 NT2-34805

Psychophysical procedures to investigate selective visual adaptation to light of different wavelengths from test gratings with various orientations and spatial frequencies  
- P051 NT2-37829

Spatial interaction with different-diameter stimuli matched on the basis of threshold, luminance, or total luminous flux.  
- P051 NT2-37829
The detectability of a brief gap in a pulse of light as a function of its temporal location within the pulse.  

Localization and dynamic changes of glycogen in frog retina adapted to darkness or light. I, II.  

Photopic and scotopic contributions to the human visually evoked cortical potential.  

Component analysis of electroretinogram in dark and light adapted sheep eye, noting rod and cone receptor potentials and transient and dc components.  

Line length detectors in the human visual system - Evidence from selective adaptation.  

The suppression-recovery effect in relation to stimulus repetition and rapid light adaptation.  

Restoration time for light sensitivity in human subjects exposed to light flashes and dark adaptation.  

Energy absorbing seat design for light aircraft.  

Descriptive changes in rabbit brain and eyes under pulsed laser beam irradiation.  

Destructive changes in rat liver and eyes under pulsed laser beam irradiation.  

Deviatoric stress in rat liver and eyes under pulsed laser beam irradiation.  

Optical image transfer functions characteristics and modulation in isolated retinas and retinal receptors, noting similarity to optical fiber bundles.  

Dye shifts accompany phase induced modulation, enhancement of minuscule flickering lights.  

Human decision making model for linear systems, based on optimal control model for pilot/vehicle systems.  

Radiation damage in phix-174 replicative form DNA.  

Quantify red cell aggregation and dispersion from light transmission measurement, showing deformation and orientation.  

Pure biocarbons for skeletal fixation of limb prosthetic devices, noting load bearing applications dependence on brittle characteristics.  

Biological effects of intense anticollision flash light backscatter pulses on instrument rated pilots.  

Biological hazards of high intensity light sources, considering physiological factors involved in threshold eye damage value determination.  

Characterization and origin of light flashes seen by astronauts onboard Apollo 11, 12, 13, and 14.
Physiological responses and heat tolerance for water cooled spacesuit of pilot during immersion in oxygenated fluorocarbon [NASA-CB-127262] p0438 872-27076

LIPID COOLING
Water cooled suits efficiency and effectiveness for heat removal, noting importance of head area [NASA-CB-129262-1] p0444 872-25129

Automatic control device for regulating inlet water temperature of liquid cooled spacesuit [NASA-CAB-ARC-10599-1] p0408 872-18104

Automatic temperature control for liquid cooled space suit [NASA-CAB-ARC-10599-1] p0408 872-25129

LIPID CRYSTALS
The use of cholesteric liquid crystals in the study of skin temperature and their applications in aviation medicine p0500 872-41192
**SUBJECT INDEX**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing Symptoms</td>
<td>A72-26030</td>
</tr>
<tr>
<td>Liquid Rocket Propellants</td>
<td>A72-26030</td>
</tr>
<tr>
<td>Liquid-Gas Mixture</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Liquid-Vapor Equilibrium</td>
<td>A72-29326</td>
</tr>
<tr>
<td>Liquid-Vapor Interfaces</td>
<td>A72-56562</td>
</tr>
<tr>
<td>Liquids</td>
<td>A72-65652</td>
</tr>
<tr>
<td>Lithium</td>
<td>A72-102025</td>
</tr>
<tr>
<td>Lithosphere</td>
<td>A72-19089</td>
</tr>
<tr>
<td>Liver</td>
<td>A72-30745</td>
</tr>
<tr>
<td>Load Factors</td>
<td>A72-27726</td>
</tr>
<tr>
<td>Load Tests</td>
<td>A72-27726</td>
</tr>
<tr>
<td>Loading Forces</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loading Waves</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loads (Forces)</td>
<td>A72-20115</td>
</tr>
<tr>
<td>ST Blast Loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>ST Compression Loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>ST Dynamic Loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>ST Impact Loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>ST Shock Loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Localization</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Location</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Locked-Military Aircraft</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Localization</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Load Bearing</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loading Effects</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Long Term Effects</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Load Factors</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Load Tests</td>
<td>A72-20115</td>
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<td>Loads (Forces)</td>
<td>A72-20115</td>
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<tr>
<td>ST Impact Loads</td>
<td>A72-20115</td>
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<tr>
<td>ST Shock Loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Localization</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Location</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Localizing-Military Aircraft</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Locking</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loading</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Load-bearing</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loading effects</td>
<td>A72-20115</td>
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<tr>
<td>Long term effects</td>
<td>A72-20115</td>
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<td>Loads (forces)</td>
<td>A72-20115</td>
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<td>ST blast loads</td>
<td>A72-20115</td>
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<td>Locking-Military Aircraft</td>
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<td>ST shock loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Localization</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Location</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Locking-Military Aircraft</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Locking</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loading</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Load-bearing</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loading effects</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Long term effects</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Load factors</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Load tests</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loading forces</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loading waves</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loads (forces)</td>
<td>A72-20115</td>
</tr>
<tr>
<td>ST blast loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>ST compression loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>ST dynamic loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>ST impact loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>ST shock loads</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Localization</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Location</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Locking-Military Aircraft</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Locking</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loading</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Load-bearing</td>
<td>A72-20115</td>
</tr>
<tr>
<td>Loading effects</td>
<td>A72-20115</td>
</tr>
</tbody>
</table>
LONG WAVE RADIATION

SUBJECT INDEX

Prolonged weightlessness effects on cardiovascular, digestive, musculoskeletal and nervous systems, blood and metabolism, noting compensatory reactions p0374 A72-33546

Physiological effects on prolonged weightlessness in dogs aboard Cosmos 110 biosatellite, emphasizing body weight loss and enzyme activity and bone tissue mineral concentration changes p0378 A72-33547

Long term space flight weightlessness and hypodynamic effects on orthostatic and vertebral tolerances, infection susceptibility and drug reactivity p0375 A72-33550

Influence of prolonged starvation on the frequency of occurrence of decompression-induced pulmonary hemorrhage. p0405 A72-34545

Exchangeable potassium in heart disease - Long-term effects of potassium supplements and bicarbonate. p0412 A72-34932

Body weight decreases in some protozoa exposed to light. p0424 A72-36447

Acceleration tolerance of man after a lasting exposure to conditions of simulated weightlessness p0492 A72-80442

An integrated medical system for long-duration space missions. p0501 A72-41305

Psychic adaptation of man to a long-duration stay in space p0508 A72-41988

Analysis of survival and cause of death statistics for mice under single and duration-of-life gamma irradiation. p0541 A72-83394

Experimental development of a method for long-term implantation of plastic catheters in different sections of the cardiovascular system p0553 A72-45118

The space Station Prototype Program - The development of a regenerative life support system for extended-duration missions. p0558 A72-45193

Longevity and cardiovascular mortality among former college athletes. p0558 A72-45689

Dietary antigenic supplements for astronaut immunology during prolonged space flight conditions. [JPPS-58331] p0604 A72-11072

Electrocardiographic and phonocardiographic cardiac cycle measurements on crewmembers during long term space flights (FPP-8004) p0518 A72-14055

Response of spacecrew cardiovascular systems to calibrated workloads during long duration space flight (FPP-8003) p0519 A72-14058

Otolithic function and orientation of Gemini spacecrew during prolonged space flight (FPP-8009) p0519 A72-14061

Long duration space flight effects on visual acuity and visual capability of Gemini crewmembers (FPP-8008) p0520 A72-14062

Pathogenesis of weightlessness syndrome during prolonged space flight [NASA-77-F-14089] p0589 A72-16008

Behavioral, psychiatric, and sociological problems of long-duration space missions [NASA-77-X-50067] p0590 A72-16016

Synchronous orbit simulation for determining long term effects of electron irradiation on spacecrews using miniature pigs p0520 A72-17690

Human reactions to long term space flight [NASA-CR-125026] p0309 A72-20103

Viability of staphylococci isolated from humans subjected to long term isolation in pressurized cabins [EHL-RPS-7115] p0530 A72-27070

Artificial gravitational environment for maintaining physiological processes and astronaut workability during prolonged space flight p0477 A72-28103

Effects of confined submarine environments on crew performance and biological processes during prolonged submergeance [AD-740794] p0535 W72-31129

Fungal induced detrimental changes in human-environmental microflora during 90 day test of advanced regenerative life support system [NASA-CR-112018] p0553 W72-32115

Harmful physiological effects of prolonged hypokinesia. [NASA-TF-15653] p0568 W72-33078

LONG WAVE RADIATION

The distribution of the long wave photoreceptors in the compound eye of the honey bee an revealed by selective osmic staining. p0471 A72-34877

LONGITUDINAL CONTROL

Computerized analysis of display requirements for aircraft longitudinal control in landing approach [NASA-CR-1552] p0004 W72-12049

LOUDNESS

Loudness scaling methods for transportation noises, discussing matching procedures, reference sources, etc p0161 A72-20165

Loudness and noisiness judgment contours, considering experimental subjective and objective conditions, subject age and sex and sound field characteristics p0162 A72-20171

Loudness function correlations to illusory spiral aftereffect persistence, motion sickness susceptibility and auditory reaction time in individuals p0186 A72-22138

LOW ALTITUDE

Low-altitude flight imposed psychophysiological stresses due to air turbulence discomfort, instrument dial vibration and ground-based navigational objects recognition difficulty p0360 A72-30747

Crew compartment vibration environment in B-52 aircraft during low altitude, high speed flight (AP-72023) p0041 A72-10127

Effects of low altitude high speed flight on physiological responses, cumulative fatigue, and decrease in performance capabilities of aircrews (AD-739027) p0472 W72-28069

LOW DENSITY MATERIALS

Development of materials for providing flotation capability for personnel wearing body armor (AD-737000) p0144 W72-15115

LOW FREQUENCIES

Effect of exposure to extremely low frequency magnetic fields on central nervous system of squirrel monkeys (AD-731994) p0201 A72-17053

LOW GRAVITY

G REDUCED GRAVITY

LOW ALTITUDES

G TROPICAL REGIONS

LOW PASS FILTERS

Design of digital low pass and bandpass filters for analyzing biomedical data for diagnostic purposes (CONF-702017-1) p0128 A72-14119

LOW PRESSURE

BT HIGH ALTITUDE PRESSURE

LOW PRESSURE CHAMBERS

G VACUUM CHAMBERS

LOW TEMPERATURE ENVIRONMENTS

Ventilatory and metabolic responses of unanesthetized dogs exposed to various carbon dioxide concentrations at 2 and 10 C, discussing oxygen uptake relation to cold p0222 A72-11554

Thermoregulation in deeply hibernating rodents during separate chilling and steady hibernation temperature maintenance of skin and brain p0207 A72-27027

LOW TEMPERATURE TESTS

Influence of temperature shocks on seed formation after irradiation of pollen from Tradescantia paludosa. p0455 A72-38642

LOW VISIBILITY

Aircraft pilot performance during instrument approach in low visibility conditions p0147 A72-18832
LOIHEB ATBOSPBBBB
LOHBAB REGION
LET (VEHICLE)
LOX (OIGKB)
LOHIHAHCE
0 LUHAB ROVING VEHICLES
0 LIQUID OXIGEH
HT FLASH L1HPS
HT LOBAE LUHIHESCEHCE
SI CHEHILOHIHESCEHCE
HT ELECTBOLOBIHESCEHCB
Terrestrial biosphere back contamination from
Biochemical functions of organisms in evolution of
Russian papers on solar activity effects on earth
atmosphere and biosphere covering climate,
Vegetation, animals and man
Solar activity effects on biospheric processes for
biological and physicochemical systems in
unsteady state, considering maximum effects on
man at certain electromagnetic wave frequencies
p0289 A72-28211
LOX (OXYGEN)
U LIQUID OXYGEN
LEV (VEHICLE)
U LUNAR MOVING VEHICLES
LUNAR REGION
Sympathetic mechanisms of vestibularspinal and
reticulospinal effect on transmission to lumbar
motorneurons in monkeys
Clinical and experimental data on treating
malfunctions of human th可以在
and lumbar back
regions (AD-740451)
Transverse response of lumbar spine under
longitudinal loads in sitting human subjects
p0526 N72-30099
LUNARIZED
ST FLASH LAMPS
Stroke lights and discrimination of short duration
two pulse flashes for anticollision purposes
LUNAHE
Human visual system multiple channels sensitivity
to patterns at low luminance or high drift
rates, noting retinal ganglion cells selective
sensitivity
Dark adaptation with logarithmically time
decreasing background luminance, noting
threshold time lag variation with rate of
background change
Achromatic and chromatic thresholds during dark
adaptation against varying background
luminances, noting trend change at transition
from cone to rod function
Visual latencies measurement as function of
stuzzle luminance and adaptation state by
stereoceptive null method, characterizing
relationship by inverse power function
Matched luminance chromatic stimulus wavelength
effects on human visual latency
Effect of target-background luminance contrast on
binocular depth discrimination at photopic
levels of illumination.
Each band measurement by psychological
compensation technique, causing band
disappearance by changes in stimulus pattern
luminance and brightness distribution relations
Spatial interaction with different-diameter
stimuli matched on the basis of threshold,
luminance, or total luminous flux.
Perceptual latency as a function of stimulus onset
and offset and retinal location.
Human visual acuity measured by chromatic square
wave gratings under luminance conditions
LUNARISCEENCE
ST BIOLUMINESCENCE
ST CRYSTALISCEENCE
ST ELECTROLUMINESCENCE
ST FLUORESCENCE
ST LUNAR LUMINESCENCE
LUNAR MODULES
PHOTOMETRIC
Stochastic spectral curves of relative luminous
efficiency for corneal deficiences of color
vision, using optical bench, interference
filters and Beckersticker flicker photometer
Inhibitory charts readings in artificial daylight at
low color temperatures, low light intensity and
limited exposure time by normal and color
defective subjects
Illumination effect on proton and gamma irradiated
cabbage plant growth, height and foliage
indicating radiation protective effect for
certain light intensities
Biological hazards of high intensity light
sources, considering physiological factors
involved in threshold eye damage values
determination
Pore cushion mangoe magnitude estimations validity,
measuring relative effects of preadaptation and
contrast
Flicker adaptation, discussing intermittent lights
effect on apparent brightness
Illumination intensity effects on circadian
periodicity and behavioral thresholds in rhooa
monkey, demonstrating exception to Aschoff rule
Pore cushion light pulse duration effects on reaction
time, showing stimulus intensity-time reciprocity
Light induced alterations in growth pattern of the
avian eye.
Discrination sensitivity and black light density
in the mesopic range
Spectral sensitivity after prolonged intense
spectral light exposure of rhesus monkey
comparing, demonstrating long term loss of cone
photopigment response
Effects on threshold luminous intensity and.
display visibility in aircraft cockpits
Determined effective flashing light intensity as
function of duration and area at threshold
suprathreshold luminance with different
background luminances
Effect of various magnesium salts on luminous
intensity and duration in phosphorescent bacteria
Effect of magnesia and soda on luminous
intensity and duration in phosphorescent bacteria
LUNAR BASES
Lunar agriculture possible role as life support
system of earth independent lunar colony
R and D on environmental and thermal control/fire
support system application to lunar base
mission, discussing reliability and food
regeneration
LUNAR COMPOSITION
Carbon compound distribution on moon from apollo
11 samples, comparing with earth data
LUNAR ENVIRONMENT
Performance of Apollo portable life support system
on lunar mission
LUNAR LUMINESCENCE
Nocturnal orientation by aschidoms using moonlight
LUNAR MODULOS
Toxicological control and chemical analysis of
outgassing products from nonmetallics in high
temperature oxygen atmosphere, investigating use
within LB crew compartment
A-241
Chest strapping-induced increased lung recoil pressure effects on maximal expiratory flow relation to lung surface compliance and pulmonary blood flow. 

LUNAB ROCKS
Effect of ground on radiation damage in mice

LUNAR BOATING VEHICLES
Thermal control system incorporation into lunar roving vehicle for electronic component protection during translimb transportation and lunar surface operation

LUNAR SOIL
Tobacco tissue cultures with Apollo 12 lunar material, determining endogenous steroids and fatty acids concentrations by gas chromatography and mass spectrometry

LUNAR SCIENTIFIC EQUIPMENT
Fabrication and operational procedures for processing lunar samples in sterile nitrogen atmosphere

LUNAR SCAFFOLD
Calculation method for estimated rate of onset and severity of pulmonary oxygen toxicity of the lungs. 

LUNAR SPACECRAFT
Fabrication and operational procedures for processing lunar samples in sterile nitrogen atmosphere

LUNAR SURFACE VEHICLES
Effects of vasoactive and increased blood pressure on the incidence of decompression-induced pulmonary edema

LUNG MORPHOLOGY
Electron microscopy examination of freeze-dried air-filled lung alveoli extracellular lining layer, discussing single capillary techniques

LUNAR SPACECRAFT
Hyperoxic-induced pathogenetic ultramorphologic changes in rat lung cells

LUNAR SURFACE VEHICLES
Analysis of vegetable seedlings grown in contact with Apollo 16 lunar surface fines

LUNAR VEGETATION
Fabrication and operational procedures for processing lunar samples in sterile nitrogen atmosphere

LUNAR VEHICLE DESIGN
Artificial heart-lung model with contractile polymer membrane as synthetic muscles to react with gases and liquids, discussing design features

LUNAR VEHICLE DESIGN
Determination of the dimensional capability of the lungs

LUNAB VEGETATION
Regional lung function in man during immersion

LUNAR VEGETATION
Relation of the electrocardiogram to hemodynamic alterations in pulmonary embolism

LUNAR VEGETATION
Control of the circulating blood mass in the case of a functional detachment of various amounts of pulmonary tissue

LUNAB VEGETATION
Lung volume changes of people in anorthotactic position in hospital beds for control, exercising and muscle electric-stimulated groups

LUNAR VEGETATION
Possible beneficial effects of oxygen uptake and carbon dioxide formation

LUNAB VEGETATION
Gas exchange mechanism in lung alveoli and capillaries, discussing cell metabolism for oxygen uptake and carbon dioxide formation

LUNAB VEGETATION
Mechanical heart and lung system, with hypothesised polymer deflatable upon contact with blood

LUNAB VEGETATION
Luna 16 fine lunar soil fraction biological effect on mice

LUNAB VEGETATION
Analysis of vegetable seedlings grown in contact

LUNAB VEGETATION
Quasi-steady creeping flow in small airways of splenic, obliterate and prolate ellipsoid and circular cylinder lung models, obtaining Stokes equations solutions

LUNAR VEGETATION
Regional lung function in man during immersion

LUNAR VEGETATION
Relating the electrocardiogram to hemodynamic alterations in pulmonary embolism

LUNAR VEGETATION
Vectorcardiographic and electrocardiographic differentiation between cor pulmonale and anterior wall myocardial infarction

LUNAR VEGETATION
Regional lung function in man during immersion

LUNAR VEGETATION
Luna 16 fine lunar soil fraction biological effect on mice
Histologic analysis of hypoxia exposure effects on mouse skin homograft reaction due to lymphatic organ function changes p0514 A72-42675
Effectiveness of radioisotope scanning of Ga-67 for localization of neoplasms in lymphatic tissues p0087 N72-13063

LYMPHOCYTES
Inhaled ozone effect on chromosome aberrations break frequencies in circulating blood lymphocytes of irradiated Chinese hamsters p0013 A72-11109
Chronic microwave irradiation effects on experimental animal blood forming systems, examining peripheral blood count, changes and nucleoli and mitotics abnormalities in erythroblastic and lymphoid cells p0019 A72-11708
Crowding phenomenon effect on blood cell oxygen consumption, using Cretans dive technique for polymorphonuclear leukocyte, lymphocyte and plateau measurements p0287 A72-27082
Stress and adaptation responses to repeated acute acceleration. p0410 A72-34729
Water-soluble insulin receptors from human lymphocytes. p0556 A72-45375
Lymphoblastic transformation test for studying immunity of pregnant women p0562 W72-32106

LYSOSOMAL ENZYMES
Of eye tissues during the action of hydrocortisone p0509 A72-42279

MACHINES LEARNING
U LEARNING MACHINES
U MACHINE LIFE
U SERVICE LIFE
U MACHINE RECOGNITION
U ARTIFICIAL INTELLIGENCE
MACROBACTERIA
U CLIMATE
MACROMOLECULES
U MOLECULES
MACULAR VISION
U VISION
MAGNETISM
Influence of magnesium necrosis on rabbit body temperature p0563 W72-32097
Magnesium Compounds
MT CHLOROPHYLLS
Effect of various magnesium salts on luminous intensity and duration in phosphorescent bacteria p0563 W72-32112
MAGNETIC ABSORPTION
U ELECTROMAGNETIC ABSORPTION
MAGNETIC DISTURBANCES
MT MAGNETIC STORMS
MAGNETIC EFFECTS
Intestinal dysbacteriosis and antinfection occurrence in quinea pigs and rats under magnetic field effect, noting Escherichia population changes p0101 A72-16648
Geomagnetic field perturbation biological effects, studying geomagnetic storm field energy levels and magnetic flux variables relation to human sensitivity thresholds p0287 A72-28210
Magnetic storm strength ELF electromagnetic field effects on rabbits, dogs and bacteria, discussing changes in ECG, ECG and blood characteristics p0289 A72-28214

MAGNETIC STORMS
Russian book - Effect of magnetic fields on biological objects p0014 A72-35001
Physical phenomena occurs in living objects under the action of constant magnetic fields p0014 A72-35002
Magnetic field effects in enzymes, tissues, respiration and some metabolism characteristics of an intact organism p0015 A72-35003
Effects of magnetic fields on microorganisms p0015 A72-35004
Mechanism of the biological action of a constant magnetic field p0015 A72-35005
Action of a constant magnetic field on plant growth p0015 A72-35006
Influence of a magnetic field on radiation-induced chromosome aberrations in plants p0015 A72-35007
Pathologo-anatomic characterization of changes induced by magnetic fields in experimental animals p0015 A72-35008
The magnetic field, infection and immunity p0015 A72-35009
Effect of a magnetic field on the nervous system p0015 A72-35010
Effect of a magnetic field on experimental tumors /direct and via nervous system/ p0015 A72-35011
Clinical hygienic and experimental data on magnetic field effects under working conditions p0015 A72-35012
Methodical and methodological characteristics of a magnetobiological experiment p0015 A72-35013
Biological experiments on magnetic field effects on physiological components p0117 W72-14045
Magnetic field effect on dysbacteriosis development in quinea pigs and rats p0123 W72-14085

MAGNETIC FIELDS
Russian book - Effect of magnetic fields on biological objects p0014 A72-35001
Mechanism of the biological action of a constant magnetic field p0015 A72-35005
Biological experiments on magnetic field effects on physiological components p0117 W72-14045
Magnetic field effect on dysbacteriosis development in quinea pigs and rats p0123 W72-14085
Effect of exposure to extremely low frequency, magnetic fields on central nervous system of squirrel monkeys [AD-731994] p0201 W72-17053
Magnetic field and transverse acceleration effects on pharyngeal and esophageal nerve cells of rats p0249 W72-19079
Magnetoreception and orientation in dancing bees p0399 W72-25096
Use of magnetic cues to select migratory direction by European robins p0399 W72-25097
Physiological and psychological effects of low and high magnetic fields on man p0417 W72-25055
Literature survey and experimental results on morphological characteristics of biological action produced by magnetic fields [AD-742513] p0565 W72-32126

MAGNETIC METALS
MT METALS
MAGNETIC PROPERTIES
MT MAGNETIC EFFECTS
MT POLARIZATION CHARACTERISTICS
MAGNETIC RESONANCE
MT NUCLEAR MAGNETIC RESONANCE
MT PROTON MAGNETIC RESONANCE
MAGNETIC STORMS
Geomagnetic field perturbation biological effects, studying geomagnetic storm field energy levels and magnetic flux variables relation to human sensitivity thresholds p0289 A72-28210
MAGNETIC SUBSTANCES

MAGNETIC SUBSTANCES
U MAGNETIC STORES
MAGNETIC TAPE RECORDERS
U TAPE RECORDERS
MAGNETIC VARIATIONS
U GEOMAGNETIC POLARIZATIONS
MAGNETICALLY TRAPPED PARTICLES
MAGNETIZATION
- Quantum-chemical model of organic ring-shaped molecule with persistent magnetization at microscopic level
p0510 A72-42318

MAGNETOCARDIOGRAPHY
Mathematical, physical and engineering aspects of electro- and magnetocardiography, noting heart field nondipolar properties and heart vector determination difficulties
p0222 A72-23414

Cryogenic Josephson junction magnetometer in magnetocardiography, discussing high ambient noise levels in unshielded environment
p0279 A72-27288

Electrocardiography and magnetocardiography to determine flux and vortex sources respectively of heart electrical activity impressed current density
p0326 A72-28998

Application of magnetometer for measuring magnetic signature of human heart and development of magnetocardiogram
p0196 A72-16061

MAGNETORECTORS
U MAGNETORECTORS
U RECORDING INSTRUMENTS
MAGNETOTRONIC PLASMA
U PLASMAS (PHYSICS)
MAGNETOTRONIC
Cryogenic Josephson junction magnetometer in magnetocardiography, discussing high ambient noise levels in unshielded environment
p0279 A72-27288

Design of photo-optical recorder, implantable electrodes, and magnetic/doppler flow sensor
p0128 A72-14117

Application of magnetometer for measuring magnetic signature of human heart and development of magnetocardiogram
p0196 A72-16061

MAGNETOPLASMAS
U PLASMAS (PHYSICS)
MAGNETOSHEETS
- Magnets as navigation aids to homing pigeons
p0396 A72-25098
- Manipulators with permanent magnet clutches for safety in handling dangerous materials
p0571 A72-33106

MAINTENANCE
- NT AIRCRAFT MAINTENANCE
- NT SPACE MAINTENANCE
- Design characteristics of underwater fire control systems for training Navy personnel in maintenance and calibration
p0262 A72-19178
- Training devices for training operators in use of electronic equipment
p0311 A72-20116
- Regression analysis of relationship between system design, training variables, and technician maintenance performance on automatic pilots
p0478 A72-28111
- Maintenance personnel job performance test for Uh-1 helicopter used by Vietnamese Air Force
p0573 A72-33128

MAKES
- Collator simulation for determining transfer of training performance in sales and services
p0206 A72-17086

MALFUNCTIONS
- Computerized simulation for predicting time needed to correct electronic equipment malfunction by humans
p0479 A72-28116
- Clinical and experimental data on treating malfunctions of human thralic and lusher back regions
p0526 A72-30094

INSTRUMENTATION REQUIREMENTS OF REGENERATIVE LIFE SUPPORT SYSTEM FOR PROVIDING INDICATIONS OF MALFUNCTIONS
p0529 A72-30113

MAMMALS
- NT BATS
- NT CATS
- NT CARRIERS
- NT DOGS
- NT DOLPHINS
- NT GROUND SQUIRRELS
- NT GUINEA PIGS
- NT HARES
- NT HUMAN BEINGS
- NT ECH
- NT MONKEYS
- NT RABBITS
- NT RATS
- NT RODENTS
- NT SNAILS
- NT SWINE
- NT TURTLES
- NT WHALES

- Seasonal rhythms of endocrine system in hibernating mammals, discussing central and peripheral biological clocks in relation to hypothalamus and pancreas/thyroid gland
p0376 A72-33100
- Slow neural recovery processes during sleep, characterizing cerebral neurons synchronized and desynchronized sleep phases for mammals
p0376 A72-33557
- Ecology of biting insects, birds, and mammals with their associated pathogens
p0044 A72-11082
- Medical spectral analyzer for monitoring physiological processes in mammalian subjects
p0204 A72-12045
- Echolocation mechanisms in marine mammals
p0398 A72-25096
- Bibliographic compendium on mathematical models used to analyze thermoregulation and heat transfer in mammals
p0668 A72-28043

JAN
- NT HUMAN BEINGS

JAN MACHINES SYSTEMS
- Human operator dynamic characteristics measurement, using pseudorandom binary signals and mathematical models in closed loop control system
p0031 A72-12660
- Online identification on human describing function by iterative differential analyzer, noting application to man-machine systems and on-line adaptive control systems
p0031 A72-12661
- Book on human factors engineering covering systems design requirements and interface equipment for man-machine interaction implementation
p0050 A72-13023
- Systems, man and cybernetics - IEEE Conference, Anaheim, California, October 1971
p0051 A72-13161
- Mathematical models for man-machine control behavior in biodynamic environments including manual control performance and interface elements
p0051 A72-13162
- Soviet book on astronaut activity psychological features covering space flight living conditions, space and time perception psychophysiological mechanism changes and weightlessness effects
p0056 A72-18296
- Man-machine systems communication ambiguities due to information misinterpretation involving sense organs, previous experience and expectational bias
p0064 A72-14850
- Synergic control of computer-manipulators, evaluating system
p0094 A72-16333
- Time shortage as stress factor affecting mental activity of operator in man-flying vehicle systems, discussing control signal handling efficiency
p0100 A72-16638
- Unmanned systems flight testing by test bed vehicle conversion to man operated mode,

A-284
SUBJECT INDEX

- Operator mental processes during ATC task
  - p0102 A72-16665
- Man computer dialogue, considering human factors
  - p0150 A72-19128
- Instructor station design for automated flight
  - p0152 A72-19277
- Book on physiological approach to ergonomics
  - p0159 A72-19875
- Man machine systems in navigation, discussing
  - p0216 A72-22777
- Development trends in airborne man machine flight
  - p0218 A72-23127
- Human operator role in ATC systems analysis,
  - p0217 A72-22781
- Operator mental processes during ATC task
  - p0218 A72-23129
- Man machine decision making procedures for
  - p0235 A72-25114
- Human performance prediction dependence on task
  - p0229 A72-24003
- Human operator role, in space systems reliability,
  - p0269 A72-26451
- Optimum performance typewriter keyboard design,
  - p0280 A72-28121
- Data display techniques in man operated automatic
  - p0361 A72-31272
- Book on man machine system experiments covering
  - p0378 A72-33796
- Predictive model for human operator performance in
  - p0378 A72-33865
- Man machine systems: operational effectiveness
  - p0454 A72-38308
- Control center relation to process control
  - p0454 A72-38310
- Flight and centrifuge tested aircrew tilting
  - p0456 A72-38707
- Behavioural characteristics of men in the performance of some decision-making task components.
  - p0465 A72-39805
- Russian book - Space ergonomics.
  - p0489 A72-40300
- Anthropotechnics /human engineering/ approach to man machine system optimization, discussing task
  - p0501 A72-41403
- Display device layout based on human operator
  - p0502 A72-41404
- Human operator role in information presentation, illustrating with laboratory performance and test measures,
  - p0502 A72-41406
- Human machine system functions and display and
  - p0502 A72-41408
- Manual workload determination by control characteristics, control-display relationships,
  - p0503 A72-41414
- Man machine systems and display and control role descriptions by flow diagrams,
  - p0503 A72-41415
- Human or computer control role in teleoperator
  - p0503 A72-41416
- Computerized supervisory control for interpretation of subgoal statements from human operator to permit teleoperator interaction with environment without long time delay
  - p0503 A72-41417
- Lectures on theory of manual-vehicle control.
  - p0503 A72-41418
- A method for the development and optimization of controller-models for man-machine systems.
  - p0504 A72-41420
- Manual tracking control with continuously variable
  - p0504 A72-41425
- Mental and physical workload measure and
differentiation in man machine systems
  - p0504 A72-41427
- Development and optimization of a nonlinear
  - p0507 A72-41449
- German monograph - Control performance as a function of the transmission ratio and the Coulomb friction in the operational element.
  - p0519 A72-43052
- Man machine control system synthesis, noting quality criteria and estimates for weighting function coefficients of optimization potential
  - p0556 A72-45508
- Problems of complex object modeling based on
  - p0556 A72-45510
- Invariant transformation of the control laws in
  - p0556 A72-45510
Human factors engineering to determine performance of human operators involved in complex systems. 

Health physics equipment and systems.

Human decision making model for linear systems, based on optimal control model for pilot/vehicle systems.

Principles of construction of complexes for continuous control of human subjects and automatic normalization of body systems.

Human operator performance optimization in industrial machine processes and data systems.

Graphical method for optimal selection of check points for human monitor in industrial process.

Prototype for machine augmentation of human operator-machine system subjected to random vibrations.

Assessment of design, aircraft cockpit layout, and display/control system.

Use of computer technology for solution to problems in cybernetics.

Mathematical models for distance perception by operators of man machine systems in motion, based on visible brightness of landmarks.

Human performance reliability data system for documentation and retrieval of information obtained from general behavioral and man-machine specific studies.

Behavior of man in technical, and socioeconomic control systems.

USAF research reports on psychology and man-machine relationships.

Dynamic characteristics of human body operators involved in complex systems subjected to random vibrations.
**SUBJECT INDEX**

**HANDED SPACECRAFT**

Biomedical data from manned space flights

Gemini (Apollo) and medical program for Skylab


- Scheduling factor analysis for flight controllers of long duration manned space flight missions
  - [NASA-CR-711765] p0195 N72-16057

- Modem assessment of radiological environmental effects on man in operational space systems using anatomical human model
  - [NASA-CR-711767] p0208 N72-17647

- Analysis of clinical radiation data for predicting human tolerance to radiation effects during manned space flights
  - [NASA-CR-711769] p0208 N72-17653

- Radiation shielding model of man for manned space mission applications
  - [NASA-CR-711771] p0210 N72-17705

- Growth of Aeromonas proteolytica and production of proteolytic enzymes inside spacecraft cabin during space flight

- Space flight stress effects on human vascular system anatomy
  - [NASA-CR-711775] p0249 N72-19075

- Specifications and engineering model of urine sample and collection system for manned space flights

- Conferences on biological approaches to solving problems of ionizing and nonionizing radiation effects during high altitude flight, manned space flight, and ground based equipment
  - [AEROD-CP-95-P7-3] p0431 N72-26045

- Passive dosimetry for measuring cosmic radiation dosage and its effects during manned space flight
  - [NASA-CR-711779] p0431 N72-26048

- Regenerative portable life support system development for extravehicular human activities during advanced space missions
  - [NASA-CR-711781] p0443 N72-27113

- Carbon dioxide and thermal-control in regenerative life support system for extravehicular human protection during advanced space missions
  - [NASA-CR-711783] p0443 N72-27116

- Aerospace medicine and exobiology problems of manned space flight
  - [JPBS-56675] p0480 N72-29051

- Human liquid waste and waste water transportation during space flight

- Physiological weightlessness threshold parameters and generation of artificial gravity during manned space flight
  - [NASA-CR-711787] p0482 N72-29063

- Six-man solid electrolyte oxygen regeneration system for producing 12.5 lb oxygen daily by electrolysis of CO2 and water vapor

**HANDED SPACECRAFT**

**HANDED SPACECRAFT**

- NT APOLLO SPACECRAFT
- NT LUNAR MODULE
- NT BANNED ORBITAL LABORATORIES
- NT ORBITAL SPACE STATIONS
- NT SALUT SPACE STATION
- NT SOYUZ SPACECRAFT
- NT SPACE SHUTTLES
- NT SPACE STATIONS
- NT YESTERDAY HANDED SPACECRAFT
- NT YESTERDAY HANDED SPACECRAFT

- Human operator role in space systems reliability, suggesting approaches to system design and program planning to exploit human potential
  - [AIAA PAPER 72-228] p0230 A72-26439

- Environmental control and life support subsystem concept design studies for shuttle launched 6-12 man crew modular space station
  - [AEROSPACE PAPER 72-EMAY-22] p0460 A72-39155

- Bosch carbon dioxide reduction process for manned spacecraft oxygen recovery, analyzing carbon and water formation reactions with iron as catalyst
  - [AEROSPACE PAPER 72-ENAY-9] p0461 A72-39168

- Integration of automated onboard data management system with a manned spacecraft environmental thermal control and life support system
  - [AEROSPACE PAPER 72-ENAY-6] p0462 A72-39171

- Collapsible couch system for manned space vehicles

Human engineering design data for reduced gravity conditions for use during development and design of manned spacecraft - handbook

[SIGMA-81-257] p0084 N72-12048

- Simulated flight tests of waste disposal system for use on manned spacecraft

- Design and development of prototype wet oxidation system for water reclamation and foaming slurry disposition on manned spacecraft
  - [NASA-CR-711793] p0572 N72-33115

**HANDED SPACECRAFT**

- Design and operation of system for monitoring systolic and diastolic blood pressures on beat by beat basis
  - [AD-740403] p0536 N72-31137

**MANUAL CONTROL**

**MANUAL CONTROL**

- NT CONTROL DEVICES
- NT VISUAL CONTROL

- Data display techniques in man operated automatic control system, assessing information volume, versatility and operability

- Pilot-aircraft system model for relationship between weapons delivery accuracy and manual flight control system design, noting display, computation and control aids to pilot

- Target acquisition by systems with unlagged acceleration control or rate control with exponential time lag, discussing number of approach and control stick movements
  - [NASA-CR-711799] p0330 A72-29819

- Tracker recovery strategy during temporary target occlusion in pursuit tracking task, analyzing control stick movements
  - [NASA-CR-711801] p0330 A72-29820

- Relationships among isometric forces measured in aircraft control locations

- Displays and controls; Proceedings of the Advanced Study Institute, Berchtesgaden, West Germany, March 15-26, 1971
  - [NASA-CR-711805] p0501 A72-41602

- Display device layout based on human operator manual control information requirements consideration, discussing functional categories, motion compatibility, indicators relation and integration

- Human consciousness and choice role in biological control process automation to define differences between manual and automatic control systems

- Prediction role in execution of manual control with display device to aid human operator adaptation
  - [NASA-CR-711811] p0502 A72-41606

- Man machine system input via human controller output transformation, illustrating with spacecraft lateral position manual control problem
  - [NASA-CR-711813] p0502 A72-41611

- A model for analysing the coordination of manual movements
  - [NASA-CR-711815] p0503 A72-41613

- Manual workload determination by control characteristics, control-display relationships, demands for dexterity and sensitivity and speed and accuracy requirements
  - [NASA-CR-711817] p0503 A72-41614

- Man machine system functions and display and control role descriptions by flow diagram, giving examples of keying and task in guided weapon system
  - [NASA-CR-711819] p0503 A72-41615

- Human or computer control role in teleoperator control mechanicals, discussing control mode, sensing and transmission time delay problems

- Computerized supervisory control for interpretation of subgroup statements from human operator to permit teleoperator interaction with environment without long time delay
  - [NASA-CR-711823] p0503 A72-41617

- Lectures on theory of manual-vehicle coordination
  - [NASA-CR-711825] p0503 A72-41618

- Some contributions to the theory of linear models describing the control behaviour of the human
  - [NASA-CR-711827] p0503 A72-41619

A-248
A method for the development and optimization of controller-models for man-machine systems.

Manual tracking control with continuously variable selective control gain in response to system state, noting intuitive optimization.

Influence of stick efficiency on tracking error applying two slightly different control elements.

Results of the investigation of different extrapolation displays.

Development and optimization of a nonlinear multiparameter human operator model.

Human operator dynamics for aural compensatory tracking.

German monograph - control performance as a function of the transmission ratio and the Coulomb friction in the operational element.

Manually activated heat pump for mechanically converting human operator output into heat energy (NASA-CASE-NPO-10677).

Comparison of human eye controlled and hand controlled tracking tasks (NCA-38-71-0052).

Analysis of pedal operation by seated operator with application to design of foot controls for automobiles and other equipment (AD-73515).

Pilot training experiment to compare three adaptive variables and two logic schemes in adaptive training of manual control (AD-73662).


Principles of arranging manual mechanical master-slave manipulators.

Operation and maintenance instructions for experimental system used to control surgically induced infections (NASA-CH-125097).

Operators reference manual for BIOSID computer graphics system (AR-786-191).

Job performance test for determining effectiveness of OH-1 helicopter used by Vietnamese air force (AD-74516).

Role of nitroglucos in biological productivity and marine food chain in temperate zones (CD-3826-22).

Marine bionics for duplicating biological systems and studying pattern recognition mechanisms in living organisms (AD-78263).

U SURFACE NAVIGATION

U SURFACE NAVIGATION

U SURFACE NAVIGATION

U ISOTOPIC LABELING

HARS (PLANT)

Extraterrestrial life on Mars and Venus and Jupiter atmospheres, discussing abiogenesis failures on life-supportable planets.

Extraterrestrial life search, noting radio contact with civilizations, bioastronautics, Martian conditions and physicochemical experiments.

HARS ATMOSPHERE

Planetary atmospheric composition diversity, discussing evolution of Mars, Venus, earth and Jupiter from primitive solar nebula.

HARS ENVIRONMENT

Mars biology likelihood from long winter model, suggesting north polar cap summer remnant vaporization as atmosphere, liquid water and greenhouse effect source.

Life on Mars, investigating ground based and probe observations of atmospheric composition and pressure, surface temperature and features and UV radiation.

MARS LANDING

Analytical models for analyzing probable terrestrial microbial release from unmanned Mars landing spacecraft (NASA-CR-126846).

MARS ROBOTS

U VIKING LANDER SPACECRAFT

U VIKING MARS PROGRAM

Space crew radiation dosage calculation from Mars mission high impulse gas core nuclear rocket engine exhaust plume fission fragments.

MARS SURFACE

Viking lander light scattering experiment to detect microbial growth from aquous turbidity changes in contact with Martian soil.

Life on Mars, investigating ground based and probe observations of atmospheric composition and pressure, surface temperature and features and UV radiation.

Biological instrumentation for the Viking 1975 mission to Mars.

MARS SPACIAL AERIAL VEHICLES

U MILITARY AERIAL

MASKING

Visual masking effect due to light offset, investigating human identification response to tachistoscopic test stimuli on lighted background with simultaneous shot-off.

Electrophysiology for auditory temporal masking mechanism study of cat cochlear nucleus and inferior colliculus single neurons.

Disparity-associated depth sensation masking, suggesting visual signal processing inhibitory mechanisms for crossed and uncrossed stimuli.

Auditory induction of fainter by louder sounds as perceptual phenomenon cancelling masking effects.

Energy detection model for transient overshoot in total signals masked by narrow band auditory stimuli, discussing masking produced by gated sinusoid.

Effect of fringe on masking-level difference when gating from uncorrelated to correlated noise.

MARS

U OXYGEN MASSES

Gas mass-caused air flow resistance effects on respiratory and circulatory response to exercise, assessing maximal oxygen uptake.

Cold weather face mask to provide protection from cold, wind, blowing snow, and frostbite in environments to ~65 F and 35 mph wind velocities (AD-72796).

Effect of gas masks on endurance of personnel in exhausting work and improved performance following training activity (AD-72978).

Operational performance of pneumatic seal-type facemask design.

Human factor evaluation of cold weather face masks (AD-75087).

MARS BALANCE

Mathematical model for life support system optimization in terms of reduced mass as quality criteria for energy conversion and metabolic processes.

MARS FILTERS

U FLUID FILTERS

U SPECTROSCOPERS

Single breath diffusing capacity and alveolar dead space measurements for carbon 18 monoxide using A-249
<table>
<thead>
<tr>
<th>Subject Index</th>
<th>Mathematical Models Contd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human performance and exhaustion predictive model from responses to exercise and environmental stresses, colorizing circulation, thermal regulation, work load and oxygen pressure effects</td>
<td>Analytical model for nonpenetrating impact caused head injuries, evaluating protective device effectiveness via energy absorption characteristics</td>
</tr>
<tr>
<td>Convective heat transfer from human foot, using cylindrical model and aluminum statue physical replica in oven and wind tunnel air flow studies</td>
<td>Predictive model for human operator performance in short term visual information processing based on psychological research to obtain decision accuracy and response time</td>
</tr>
<tr>
<td>Soviet papers on human higher nervous activity physiology covering conditioned reflexes and adaptive behavior, neurotropic substance effects, mathematical and structural modeling, etc</td>
<td>Hybrid computer simulation of cochlea mathematical model, noting nonlinear damping</td>
</tr>
<tr>
<td>Conditioned reflex activity, discussing biological and nervous system, electric analog simulation and mathematical and structural modeling</td>
<td>Mathematical model for flow limitation in collapsible tube in relation to pressure in pulmonary and circulatory system</td>
</tr>
<tr>
<td>Mark VII ear performance calculation procedure for perceived loudness or unlikelihood levels relation to sound pressure, using experimental frequency weighting contours</td>
<td>Mathematical models for flow ejection and aorta pressures based on displacement ballistocardiography and time dependent incompressible flow theories respectively</td>
</tr>
<tr>
<td>Mathematical model of skin contact cooling tube device for human body thermoneutrality maintenance in various environments</td>
<td>Mathematical methods for improving the significance of scintigrams</td>
</tr>
<tr>
<td>Human left ventricle measurements, modeling, control and simulation for heart modeling purposes, describing muscle performance mathematical model and stress effect prediction control system</td>
<td>A stochastic biochemical model for spacecraft operation</td>
</tr>
<tr>
<td>Stochastic models of human performance effectiveness functions reliability and correctness from error data generated by tracking and vigilance tasks</td>
<td>Theoretical models for speed-accuracy tradeoff during difficult visual discrimination tasks under time pressure</td>
</tr>
<tr>
<td>Cochlea enclosed two dimensional cavity potential flow model for fluid mechanical theory of hearing</td>
<td>Models of neurons reacting to input signal alternation in space and time</td>
</tr>
<tr>
<td>Mathematical model for arterial system pressure, blood flow and dimensional changes, examining cardiac ejection dynamics and vasculature mechanical properties and viscoelasticity</td>
<td>Neuron mathematical model synthesis from algorithms to construct neural networks and single threshold element in network form</td>
</tr>
<tr>
<td>Gabor-Nelson myocardium electrical activity model for mathematical construction of vectorcardiogram from ECG for comparison of various lead systems</td>
<td>Mathematical model of two-component algae-bacteria bioerosion</td>
</tr>
<tr>
<td>Mathematical model of extracellular pH in brain tissue from blood and cerebrospinal fluid acid-base parameters for respiration central chemosensitive mechanism study</td>
<td>Crystalline lens optical structure in human eye, representing on and off axis imaging characteristics by mathematical model</td>
</tr>
<tr>
<td>Pilot-aircraft system model for relationship between weapons delivery accuracy and manual flight control system design, noting display, computation and control aids to pilot</td>
<td>A mathematical model of the chemoreflex control of ventilation</td>
</tr>
<tr>
<td>Modified Van der Pol wave motion oscillator model for prediction of aortic dynamic response to negative q impact accelerations</td>
<td>Two explanations of temporal changes in ability-skill relationships - a literature review and theoretical analysis</td>
</tr>
<tr>
<td>Electrophysiologic data acquisition by multiple dipole type of inverse electrocardiographic procedure based on model data, noting favorable and unfavorable dipole array configuration</td>
<td>Lectures on theory of manual-vehicle control</td>
</tr>
<tr>
<td>Human hand-arm system vibration characteristics, describing mechanical impedance measurements for mathematical modeling</td>
<td>Some contributions to the theory of linear models describing the control behaviour of the human operation</td>
</tr>
<tr>
<td>Divided attention effect localization, using choice tracking task reaction times in sequential stage model for human information processing</td>
<td>The design of a nonlinear multi-parameter model for the human operator.</td>
</tr>
<tr>
<td>#Malntrated nerve fiber mathematical model for action potential transmission mechanisms analysis during relative refractory phases</td>
<td>The functional organisation of object directed human intended-movement and the forming of a mathematical model.</td>
</tr>
<tr>
<td>Linear systems theory for mathematical model of retinal image and ganglion cell excitation, calculating receptor layer luminance distributions for several stimulus patterns</td>
<td>The influence of a prediction display on the human transfer characteristics.</td>
</tr>
<tr>
<td>Mathematical model of extracellular pH in brain tissue from blood and cerebrospinal fluid acid-base parameters for respiration central chemosensitive mechanism study</td>
<td>Development and optimization of a nonlinear multiparameter human operator model.</td>
</tr>
<tr>
<td>Hybrid computer simulation of cochlea mathematical model, noting nonlinear damping</td>
<td>Empirical support for a stochastic model of evolution.</td>
</tr>
<tr>
<td>Possibility of determining the lung ventilation volume by the mathematical modeling method</td>
<td>A-251</td>
</tr>
</tbody>
</table>
HATHEMATIC STATISTICS

Relative position of the rib within the chest and its determination on living subjects with the aid of a computer program. p0552 A72-44957

Mathematical model for life support system optimization in terms of reduced mass minimisation as quality criteria for energy conversion and metabolic processes p0554 A72-45133

Problems of complex object modeling based on heuristic self-organization p0556 A72-45509

Mathematical description of a human operator in ergodic control systems p0556 A72-45514

Mathematical model of more effective protection for shipboard personnel against shock-excited deck motions p0037 A72-10094

Mathematical model for stability and control of legged locomotion systems [AD-727806] p0039 A72-10113

Mathematical model for adapting psychometric data in automated pilot performance evaluation [AD-726632] p0086 A72-12062

Selected articles on mathematical or simulation models of human thermoregulation [NASA-CR-115260] p0087 A72-13057

Mathematical model of hematopoietic radiation damage and recovery in human body p0121 A72-14073

Mathematical model of optical illusions and figural aftereffects [AD-720741] p0128 A72-14120

Validity of input noise approximations for human response modeling in man machine systems [AD-730742] p0130 A72-14133

Model of human subject and ejection seat used to calculate aerodynamic and dynamic forces, deflections, and trajectories for zero speed and high speed ejections [AD-730907] p0131 A72-14137

Mathematical model for human color vision process simulation p0132 A72-15030

Mathematical model of psychophysiological relationship between sensation and stimulus in human color perception p0132 A72-15031

Grassmann algebra for functional model of color vision statistics in human perception p0132 A72-15032

Mathematical model for linear stationary operator describing relationship between stimulus and evoked potential in electroretinograms p0132 A72-15033

Set theory in developing mathematical model of entire organism [AD-729863] p0138 A72-15074

Quantitative psychological correlates of human visual system model [AD-731997] p0140 A72-15090

Impact force of human volunteers dropped from low heights, and mathematical model. p0197 A72-16767


Linear and angular acceleration terminology, human acceleration simulation, airplane airbag, restraint system, and mathematical models of automobile crash loads p0259 A72-19155

Computerized simulation model for studying performance of air bag [FB-204170] p0264 A72-19184

Mathematical models for determining nature of electronmagnetics mechanism and its sensitivity in fish [AD-736027] p0308 A72-20093


Mathematical models for analyzing sequential and continuous motor behavior in humans [AD-736811] p0314 A72-21060

Mathematical models for distance perception by operators of man machine systems in motion, based on visible brightness of landsarks p0329 A72-22129

Approaches to problems involved in structuring and modeling of robots p0390 A72-22132

Adaptive human operator model in pursuit tracking problem p0390 A72-22134


Mathematical modeling, automata theory speech synthesis, and mechanical model of heart and lungs [JFRE-56072] p0405 A72-25135

Physiological models for visual vestibular interactions in simulating human system's eye movements [AD-737995] p0409 A72-27090

Control system analysis for mathematical modeling of respiratory protective devices [FB-5] p0417 A72-28077

Theoretical static moment analysis of knee joint, quadriceps mechanism, and patella [AD-704555] p0523 A72-30376

Development of data support system with models for predicting factors affecting human performance [AD-704665] p0523 A72-30380

Use of mathematical model for evaluation of head injury severity index criteria [AD-704641] p0524 A72-30387

Multidegree, nonlinear mathematical models of whole-body kinetics for engineering design of protective systems for acceleration exposures of humans [AD-704644] p0525 A72-30390

Nonlinear mathematical models for determining human dynamic response to low frequency vibrations [AD-704642] p0527 A72-30396

Mathematical models for testing effectiveness of multilayer viscoelastic and elastic-plastic brain protection system during impact shock [AD-704644] p0527 A72-30402

Mathematical models for impact studies including spinal and head injuries [AD-704645] p0527 A72-30403

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity [AD-704672] p0528 A72-30407

Mathematical model for nonlinear multiparameter man machine system to be run on hybrid computer [FB-5] p0536 A72-31122

HATHEMATIC STATISTICS U STATISTICAL ANALYSIS

MATHEMATICAL MODELS

Pattern recognition by computerized local processing of binary matrix representations [A72-10476]

HATHEMATIC STATISTICS

U STATISTICAL ANALYSIS

HATHEMATIC MODELS

Pattern recognition by computerized local processing of binary matrix representations [A72-10476]

HATHEMATIC THEORY

Two element matrix patterns generation with different degrees of internal constraint, developing objective complexity measures based on information theory or symmetry and grouping considerations p0008 A72-10715

HATHEMATIC VEGETATION

U VEGETATION

HATHEMATIC LIEBENDORF ESTIMATES

Psychological criteria for flying personnel selection in civil aviation, noting performance prediction based on maximum likelihood estimates p0341 A72-30586

HATHOVERFLY MILITARY AIRCRAFT

U MILITARY AIRCRAFT

MEASURE AND INTEGRATION

U WEIGHING FUNCTIONS

MEASURING APPARATUS

U MEASURING INSTRUMENTS

A-252.
Supine human body mechanical impedance under combined stress of vibration and sustained acceleration

Human hand-arm system vibration characteristics, describing mechanical impedance measurements for mathematical modeling

Human body or dummy mechanical impedance calculation by acceleration measurement at two point reference system with circular spring supporting mass

Measurement of specific mechanical impedance of the skin - effects of static force, site of stimulation, area of probe, and presence of a surround.

Mechanical impedance model for human and primate head injury due to linear impacts

MECHANICAL MEASUREMENT
MT DISPLACEMENT MEASUREMENT
MT FLOW MEASUREMENT
MT FRICTION MEASUREMENT
MT PRESSURE MEASUREMENTS
MT VELOCITY MEASUREMENTS
MT VIBRATION MEASUREMENTS

MECHANICAL OSCILLATORS
MT PERIODS

MECHANICAL PROPERTIES
MT BRITTLENESS
MT COMPRESSIVE STRENGTH
MT ELASTIC PROPERTIES
MT FIBER STRENGTH
MT MODULUS OF ELASTICITY
MT STRESS RELAXATION
MT THERMAL RESISTANCE
MT VISCOSITY

Structural and mechanical characteristics of human connective tissue

Biodinamc modelling of mechanical properties of skin and soft tissues

MECHANICAL RESONANCE
MT RESONANT VIBRATION

MECHANICAL SHOCK
New mechanical device for producing traumatic shock in dogs - circulatory and respiratory responses

MEDICA
MT ANISOTROPIC MEDIA

MEDICAL ELECTRONICS
Picoscale blood diagnostic device for red and white cell count, noting piston principle electronic operation

Electromagnetic velocity and flow measurements techniques application to cardiovascular patients, discussing utilization problems

Biological cell sorting by differential fluorescence generated electric signals via laser beam illuminated liquid stream

Digital evoked brain potential detector using multichannel amplitude analyzers

Considerations in the design of an automatic visual field tester

Needle type solid state detectors for in vivo measurement of tracer activity

'V1'-like' and 'V2'-like leads for continuous electrocardiographic monitoring

An automatic measuring and recording system for clinical electro-oculography

Implantable blood pressure telemetry system

Techniques and procedure for differential ballistocardiography of extremities

Radiospirometry in the case of work and sports activities
MEDICAL EQUIPMENT

- Carotid displacement pulse first time derivative recording as diagnostic technique for heart function assessment
- Instrumentation for pre-computer processing of electrocardiogram signals
- Biotelemetry measurement of rhythms in gastrointestinal system of animals and humans

MEDICAL EQUIPMENT

- Medical equipment advancements through NASA sponsored aerospace research program, describing prosthetic urinary valve, ear oximeter, radiation dosimeter and electrocardiographic muscle trainer
- Cardiac catheterization practice review, discussing pediatric and adult cardiology, risk reduction, diagnostic aids, relationship to radiology and laboratory equipment complexity
- Therapeutic electrocardiogram equipment hazards due to electromagnetic interaction, considering implantation and simulation of human body
- Digital systems for data acquisition and storage for medical imaging instruments
- Prototype slide stainer for blood smear tests on Skylab
- Health physics equipment and system
- Simplified manufacturing techniques for ultraminiature capacitive pressure transducers for physiological measurements
- Automatic histocompatibility testing of cells
- Feasibility and efficiency of portable recompression chamber for treating decompression sickness
- Biomedical system for measuring volume and volume variations of human body under zero gravity conditions
- Prosthetic device with sensing means for detecting tactile stimuli
- Pressure ramp programmer for automatic blood pressure measurements
- Portable equipment for detecting myocardial activity
- Aerospace technology transfer and utilization in biospace work
- Aerospace technology transfer and utilization in medical research and health care
- Application of aerospace technology to medical equipment, and cleaning and diagnostic procedures of earth health care systems
- Ultrasonic Doppler method for monitoring biomechanical processes of cardiac activity in enclosed men
- Method and design for securing implanted electrodes during chronic experiments
- Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices
- Automatic system for measuring and monitoring systolic and diastolic blood pressure in humans

SUBJECT INDEX

- [NASA-CASE-BSC-13999-1] p0405 N72-25162
- Design of white blood cell counting system for use in Skylab 1972
- Biotelemetry applications in medicine, animal experiments and ecology, including electromyography, internal bleeding detection, fetal monitoring, animal brain implants, animal movement tracking, etc
- Ultrasonic Doppler method for monitoring biomechanical processes of cardiac activity in enclosed men
- Method and design for securing implanted electrodes during chronic experiments
- Tilting table for testing human body in variety of positions while exercising on ergometer or other biomedical devices
- Automatic system for measuring and monitoring systolic and diastolic blood pressure in humans

MEDICAL SCIENCE

- Medical primatology - Conference, New York, September 1969
- Bioteleremetry applications in medicine, animal experiments and ecology, including electromyography, internal bleeding detection, fetal monitoring, animal brain implants, animal movement tracking, etc
- Collaboration of World Health Organization and various international astronautical organizations for space technology applications to man-environment relationships and medical and communication sciences
- Clinical observations as a research method in physiology

A-254
Hemoglobin-facilitated diffusion of oxygen - Interfacial and thickness effects.

Studies of the electron transport chain of extremely halophilic bacteria. VII - Solubilization properties of menadione reductase.

Study of the conductivity of the motor neuron membrane during superstimulation.

Unsteady state description of living corneal mass transport model, elucidating cornea thickness control mechanism.

The effect of membrane parameters on the properties of the nerve impulse.

Ideal tracer theory for transfer of chemical species through various membranes.

Selective attention and short term memory encoding, using tachistoscopic visual display arrangements of capital letters.

Human immediate memory adaptation to speed stress, discussing response time and performance accuracy relationship to stimuli complexity and input speed.

Short-time memory and electrophysiological effective and trace processes; relationship from visual and Rolandian cortical regions activity and Tarkhanov galvanocutaneous reaction.

Hippocampus neuron reactions and memory function realization with incoming information and stored imprints comparison by brain.

Review of biology and biochemistry of memory, suggesting molecular level mechanism of cerebral information processing.

Sleep deprivation effects relation to work duration, time of day, circadian rhythm, memory function, task performance, environmental factors, drug use and age.

Object code storage in the static portion of a short-time memory.

Operative memory mechanism on visual system neuron chain storage of stimuli from image recognition time measurements.

Characteristics of certain parameters of memory for visual signals in lower monkeys.

Visual experience as a determinant of the response characteristics of cortical receptive fields in cats.

Some effects of cognitive similarity on proactive and retroactive interference in short-term memory.

Content and time aspects of short and long term memory operation theories, relating attention and memory spans.

Information processing of short and long term human memory - bibliography.

Annotated bibliography of published articles on short term memory.

Theoretical and applied biocybernetics for memory simulation.

Enforced delay of human response to stimuli for observing memory and higher mental processes.

Correlation between electrophysiological trace phenomena in brain and immediate memory using normal and alcoholic subjects.

Scientific research in human perception and verbal memory.

Mental Health:

Psychiatric preventive intervention in emotional crisis situations during patients aeromedical evacuation and transportation, discussing personnel shortage.

Handbook on aviation medicine for safe mental and physical health of aircrew during flight.

Mental Performance:

Soyuz 9 flight crew physiological data, discussing mental and physical performance and adaptation and readaptation to space-earth environments.

Skill acquisition in performance of three phase code transformation task.

Time sharing three phase code transformation multitask effects on sustained performance.

Human mental and psychomotor performance measurements in compressed oxygen-helium atmosphere pressure chamber for dive between 100 and 1500 feet.

Inert gas narcosis under hypobaric conditions, relationship to mental performance and auditory and visual evoked responses in man.

Human mental working capacity estimation relation to functional state, discussing brain performance tests.

Operant conditioning for producing gross motor responses, discussing application to physical medicine and rehabilitation with mentally retarded Down's syndrome children.

Short and long term mental and physical work effects on central nervous system and motor apparatus in young people.

Time shortage as stress factor affecting mental activity of operator in man-flying vehicle system, discussing control signal handling efficiency.

Psycho-physical theory of human mind, discussing molecular biological processes of memory recording in terms of quanta mechanics.

Mental rehearsal and physical practice relation to learning rate for rotary pursuit tracking skill acquisition.

Sex differences of chronological effect of environmental stress on blood pressure and information processing in rats, observing autonomic hypertonic blood pressure irregularity.

Operator mental processes during ATC task performance, discussing work load effect, mental representation and operator algorithms definition.

Acceptable load standards in ATC tasks, defining moments of conscious brain control as mental load measure.

Ergonomic simulators for testing individual mental working capacity, using stress-strain and fatigue relation.

Visual search model from perceptual theory, animal studies and search data, discussing selection, inspection and naming single cued letters in visual array.

Mental performance tests in sleep deprived subjects for indication of recuperative function of slow wave and REM sleep stages.

Cumulative partial sleep deprivation effects on human performance in auditory vigilance, routine addition and running digit span tests, observing circadian rhythms.

Project Pegasus vigilance tasks for mental performance aspects of time zone change effects on human circadian rhythms.
Influence of simulated sonic booms introduced during sleep on complex mental, monitoring, and physiological performance.

Effects of flight stress on pilots’ time perception and physiological performance.

Vigilance effects for noise or vibration stimuli and pathological aspects of sleep, noting analogy to behavioral and physiological rhythms.

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BT ABAEBOBES
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.Bonolithic micropower command receiver to extend
Electrolyte hydrostatic pressure measurement in
Comaon collector micropower monolithic transmitter
Design, fabrication, and tests of acoustically
Optimal temperature control for Bicrobial
Cellular evolution investigation using molecular
biology, microbial physiology and ecology
Modular microbiology laboratory design
considerations and zero gravity experiments to
investigate microbial culture systems behavior
Interval scanning photomicrography for recording
growth of microbial cell populations during
incubation
Optical temperature control for microbial
inactivation by composite environment of heat
and gamma radiation, using quadratic technique
Microflora accumulation prevention methods during
spacecraft flight, noting bacterial filters for
air purification and wiping with disinfectants
for surface contamination reduction
Development of facility and technique for
producing nutritional single cell bacteria from
waste sugarcane bagasse
[HASA-CB-123368 ]
Design, fabrication, and tests of magnetically
connected plastic vacuum probe surface sampler
with potential for total aseptic operation
[HASA-CB-1947 ]
Medical science research projects involving cell
structure, malaria, hepatitis, hemolytic
streptococcus, acute renal failure, and effects of lasers
[AD-730840 ]
Planetary quarantine laboratory experiments on
thermal resistance of airborne spores and
microbiological examination of space hardware
[HASA-CB-126213 ]
MICROCIRCUITS
U MICROELECTRONICS
MICROELECTROMETERS
Radiation damage in microporous volumes exposed to
energetic photons
[AO-731709]
MICROELECTRONICS
Cosmic collector micropower monolithic transmitter
for single or multichannel biomedical telemetry
[PD-270 A72-26563]
Monolithic micropower command receiver to extend
lifetime of implanted biotelemetry system
[PD-270 A72-26564]
MICROGRAPHY
U PHOTOMICROGRAPHY
MICROINSTRUMENTATION
Electrolyte hydrostatic pressure measurement in
limited volume biological compartments by field
filled glass micropetite used in
microtransducer capacity
[PD-272 A72-26623]
MICROHOTPLATES
U HASTETUBES
MICROHOTPLATE BASED ELECTRONIC DEVICES
Simplified manufacturing techniques for
ultrasound sensitive pressure transducers
for biomedical measurements
[PB-201938]
MICROORGANISMS
NT ADENOVIRUSES
NT AEROBES
NT AMEBAS
NT BACILLUS
NT BACTERIA
NT BACTERIOPHAGES
NT CLOSTIDIUM BOTULINUM
NT ESCCHERICHA
NT FLAGELLATA
NT HYDROGENOGRAPHS
NT PHLOTTIA
NT PSEUDOMONAS
NT PSYCHROPHILES
NT SALMONELLA
NT SPOROB
NT STAPHYLOCOCCUS
NT STREPTOCOCCUS
NT VERDUS
Papers on planetary quarantine covering microbial
survival in deep space, contamination by
nonsterile flight hardware and sterilization
Planetary quarantine microbial contamination
control, considering clean room concept and
microbiologic barrier techniques
Microbial survivability in deep space
environmental simulation experiments, describing
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metabolism evolution in primary living
organisms, noting polyphosphate glucokinase
distribution in various microorganisms
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salt effect on enzyme activity
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cultures for human nutrition, describing
experimental production, protein value
determination, special diets and food shortage
relief
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deep space vacuums, using molecular sink test
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cycles, leading to changes in oxygen
distribution in earth crust, hydrosphere, atmosphere and biosss
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long term isolation effects on human intestinal
microflora, showing reduction and disappearance of
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atmospheric conditions
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for surface contamination reduction
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spores in aqueous solution, various
temperature, and humidity conditions
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in and on interplanetary spacecraft components
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methods for microbial decontamination of
spacecraft
Series analyses method for determining protein
content of intact microorganisms
Fatimation and identification of microfungi
biofilm growing on various materials in Queensland,
Australia
Effects of microorganisms on growth and destruction of malignant tumors (NASA-TT-P-14302) p0383 B72-24072
Analytical models for analyzing probable terrestrial microbial release from unmanned Mars landing spacecraft (NASA-CR-15966) p0400 B72-25105
Microbial analysis of television cameras retrieved from Surveyor 3 spacecraft p0437 B72-26768
Microbial assay of electric wire bundle from Surveyor 3 spacecraft p0437 B72-26769
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Effect of soil particle size on microflora survival time and sterilization requirements (NASA-CR-127633) p0470 B72-28058
Reliability of microbial cultivation in chemostat of closed ecological life support system p0483 B72-29070
Biodestruction of coated-aluminum by microorganisms (NASA-CR-127866) p0502 B72-30068
Death behavior of microorganisms during heat sterilization (NASA-TT-P-14853) p0559 B72-32086
Water soluble filter for trapping airborne microorganisms (NASA-TT-P-14840) p0562 B72-32111
MICROPHONES Condenser microphones sensitivity and frequency response characteristics measurement at normal and elevated atmospheric pressures in hyperbaric chamber air and He-air environments p0108 B72-17088
MICROSCOPES NT ELECTRON MICROSCOPES MICROSCOPE NT microscopic system for on-line measurement of cat otosensory microvessels diameter relative to heart action p0272 B72-26621
MICROWAVE COUPLING NT COUPLING CIRCUITSMICROWAVE EQUIPMENT NT MICROWAVE PROBES Semiconductor devices potential interference and biological hazards in microwave leakage field, considering shielding and filtering methods for reducing susceptibility p0056 B72-14032
MICROWAVE FREQUENCIES Microwave radiation effects in cataract development (AD-730909) p0199 B72-17043
Effects of microwave electromagnetic radiation on organisms of man and animals (NASA-TT-P-708) p0350 B72-22073
MICROWAVE PROBES Ultrabroadband probe design for microwave radiation intensity measurement in harsh exposure study p0369 B72-32574
MICROWAVE RADIATION NT MICROWAVESMICROWAVES Chronic microwave irradiation effects on experimental animal blood forming systems, examining peripheral blood count changes and nuclei and mitosis abnormalities in erythroblasts and lymphoid cells p0019 B72-11708
Cataractogenesis from microwave radiation exposure, discussing protection, legislation and Western and Soviet literature review p0110 B72-17077
Neuroendocrine responses in microwave radiation exposed rats and thyroid activity p0299 B72-28321
Standardization of microwave irradiation experiments on animals, discussing power density level evaluations and local vs whole-body irradiation effects p0300 B72-30746
Microwave induced cutaneous heat and pain perception thresholds, noting usefulness as possible radiation hazard warning p0363 B72-31506
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Microwave radiation - Biophysical considerations and standards criteria. p0408 B72-14299
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Dosemetric techniques for calculating microwave energy absorption in animal tissues (PB-20023) p0533 B72-31109
MICROWAVE HEATING NT WEIGHT MEASUREMENT MICROWAVING NT VIBRATION MIDAIR COLLISIONS Pilot warning systems for visual midair collision avoidance, noting reaction to imminent threats, scanning-patterns and display sector size effects (SAR PAPER 720312) p0265 B72-25576
MIDDLE EAR Cat and rabbit middle ear muscle contraction by electric stimulation of motor nerves, noting sound transmission reduction p0175 B72-21136
Cat middle ear muscles motor units twitch tension and contraction time in response to motor neuron threshold stimulation p0175 B72-21137
Stapedectomy postoperative complications as flying hazard, discussing pilot reaction to middle ear pressure changes p0344 B72-31094
Effect of middle ear muscle contractions on hearing and echo processing in Mustache Bat p0398 B72-25084
MIGRATION Numerical analysis of ability of birds to find bearings and navigate based on parameters of solar elevation and azimuth (SSL-6758-6632) p0062 B72-11068
Radar and visual tracking of migratory birds to determine correlation of flight altitude and wind direction on direction of migration p0396 B72-25070
Radar observations of birds migrating in opaque cloud cover to determine effects of wind and meteorological conditions p0396 B72-25073
Orientation of nocturnally migrating birds based on reference to stellar positions and sky rotation p0397 B72-25074
Analysis of patterns recognition capability of migratory birds and manner of orientation with stellar presentations p0397 B72-25075
ANALYSIS OF CUES USED BY MIGRATORY BIRDS FOR NAVIGATION AND ORIENTATION

ENVIRONMENTAL AND ENDOGENOUS TIMING FACTORS AS STIMULI FOR BIRD MIGRATION

FACTORS AFFECTING MIGRATORY HABITS AND ORIENTATION OF SEAS TURTLES

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ANALYSIS OF MILITARY AIRCRAFT ACCIDENTS CAUSED BY SPATIAL DISORIENTATION

STATISTICAL ANALYSIS OF MILITARY AIRCRAFT ACCIDENTS TO DETERMINE INCIDENTS CAUSED BY SPATIAL DISORIENTATION

PSYCHOPHYSIOLOGICAL AND ENVIRONMENTAL FACTORS INVOLVED IN AIRCRAFT ACCIDENTS OF MILITARY AIRCRAFT AND EFFECT OF FLYING EXPERIENCE IN REDUCING SPATIAL DISORIENTATION

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USAF Y-518 NOISE PROTECTOR EARPLUG MODIFICATION TO ALLOW FOR PRESENCE EQUALIZATION DURING AIRCRAFT CLIMB AND DESCENT

CENTRAL NERVOUS SYSTEM SYMPTOMS AND SIMPLE BENDS IN MAN DECOMPRESSION SICKNESS CASES DURING USAF OPERATIONAL FLYING

CHANGE IN NAVAL FLIGHT OFFICER OPERATIONAL ROLE DUE TO MODERN EQUIPMENT DESIGN IN WEAPONS SYSTEMS, SENSORS AND NAVIGATIONAL AIDS

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FLIGHT PSYCHIATRY IN NATO COUNTRIES, DISCUSSING ORGANIZATION AND FACILITIES WITH RESPECT TO MILITARY AND CIVIL AVIATION

KEROSENE INCIDENT IN USAF FLYING PERSONNEL, DISCUSSING DIAGNOSIS, ETIOLOGY AND THERAPY

PARAMESHEE BRONTOM AND MILITARY FLYING PERSONNEL, DISCUSSING RADIOGRAPHIC DIAGNOSTIC METHODS AND HYPOTHETICAL TEST PROCEDURES FOR FLIGHT STATUS RESTORATION TIME DETERMINATION

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EFFECTS OF ENVIRONMENTAL STRESSES ON ATTACK HELICOPTER CREW TASK PERFORMANCE IN NATO THEATER

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U.S. MILITARY PSYCHOLOGY

MILITARY PsYCHOLOGY

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CALIFORNIA PSYCHOLOGICAL INVENTORY AS A PREDICTOR OF SUCCESS IN THE NAVAL FLYING PROGRAM

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ATTITUDES OF AIR FORCE PILOTS RETURNING FROM VIETNAM

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DESIGN, TECHNICAL HISTORY, AND USE OF NAVAL TRAINING DEVICES

CONFERENCE PAPERS RELATING TO MILITARY TRAINING DEVICE TECHNOLOGY AND TRAINING METHODOLOGY

SOVIET RESEARCH IN MILITARY HUMAN FACTORS ENGINEERING

ARRANGING TASKS, IN FIGHTING VEHICLE, TO CAPABILITY OF SOLDIER

MINERALS

MT ASBESTOS

MT QUARTZ

MT EFFECT OF PROLONGED RESTRICTED MOTOR ACTIVITY ON CHANGES IN WATER-MINERAL METABOLISM AND FLUID DISTRIBUTION IN RABBITS

MINES (EXCAVATIONS)

FUNCTIONAL ADAPTATION, THERMOREGULATION, AND WATER BALANCE ADAPTATION FOR MINE WORKERS UNDER HOT AND HUMID CONDITIONS

EFFECTIVENESS AND LIMITATIONS OF CURRENT PORTABLE OXYGEN BREATHING EQUIPMENT FOR MINE RESCUE OPERATIONS

DESIGN OF AUXILIARY SURVIVAL SHELTER AS PORTABLE LIFE SUPPORT SYSTEM IN MINES

HYDROLOGY

U OPTIMIZATION

KNAPHEIM ICN

REGRESSION ANALYSIS TECHNIQUE FOR SELECTING KINESTMATIC COMBAT CREW MEMBERS

KIRWAN KISSLES

KIRWAN KISSLES

KIRWAN KISSLES

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([A72-23982])
Effect of chronic hypoxia on the kinetics of energy transformation in heart mitochondria
([A72-23993])
Cytoplasmic heredity theory linking mitochondria origin to bacteria
([A72-23989])
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([A72-23849])
Hypoxic acclimation effects on rats heart, liver and kidney mitochondria, measuring cytochrome oxidase and succinic dehydrogenase activities
([A72-23871])
Relation between mitochondria and glycolysis
([NASA-TT-F-10034])
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BT COLLOIDS
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BT NORMAL
BT SOLUTIONS
MOBILITY
BT ELECTRON MOBILITY
BT IONIC MOBILITY
MODELS
BT ANALOG SIMULATION
BT ATMOSPHERIC MODELS
BT DIGITAL SIMULATION
BT DYNAMIC MODELS
BT ENVIRONMENT MODELS
BT MATHEMATICAL MODELS
BT SCALE MODELS
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MODIFICATION

BT RETICULUM
MODULATION

BT FREQUENCY MODULATION
BT LIGHT MODULATION
BT PULSE FREQUENCY MODULATION
BT PULSE MODULATION

MODELS

BT COMMAND MODULES
BT LUNAR MODULE
BT SPACECRAFT MODULES

MODULUS OF ELASTICITY

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NOISE EFFECTS

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MOBILIZATION
MT BINDING HORMONE
MT STANDARD DEVIATION
MT VARIANCE (STATISTICS)

MOBULAR SIGNALS
Neuronal per sistential loudness adaptation measurement by delayed and single simultaneous balance methods, discussing intensity, frequency and duration effects

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Ultrasound transducer monitoring of decompression-caused gas bubbles in rat thigh muscle tissue for decompression sickness time course development studies

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Space medical urological problems from experience with Biosatellite 3 monkey, discussing closed
Influence of vision on susceptibility to acute motion sickness studied under quantifiable stimulus-response conditions.

Relation between response thresholds of cupular-endolymphatic system to angular and Coriolis accelerations in humans and motion sickness tolerance.

Influence of vision on susceptibility to acute motion sickness in subjects exposed to strainful accelerations in rotating room.

Vestibular stimulation for determining response from arousal and thermal sweat areas during motion sickness.

Swear sensor for monitoring perspiration response during motion sickness.

Effects of motion sickness on autonomic nervous systems role in vestibular-respiratory-vasomotor reflexes.

Development of theory concerning human reactions to whole body motion and explanation of individual differences to motion effects.

Altered susceptibility to motion sickness as function of subgravity level.

Forehead sweating during motion sickness from vestibular stimulation.

Effect of environmental temperature on sweat onset during motion sickness.

Role of higher sections of central nervous system in motion sickness.

Motion sickness drugs.

Antiemetic and antinoise drugs effectiveness based on acetylcholine or norepinephrine induced changes of balance between vestibular and reticular neurons.

Effectiveness of benzazepine hydrochloride and other antimotion sickness drugs combined with scopolamine.

Motivation.

Influence of self-deception and verbalization on susceptibility to acute motion sickness.

Knowledge of results/controlled feedback in vigilance performance.

Terminal area ACC specialists and trainee job attitude and motivation from questionnaire on challenge, tasks, salary, work schedule, etc.

Conditioned slow negative potential of human brain cortex dependence on motivation, emphasizing punishment avoidance conditions.

Self-paced ergometer performance - Effects of pedal resistance, motivational contingency, and inspired oxygen concentration.

Effect of differential payoff matrices to induce motivation in vigilance performance involving detection of visual signals.

Measurement of motivation in human factors engineering by psychological tests.

Early attitude-achievement discrepancies as predictors of voluntary withdrawal from naval aviation training.

Influence of vision on susceptibility to acute motion sickness.

Motion sickness experience correlations to vestibular tests in pilots and nonpilots.

Vision influence on acute motion sickness elicitation in slow rotation room, comparing with vestibular facets.

Environmental temperature effect on motion sickness awareness, discussing nausea and discomforting symptomology prediction.

Experimental motion sickness studies in slow rotation room simulating rotating spacecraft condition and noting relation between subject susceptibility and number of head motions.

Influence of high temperature on the onset of motion sickness.

Motion sickness, autonomic nervous systems role in vestibular-respiratory-vasomotor reflexes.

Motion sickness, effects on human stability under frontal and dorsal sweating detection during motion sickness by vestibular stimulation, comparing arousal and thermal sweat response.

Motion sickness, effects on autonomic nervous systems role in vestibular-respiratory-vasomotor reflexes.

Motion sickness, effects on autonomic nervous systems role in vestibular-respiratory-vasomotor reflexes.

Motion sickness, effects on autonomic nervous systems role in vestibular-respiratory-vasomotor reflexes.

Motion sickness, effects on autonomic nervous systems role in vestibular-respiratory-vasomotor reflexes.

Motion sickness, effects on autonomic nervous systems role in vestibular-respiratory-vasomotor reflexes.
MOUNTAIN INHABITANTS

Respiration control during hyperoxia, discussing chemoreceptor significance in minute volume regulation at high altitudes.

Mismatch detection with collection from Native American Indians, noting effects at high altitudes.

High altitude natives cerebral arterial-venous oxygen difference measurement during physical activity.

Pulmonary gas exchange in native highlanders.

Vascular headache of acute mountain sickness.

Aortic circulation at high altitude.

Anatomy of the coronary circulation at high altitude.

Resistance and capacitance vessels in the skin in permanent and temporary residents at high altitude.

BIBLIOGRAPHY

Influence of ionizing radiation on the tooth organ.

Vascular headache of acute mountain sickness.

Adaptive processes responsible for natural acclimatization of human organ to low ambient pressures at high altitudes.

Anatomy of the coronary circulation at high altitude.

Resistance and capacitance vessels of the skin in permanent and temporary residents at high altitude.

MOUNTAINS

Medical and technical aspects of rescue and survival of astronauts in high mountain and mountainous remote areas.

ROUTES

Influence of ionizing radiation on the tooth organ.

MULTICHANNEL COMMUNICATION

Exercise ECG multichannel radio telemetry equipment, discussing sources of malfunction and unreliability and remedial procedures.

MULTICHANNEL RECEIVERS

U MULTICHANNEL COMMUNICATION

MULTICHANNEL TRANSMITTERS

U MULTICHANNEL COMMUNICATION

MULTICHANNEL TRANSMITTERS

MULTILAYER INSULATION

Mathematical models for testing effectiveness of multilayered insulating and elastic-plastic brain protection system during impact shock.

MULTIPOLARIS

A rapid assay of dipolar and extradipolar content in the human electrocardiogram.

MULTISPECTRAL PHOTOGRAPHY

Remote multiphoton photographic vegetation inventories to determine environmental conditions that breed public health hazards.

MULTIVARIATE STATISTICAL ANALYSIS

BT CORRELATION

BT REGRESSION ANALYSIS

Multivariate algorithms of optimum content and form for cardiovascular risk assessment in pilots and air transport personnel.

Bibliography of basic references to multivariate analysis using response surface methodology and application to human factors engineering.

Multivariate approaches to pattern recognition and dyspepsia cures.

NOUSES

Absorbed doses at various depths in water target, exposed to charged pions, muons and electron beams, using Monte Carlo program.
MUSCULAR FATIGUE

sudden death and congestive heart failure patients [NAPA-07-14128]
p0239 072-18050
Hyponuria effect on development of morphological and
metabolic changes in skeletal rat muscles
during hypokinesia
p268 072-29058

DYNAMIC FUNCTION

Human oxygen intake and blood lactic acid removal
kinetics during recovery from wild steady work
on bicycle ergometer
p224 072-24989
Dynamic bioelectric impedance level of tissue area
related to human skeletal muscle fatigue
p239 072-29322
Effects of muscular stress on biochemical changes
in serum enzyme activity
[NAPA-07-14167]
p253 072-19101
Electromyographic activity of biceps muscle during
submaximal isometric contraction determined from
auditory feedback
[ND-73430]
p308 072-22994
Electromyographic measurement of maximum voluntary
muscle contraction endurance in chronic
hyperventilators
[ND-73429]
p136 072-21072

MUSCULAR FATIGUE

Hyperfector-suction-contraction mechanism in heart regulation,
discussing surface membrane structure and cell action potential
p220 072-22133
Motor unit potential histogram study of human
torsen sensor activity patterns during voluntary
muscular contractions
p277 072-21472
Hyperventilation-excitation-contraction mechanism in
heart regulation, discussing surface membrane
structure and cell action potential
p223 072-22222
Force-velocity relations in cat papillary muscles
isotonic contraction, discussing effects of
preload and afterloads, testing frequency
and stimulation frequency
p217 072-22864
Functional organization of monkey cortical
efferent zones in distal forearm muscle control
from intracortical microstimulation studies,
showing stimulation thresholds distinctive
p224 072-23582
Peripheral afferent input to monkey cortical
efferent zones of distal forearm muscle
control, using single microelectrode for
intracranial stimulation and cellular discharge
recording
p224 072-23583
Artificial heart-lungs model with contractile
polymer membrane as synthetic muscles to react
with gases and liquids, discussing design features
p233 072-24640
Human body biochemical energy conversion processes
during muscular activity, discussing nutrition,
circulation and respiration roles
p268 072-26075
Speed and mechanical work measurements during knee
bending and immediate or delayed leg extension
exercise, showing muscle elastic potential
energy utilization
p271 072-26615
Electromyograms and myogram responses in phasic
stretch reflex under-understrains conditions as
activity level on muscle humans
p273 072-26632
Human motometer discharge time relation during
isometric muscle contraction, measuring adjacent
action potential and mean interspike intervals
p233 072-27653
Irreversibility mechanisms in postpartum ductus
arteriosus closure in guinea pigs, studying
vessel cellular changes and smooth muscle
response to oxygen pressure
p287 072-27826
Inspiration, expiration and hand muscle control
comparison in psychophysical category production
method for human voluntary breathing regulation
investigation
p288 072-27843
Energy metabolites and ATP balance characteristics
during muscular activity as function of organism
adaptation to activity
p233 072-28640
Supraspinal effects on different work regimes of
supplementary respiratory muscles, using
interference electromyograms cross correlation
analysis
p269 072-29328
Contractile responses of quinie pig, cat and hares
isolated ventricular myocardium to increased
stimulation frequency
p334 072-30048
Temperature and extracellular Ca level effects on
mammalian ventricular myocardium-force-frequency
relationships, determining contractile tension,
velocity and phase duration
p334 072-30045
Delayed growth of rat carcasses and skeletal
muscles during prolonged hypoxia, comparing
effects on flexor muscles to ankle joint extensors

SUBJECT INDEX

p0159 072-19875
Acceleration tolerance increase by static forearm
muscular contraction exercise comparison to
isometric contraction during human central tests
[AD-739063]
p0171 072-20887
Cat and rabbit middle ear muscles contraction by
electric stimulation of motor nerves, noting
sound transmission reduction
p0175 072-21136
Cat middle ear muscles motor units stretch tension,
and contraction time in response to motor neurons
threshold stimulation
p075 072-21137
Motor unit potential histogram study of human
motor sensor activity patterns during voluntary
muscular contractions
p217 072-22864
Hyperventilation-excitation-contraction mechanism in
heart regulation, discussing surface membrane
structure and cell action potential
p223 072-22222
Force-velocity relations in cat papillary muscles
isotonic contraction, discussing effects of
preload and afterloads, testing frequency
and stimulation frequency
p217 072-22864
Functional organization of monkey cortical
efferent zones in distal forearm muscle control
from intracortical microstimulation studies,
showing stimulation thresholds distinctive
p224 072-23582
Peripheral afferent input to monkey cortical
efferent zones of distal forearm muscle
control, using single microelectrode for
intracranial stimulation and cellular discharge
recording
p224 072-23583
Artificial heart-lungs model with contractile
polymer membrane as synthetic muscles to react
with gases and liquids, discussing design features
p233 072-24640
Human body biochemical energy conversion processes
during muscular activity, discussing nutrition,
circulation and respiration roles
p268 072-26075
Speed and mechanical work measurements during knee
bending and immediate or delayed leg extension
exercise, showing muscle elastic potential
energy utilization
p271 072-26615
Electromyograms and myogram responses in phasic
stretch reflex under-understrains conditions as
activity level on muscle humans
p273 072-26632
Human motometer discharge time relation during
isometric muscle contraction, measuring adjacent
action potential and mean interspike intervals
p233 072-27653
Irreversibility mechanisms in postpartum ductus
arteriosus closure in guinea pigs, studying
vessel cellular changes and smooth muscle
response to oxygen pressure
p287 072-27826
Inspiration, expiration and hand muscle control
comparison in psychophysical category production
method for human voluntary breathing regulation
investigation
p288 072-27843
Energy metabolites and ATP balance characteristics
during muscular activity as function of organism
adaptation to activity
p233 072-28640
Supraspinal effects on different work regimes of
supplementary respiratory muscles, using
interference electromyograms cross correlation
analysis
p269 072-29328
Contractile responses of quinie pig, cat and hares
isolated ventricular myocardium to increased
stimulation frequency
p334 072-30048
Temperature and extracellular Ca level effects on
mammalian ventricular myocardium-force-frequency
relationships, determining contractile tension,
velocity and phase duration
p334 072-30045
Delayed growth of rat carcasses and skeletal
muscles during prolonged hypoxia, comparing
effects on flexor muscles to ankle joint extensors

A-268
The foot as input device for control operation.

Physical and chemical identification methods for biochemical reactions and energy balance of muscular contraction and shaking.

Chemical energy transformation to mechanical energy and heat in muscles during exercise, considering energy sources for contraction, oxidations, glycogen and anaerobic mechanisms.

Effects of physical exercise on spinal reflectivity in man.

Dependence of muscle efficiency on oxygen concentration in the venous blood.

Blood flow, oxygen uptake, and capillary filtration in resting skeletal muscle.

Analysis of femoral venous blood during maximum muscular exercise.

Sensorimotor mechanism of proprioceptors in muscles and tendons, considering reflexive control of position and motion.

Functional insufficiency of the neuromuscular system caused by weightlessness and hypokinesia.

Metabolic changes in healthy humans caused by prolonged bed rest in horizontal position, noting prevention by physical exercises and electric muscle stimulation.

Influence of the nervous system and its mediators on the spontaneous contractile activity of a smooth muscle.

Changes in certain hemodynamic indices during muscular strain in people with differing capacity to perform work.

The reflex and mechanical response of the inspiratory muscles to an increased airflow resistance.

General index for the assessment of cardiac function.

Effects of potassium on muscle functions during physical exercise.

Effects of chronic potassium deficiency on skeletal muscle cell excitability, resting potential, and latency time.

Morphological effects of space flight environment on vascular, muscular, and nervous biological systems.

Hypokinesia and hypodynamia effects on rabbit.

Physical exercise effects on rat skeletal muscle vascularization in the course of ontogeny.

Influence of vestibular stimulation on segmentary reflexes in spinal cord.

Multichannel bioelectric control system for simulating neuromuscular movements and treating motor function disturbances.

MUSCULAR STRENGTH

Contractile and muscle-like fibers and autopilomat systems for polymer engine and spring action studies.

Use of isometric exercises as means of preventing muscular atrophy in treatment of fractures of extremities.

Three dimensional hand force and biomechanical models for simulating human hand strength in zero gravity.
MUSCULAR TONE

MUSCULAR TONE
Human and monkey muscle tonic vibration reflex response to vibratory stimulation dependent on frequency range, electromyograph discharge interval length, etc

Techniques and procedure for differential ballistocardiography of extremities.

Breathing rate response to oral instructions in relationship to nervous system, bronchial muscle tone and gas metabolism rate reflex-type changes

Functional insufficiency of neuromuscular system caused by weightlessness and hypokinesia.

MUSCULOSKELETAL SYSTEM

Muscles of the bones

Muscles of the head

Muscles of the neck

Muscles of the chest

Muscles of the arms

Muscles of the back

Muscles of the legs

Muscles of the pelvis

Muscles of the trunk

Muscles of the neck

Muscles of the limbs

Muscles of the hand

Muscles of the foot

Muscles of the face

Muscles of the tongue

Muscles of the larynx

Muscles of the diaphragm

Muscle tone in different body areas during prolonged restrictive muscular activity

Blood flow, oxygen uptake, and capillary filtration in resting skeletal muscle.

Prototype for machine augmentation of human strength and endurance - Hardman project

Analysis of human subjects to determine skeletal configuracions of operation in pulling or pushing heavy loads

Hypokinesia effects on rat skeletal muscles

Atrophy and cytochemical changes in rat skeletal muscles caused by hypokinesia

Clinical tandem walking test for evaluating axial battery test performance in detecting vestibular problems

Effects of prolonged hypokinesia on general body skeletal muscle growth in rats

Prototype of bilateral manipulator for machine augmentation of human strength maintaining dexterity

Biomechanics in motor skeletal structures and determination of tolerance to external forces

Geometric properties of human ribs and thin walled ellipse model for rib cross section

Stabilography for stability determination of stance and fine adjustments to body equilibrium

MUTATIONS

Molecular evolutionary changes in amino acids of proteins due to mutagen random fixation, comparing human and fish hemoglobin chains

Evolutionary rate of citrulline in vertebrates, discussing hemoglobin and cytochrome c changes involving amino acid mutant substitution

Amino acid composition of polypeptide chains of globins due to mutations during vertebrate evolution from ancestral gene

Space flight effects on chlorella cell survival and mutability in land automatic stations

Dose response curves for pink somatic mutations in Tradescantia after neutron and X ray irradiation

Blue green alage Anacystis nidulans DF-7004501

Space flight effects on chlorella cell survival and mutability in space automatic stations

Soysa 5 satellite vehicle space flight factors effect on chlorella cells, investigating survival rates and mutability

Empirical support for a stochastic model of evolution.

Amino acid substitution correlation with genetic code in human, bovine, ovine, porcine and salmon calcitonins, suggesting mutation occurrence time during evolution

Bales of Drosophila melanogaster treated with 250 KF X rays for determination of genetic mutations induced in ova cell cycle

Effect of white blood cell and spacecraft environment on spontaneous and radiation induced somatic mutation rates and cytologic changes in Tradescantia [EPP-P-1123]

Combined effects of radiation and weightlessness on mortality and mutagenesis of living systems

Evolved nerve fiber mathematical model for action potential transmission mechanism analysis during relative refractory phases
Subject Index

Myocardium

Incidence rates of myocardial infarction and sudden death from coronary heart disease for adult black and white populations in Nashville

Canine and human ventricular myocardium microelectrophysiologic studies of postextrasystolic T wave change relation to cellular repolarization and contractile potentiation magnitude

High altitude hypoxia effects on rat myocardium lactic dehydrogenase isozyme complement and anoxic tolerance

Xenon 133 myocardial clearance method accuracy and reliability in determining high and low left coronary artery blood flow under different hemodynamic conditions

Myocardial blood flow measurement by Te 133 clearance method after direct application of isotope into subendocardial and subepicardial layers of left ventricle

Familial cardiomyopathy detection by electrocardiography noting arrhythmias, ventricular hypertrophy, abnormal Q waves and intraventricular conduction defects

Regional myocardial contraction mechanics during transient ischemia and reoxygenation in anesthetized dogs

Helium-cold hypothermia induction and maintenance effect on hamster myocardia, with ventricle analysis of hypoxic damage, glycogen and catecholamines

Neurogenic response to hypoxia in dogs with experimental myocardial infarction, discussing changes in cardiac output, stroke volume, left ventricular pressure and systemic vascular resistance

Norepinephrine 3,5-dimethyl-4-bromopyrazol injection effect on rabbit and dog heart during direct extracardiac nerve stimulation

Norepinephrine activity determination as diagnostic test for human myocardial infarction, comparing to creatine phosphokinase activity test

Asymmetrical hypertrophic cardiomyopathy symptoms simulating mitral stenosis, suggesting electrocardiography, chest X ray and hemodynamic studies as diagnostic procedures

Sudden death in myocardial infarction, discussing heart electrical stability, neural control, arrhythmias and cardiac conduction disturbances

Coronary artery disease and venous involvement severity predictions from electrocardiographic and vectorcardiographic patterns of anterior wall myocardial infarction

ECG evidence of myocardial ischemia in patients without arteriographic evidence of coronary artery disease, studying myocardial oxygen supply

ECG and VCG in diagnosis of myocardial infarction and QRS changes

Glucose and fatty acid metabolic response during impending myocardial infarction in animals

Stretch activation of myogenic oscillation of isolated contractile structures of heart muscle in ATP salt solution

Myocardium catecholamine level reduction by heart hypertrophy from soring coarctation during moderate thyroidin doses

Hyperbaric chamber tests for hemodynamic response to oxygen inhalation at 1 and 2 atm pressure for myocardial infarction treatment assessment

Myocardial infarction effects on drug tolerance and hemodynamic changes due to digoxin doses, discussing toxic arrhythmias

Beta-adrenergic inhibitors effects on coronary blood flow and myocardial oxygen consumption of normal and coronary artery disease patients

Ventricular myocardium contractile function disorder diagnosis by phase coordinate method with intracardiac hemodynamics application

Myocardial excitation-contraction mechanism in heart regulation, discussing surface membrane structure and cell action potential

Intraventricular conduction defects incidence and mortality in acute myocardial infarction, noting left anterior hemiblock dominance

Assessment of regional myocardial temperature changes effect on blood flow measurements by heated cross-thermocouples in dogs

Sera petidase activity determination enzymatic diagnostic test for myocardial infarction

Myocardium biopulsed-controlled cardioischronizer as key component of bioclot control system for cardiological studies

Chronic hypoxia adapted rat myocardial tissue sensitivity to increased carbon dioxide tension

Hemodynamic variables relation to coronary blood flow and myocardial oxygen consumption during upright bicycle exercise

Gabor-Wilson myocardium electrical activity model for mathematical construction of vectorcardiograph from ECG for comparison of various lead systems

Myocardial infarction stress effect on serum cortisol, plasma free fatty acid and urinary catecholamine levels

High altitude hypoxia preadaptation effects on left ventricle myocardium noradrenaline concentration in rats with experimental vitium cordis

Hemodynamic effects of angiographic contrast medium in patients with and without heart disease, discussing myocardial performance during first ten beats

Electrical components of cardiac and skeletal muscle impedance, calculating rectangular stimulating current mean value

Heart enzyme activity under experimental myocardial ischemia in rabbits determined for blood, left and right ventricles and atrium

Physiological evaluation of diastolic mechanics in rat hypertrophied myocardium as function of heart rate, Ca ion concentrations and temperature

Contractile responses of guinea pigs and human isolated ventricular myocardia to increased stimulation frequency

Temperature and extracellular Ca level effects on asanall ventricular myocardium force-frequency relationships, determining contractile tension, velocity and phase duration

Platelet aggregates role in intramyocardial vessel circulation impedance in patients dying suddenly of coronary artery disease

Hill model for myocardia activity, taking into account contractile state variations and characteristic force-velocity curve

Human heart physiopathology from cardiac performance analysis, treating heart as pump and
HYDROCARBONS
Blood-brain-facilitated diffusion of oxygen — Interfacial and thickness effects.

NACOSIS
Inert gas narcosis under hyperbaric conditions

NARCOTICS
Inert gas narcosis under hyperbaric conditions

NARCOLOGY
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATION
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATION AIDS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATION INSTRUMENTS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATORS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NATURAL FREQUENCIES
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

Nausea
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATION AIDS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATION INSTRUMENTS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATORS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NATURAL FREQUENCIES
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATION AIDS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATION INSTRUMENTS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATORS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NATURAL FREQUENCIES
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATION AIDS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATION INSTRUMENTS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NAVIGATORS
Surface electrode distance, area and pressure effects on electrocorticogram recording of large skeletal muscle electrical activity during defined muscular tensions

NATURAL FREQUENCIES
Environmental tests of commercially available abandon-ship survival suit (AD-734136)

Training devices for training operators in use characterization and maintenance of naval electronic equipment (AD-733871)

NAVY research and instrumentation for analyzing nonionizing radiation effects on human personnel (AD-72-26054)

NEAR INFRARED RADIATION
Human eye relative luminous efficiency for near IR and UV coherent light, using ruby laser pumped tunable dye laser primary and second harmonic outputs (AD-72-31380)

Near-infrared reflective vs low visual reflectance of green plant tissue (NASA-CS-125657)

Revised safe laser radiation exposure levels for air force personnel working in visible and near infrared radiation (AD-742267)

NEAR ULTRAVIOLET RADIATION
Human eye relative luminous efficiency for near IR and UV coherent light, using ruby laser pumped tunable dye laser primary and second harmonic outputs (AD-72-31380)

NECK (ANATOMY)
Neck proprioception effects and otolith organ activity in perceived visual target elevation under centrifuging stress (AD-72-28305)

Neck cooling collar for improved thermal comfort in hot weather (AD-72-27126)

NEGATIVE FEEDBACK
MT SENSORY TERMBACE
Topographical distribution of CBN on human scalp during analogous sustained and delayed response tasks (NASA-TS-X-62097)

NEGATIVE RESISTANCE CIRCUITS
Receptor membrane pulse generation electronic model with tunnel diode negative resistance circuit (AD-72-27578)

NERVOTAL (TRADEMARK)
Neurovascular barbiturate effects on afferent signals transmission and thalamocortical level of somatosensory system (AD-72-21195)

NOBLESSES
MT CANCER
MT LUMBARIAS
NERVES
His bundle electrocardiography for arrhythmia studies, discussing conducting tissue potential recording, ventricular delay and block site determination and electrophysiological effects of drugs (AD-72-11473)

Ventricular nucleus bulbar complex evoked potentials under visceral and somatic nerves, electric stimulation in anesthetized cats (AD-72-12512)

Exercise and denervation effects on intramuscular muscle fiber morphology, noting 25-33 percent cross-sectional area atrophy in nuclear bag and chain fibers (AD-72-14895)

Adrenergic innervation of internal carotid arteries in extra- and intracranial regions in dogs, using luminiscence method (AD-72-22180)

German monograph on Ranvier node steady state I-V characteristics transition range and control by altered external solutions and morphological effects on nerve fiber (AD-72-22336)

Photically induced and spontaneously discharged neuron impulse propagation through direct pathways from superior colliculus to dorsal and ventral lateral geniculate nuclei in cats (AD-72-22863)

Cerebrospinal fluid pH change effects on cat respiratory response before and after vagotomy, showing vagal activity relation to central chemical control of respiration (AD-72-27925)

Vagus nerve regeneration in humans after stomach cancer surgery (AD-72-23268)

Statistical activity analysis procedure for random nerve network model, determining representative point trajectory in phase space via similarity matrix (AD-72-29176)

Myelinated nerve fiber mathematical model for action potential transmission mechanism analysis during relative refractory phases (AD-72-30597)

Cat cerebellum cortex evoked response impulses interaction during stimulation of hypothalamus and peripheral nerves (AD-72-30669)

Cerebral cortex electric shock stimulation effects on phrenic nerve discharges in bipedalized and curarized cats (AD-72-30842)

Acquired complete right bundle branch block without overt cardiac disease - Clinical and hemodynamic study of 37 patients (AD-72-35821)

Effects of vagotomy and increased blood pressure on the incidence of decompression-induced pulmonary barotrauma (AD-72-36446)

Electrical stimulation of vestibular nucleus - Effects on light-evoked activity of lateral geniculate nucleus neurons (AD-72-38220)

Study of bilateral cortical nerve connections between the preobiliary and various cortical regions (AD-72-39323)

Propriospinal ducts of the lateral funiculus and their possible role in transmission of pyramidal stimuli (AD-72-40583)

Localisation and structural-functional organization of the system of vagus nerve nuclei constituting the 'cardiac center' of the medulla oblongata (AD-72-41673)

Computation of the shape and velocity of a nerve pulse (AD-72-42156)

Continuous recording of His bundle electrocardiogram during selective coronary cineangiography in man (AD-72-43813)

H-V intervals in left bundle-branch block - Clinical and electrocardiographic correlations (AD-72-45690)

Clinical and anatomic implications of intraventricular conduction blocks in acute myocardial infarction (AD-72-45691)

Magnetic field and transverse acceleration effects on pharyngeal and esophageal nerve cells of rats (AD-72-19079)

SUBJECT INDEX
Soviet book on physiology of conditioned reflexes
covering brain and nervous system, tonic reflexes, functional models, inhibition localization, etc.

Human nervous system properties responsible for individual behavioral differences, discussing methodological problems in future research from biological criteria viewpoint

Conditioned reflex activity, discussion on biological and nervous system, electronic analog simulation and mathematical and structural modeling

Effects of long periods of clinical death from drowning or lethal blood loss on higher nervous activity in reanimated dogs

Statistical activity analysis procedure for random nerve network model, determining representative point trajectory in phase space via similarity matrix

Effect of a magnetic field on experimental tumors

New experimental data on the morpho-physiological analysis of the adaptation phenomenon in the somatic reflex arcs

Vasomotor reflex locking level

Biological systems activity in controlling extremal problems of nervous and vascular systems, noting external stimulation minimization

Changes in the functional state of analyzers in flying personnel during long flights

Critique of Pavlov conditioned reflex role in higher nervous activity and association principle role in psychic activity

A model for analyzing the coordination of manual movements

Some data on the interrelations of conscious and unconscious reactions

Influence of the nervous system and its mediators on the spontaneous contractile activity of a smooth muscle

Development of algae, nerve cells, and amphibian eggs applied to space flight

Clinical analysis of hypokinesia caused by hypophosphataemia in investigation of nervous system and effects of pharmacological preparations on hypokinesia disorders

[HASA-72-F-142251 - P0312 24127]

[HASA-TT-F-142251 - P0312 H72-21016]

Proton irradiation-effects on monkey central nervous system, showing inflammatory reaction and neuroglial astrocyte glycogen accumulation

[HASA-73-S-72-32119]

Neurotoxic effects of drug isoniazid on pilot neurochemical alterations in laboratory animals, exposed to microwave irradiation with determination of effect on turnover rate of serotonin

[AD-72-916]

[AD-73-5178]

[AD-72-28085] Workload modification effects on pilot neurological changes during Boeing 707 letdown, approach and landing

[AD-72-28250]

Neurological oxygen toxicity - Effects of switch of inert gas and change of pressure.

[AD-72-39070]

Study of bilateral cortical nerve connections between the precentral gyrus and various cortical regions

[AD-72-39070]

Neurochemical investigations in laboratory animals exposed to microwave irradiation with determination of effect on turnover rate of serotonin

Neurophysiology of auditory pattern recognition of simple and complex sounds, using cats data on cochlear nerve neural mechanisms

Neural tissue excitability relationship to precolularization, considering polynucleotide distribution in vertebrate tissues

Multichannel IC spike height discriminator for separating electrical activity of neural units recorded with microelectrode

Cats cochlea and cochlear nuclear neural responses in auditory masking of low frequency tones, showing phase locked cells progressive desynchronization with intensity

Nerve structures localized cooling device using vacuum insulated closed circuit controlled cryogenic probe with cooling range of plus/minus 20° C

Human visual system selective adaptability to size, speed and orientation, suggesting motion analysis by visual cortex neural subsystems

Adaptive neural nets of threshold logic units as models of perception and memory in biological systems

Visual cortex neuronal background activity in unanesthetized rabbits under stimulation and depression of lateral geniculate body and mesencephalic reticular formation, considering synaptic organization

Neuron networks dynamic behavior in terms of linear differential equations for membrane potential changes and neuron thresholds

Coherent brain model for evolution mechanisms of biological resonance in neuronal network signal flow

Object code storage in the static portion of a short-time memory

Models of neurons reacting to input signal alternation in space and time

Neuron mathematical model synthesis from algorithms to construct neural networks and single threshold element in network form

A possible anatomical basis for descending control of impulse transmission through the dorsal horn

Visual information space-time dependent filtering by retinal and geniculate body neural nets

Preprocessing of nerve pulse sequences for analysis by digital computer

Proton irradiation effects on monkey central nervous system, showing inflammatory reaction and neuroglial astrocyte glycogen accumulation

Models of neurons reacting to input signal alternation in space and time

Neuron mathematical model synthesis from algorithms to construct neural networks and single threshold element in network form

A possible anatomical basis for descending control of impulse transmission through the dorsal horn

Visual information space-time dependent filtering by retinal and geniculate body neural nets

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Proton irradiation effects on monkey central nervous system, showing inflammatory reaction and neuroglial astrocyte glycogen accumulation

Models of neurons reacting to input signal alternation in space and time

Neuron mathematical model synthesis from algorithms to construct neural networks and single threshold element in network form

A possible anatomical basis for descending control of impulse transmission through the dorsal horn

Visual information space-time dependent filtering by retinal and geniculate body neural nets

Preprocessing of nerve pulse sequences for analysis by digital computer

Proton irradiation effects on monkey central nervous system, showing inflammatory reaction and neuroglial astrocyte glycogen accumulation

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Preprocessing of nerve pulse sequences for analysis by digital computer

Proton irradiation effects on monkey central nervous system, showing inflammatory reaction and neuroglial astrocyte glycogen accumulation

Models of neurons reacting to input signal alternation in space and time

Neuron mathematical model synthesis from algorithms to construct neural networks and single threshold element in network form

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Models of neurons reacting to input signal alternation in space and time

Neuron mathematical model synthesis from algorithms to construct neural networks and single threshold element in network form

A possible anatomical basis for descending control of impulse transmission through the dorsal horn

Visual information space-time dependent filtering by retinal and geniculate body neural nets

Preprocessing of nerve pulse sequences for analysis by digital computer

Proton irradiation effects on monkey central nervous system, showing inflammatory reaction and neuroglial astrocyte glycogen accumulation

Models of neurons reacts...
Human voluntary muscle contractions

Human and monkey muscle tonic vibration reflex response to vibratory stimulation dependent on frequency range, electromyograph discharge interval length, etc.

Lateral decussate body neurons' activity during sympathetic preganglionic nerve stimulation in cats after ventral root stimulation related to visuo-motor mechanisms counteracting illusory shifts

Spinal reflexes through electrical stimulation of gastrocnemius and soleus human leg muscles, attributing increased tendon reflex amplitudes to gamma motoneuron hyperactivation

Neuromuscular coordination control optimization, discussing preprogrammed open-loop control with feedback monitoring loop

Human arm muscle motor neuron reflex response to rectangular pulse excitation of ulnar nerve

Marine gastropod mollusk synaptic transmission mechanisms, discussing various chemical transmitters, two phase potentials, receivers, electrical interaction and electrophysiological conditioning

Phase relations among alpha waves in EEG and automated rhythmic motor activity as functions of subject behavioral activity and thalamic pacemaker zones

Field and intracellular potentials in cat trochlear nucleus following ventral root stimulation for synaptic organization study of vestibulo-ocular reflex

Inhalation transients in sympathetic mechanisms and tonic activity of cat sympathetic ganglia

Motoneuron pool fraction determination in human monosynaptic response of healthy and neuropathological subjects, comparing diagnostic methods

Cat and rabbit middle ear muscles contraction by electric stimulation of motor nerves, noting sound transmission reduction

Cat middle ear muscles motor units twitch tension and contraction time in response-to motor neuron threshold stimulation

Motor unit potential histogram study of human motoneuron activity patterns during voluntary muscular contractions

Balbar respiratory neuron discharge pattern response to nasal and tracheal receptor stimulation in cats, relating changes in neuronal activity and intratracheal pressure

High pressure gas mixture breathing effects on intercostals external muscles electrical activity and respiratory cycle time in rats

Myocardium excitation-contraction mechanisms in heart regulation, discussing surface membrane structure and cell action potential

Laryngeal motoneuron activity during Hering-Breuer reflexes, noting inspiratory fibers firing inhibition and activation during lung inflation

Functional organization of monkey cortical efferent zones in distal forelimb muscle control from intracortical microstimulation studies, showing stimulation thresholds distribution

Peripheral efferent input to monkey cortical efferent zones of distal forelimb muscle control, using single microelectrode for intracranial stimulation and cellular discharge recording

Human motoneuron discharge time relations during isometric muscle contraction, measuring adjacent action potential and mean interpulse intervals

Neuronal mechanisms of muscular motor activity control, analyzing cerebro-motoneuron connections, spinal potentials, monosynaptic responses and depolarization

Description of an easy and simplified test for electromyographic diagnosis of latent spasmophilia in flight personnel

Proprioceptive ducts of the lateral funiculus and their possible role in transmission of pyramidal stimuli

Synaptic supracranial control mechanisms of spinal cord motor neurons

Study of the conductivity of the motor neuron membrane during supraspinal stimulation

Synaptic potentials of sensor and motor neurons of trigeminal nuclei during corticofugal stimulation

Influence of a preceding afferent stimulation on the pyramidal activation of spinal motor neurons

Role of pyramidal and extrapyramidal components of cortically-induced efferent stimuli in the mechanics of cortical motor activity coordination

Synchronization in the work of motor neurons during arbitrary motor activity of various types

Role of efferent influences of tempero-thalamo-cerebral structures in pre-adjunct alterations of spinal motor neuron excitability

Cortical metabolism regulation and effector systems of the adaptation process

Computation of the shape and velocity of a nerve impulse

Tactile information transmission for orientation and motor control, discussing somatic sensitivity peripheral mechanisms

Functional insufficiency of the neuromuscular system caused by weightlessness and hypokinesia

Measurement of neuromuscular excitability variations in course of acute glaucoma nutritional imbalance in pigeons

Physiological effects of brief space flights on human subjects as measured by reflex excitability of neuromuscular system and contractability of muscles

Electromyographic measurement of maximum voluntary muscle contraction endurance in chronic hyperventilators

Bioelectric system for control of muscular activity

Multichannel bioelectric control system for simulating neuromuscular movements and treating motor function disturbances

Human forearm models for aiding diagnostic and postsynaptic electric potential responses to click bioelectric system for control of muscular activity

Emotional effects of brief space flights on human subjects as measured by reflex excitability of neuromuscular system and contractability of muscles

Electroencephalographic measurement of maximum voluntary muscle contraction endurance in chronic hyperventilators

Bioelectric system for control of muscular activity

Multichannel bioelectric control system for simulating neuromuscular movements and treating motor function disturbances

Human forearm models for aiding diagnostic and therapeutic monitoring of neuromuscular diseases

Revised normative standards of performance of men, ages 16-60 years, on quantitative ataxia test battery

Postsynaptic electric potential responses to click of auditory cortex neurons in cats

Visual cortex neuron responses to light flashes under hypothalamic and reticular electric stimulation in rats

Neuron Transmission

Subject Index
NEUROPHYSIOLOGY

Post-synaptic potentials of motor neurons of the facial nerve nucleus evoked by afferent and corticofugal pulse stimulation

Classification of neurons in the lumbar dorsal column according to their discharge during evoked locomotion

Elaboration of steady changes in the firing rate of cortical neuron populations

Cat hypotalamus regions neurons background activity characterized by single nonrhythmic spikes with large interspike intervals, noting frequency of discharge bursts

Pulse activity of neurons in the thermal regulation center of the anterior hypothalamus during chill shivering

First-breath response of medullary inspiratory neurons to the mechanical loading of inspiration.

Temperature-sensitive neurons in the brain stem - Their response to brain temperature at different ambient temperatures

Acid phosphatase distribution and functional differences of neurons in frog retina

Stochastic model of neuron firings based on two recurrent time sequences of stimuli (79-72-71)

Morphological effects of space flight environment on vascular, muscular, and nervous biological systems

Gravitational stress effects on neurons in autonomic nervous ganglia of cats

Changes in atrium nerve cells following transverse acceleration of dogs

Measurement of color and movement detection by neurons

Clinical electrodiagnosis in prognosis of lower motor neurone lesions

NEUROPHYSIOLOGY

Soviet book on physiology of conditioned reflexes covering brain and nervous system, tonic reflexes, functional models, inhibition, localization, etc

Psychology of visual form perception in relation to neurophysiological principles of lateral interaction and organization; considering retinal images, aftereffects, binocular vision, etc

Neuronal mechanisms of binocular vision and space perception from tests on cats and men, discussing neurophysiological models of stereopsis

Neurophysiology of auditory pattern recognition of simple and complex sounds, using cats data on cochlear nerve mechanical

Split human cerebrum physiology, discussing corpus callosum as interhemispheric nervous process transfer, and right and left hemisphere functional differentiation and asymmetry

Retinal annulus onset and offset thresholds, discussing neural signals delay characteristics

Differential neurophysiological and psychological effects of substance B2, volatile ether anesthesia, and ethane in conscious man

Neuroelectric signal recognition system with computerized compensation for variations due to small random changes, slow trends and interference potentials

Subject Index

Ecdysone hormonal control of Drosophila circadian rhythms and synchronizing mechanisms, discussing light stimulation and neurohormones secretory

Thalamic functional and organizational anatomy studies using neurophysiological and biological research methods, emphasizing cytoarchitectural differentiation functional significance

Comparative EEG characteristics of frontal and occipital human brain cortex, relating psychophysiological and neurophysiological factors

Soviet book on higher nervous activity physiology covering conditioned reflexes and adaptive behavior, neurotransmitter effects, mathematical and structural modeling, etc

Neurophysiological mechanisms responsible for conditioned reflexes, considering cells, reaction relationship to animal behavior, neuronal stimuli interactions, interlamine and inhibitory processes in reproduction

BRAIN structures role in fixation of temporal relationships in information memory function of central nervous system

Conditioned reflex mechanisms responsible for regulation of emotions in higher order animal and human neurophysiology

Physiology of sleep phases and dreams, discussing data on highly organized and interacting neuronal mechanisms exhibiting alternating forms of brain bioelectric activity

Human nervous system properties responsible for individual behavioral differences, discussing methodological problems in future research from biological criteria viewpoint

Soviet book on psychic phenomena and brain, covering cybernetics, dialectical materialist implications, consciousness, neurophysiology and cerebral neurodynamic structures

Electrophysiological, neurophysiological, metabolic, vegetative, psychological, chemical and pathological aspects of sleep, noting insomnana and wakefulness mechanisms for various clinical disorders

Neurophysiological mechanisms of sleep, studying sleep and wakefulness state evoked potentials relation to cortex and subcortical activity levels

Gerson monograph on Basler node steady state E- V characteristics transition range and control by altered external solutions and morphological effects on nerve fiber

Antiemetic sickness drugs effectiveness based on acetylcholine or norepinephrine induced changes of balance between vestibular and reticular neurons

Neural effects on human visual resolution of horizontal and vertical gratings resulting from early amobarbital visual inputs due to antagonists

Russian book on visual sensor signal dynamics covering nerve signal transformation, light stimuli responses, afferent flow, biomes, neurocybernetics and communication theory

Intraelectroretinographic analysis of light signal spatial summation at different retinal nerve levels in frogs

Effects of long periods of clinical death from drowning or lethal blood loss on higher nervous activity in reanimated dogs

Functional organization and neurophysiological mechanisms of reticulohypothalamic system in anesthetized cats, showing axon terminal presynaptic depolarization
Neutral Beams

Central nervous system pharmacology, discussing somniferous, narcotic and neurotropic substances effects on brain activity

Neutral Beams

Neutral Particles

Neutrals

Neutron Activation Analysis

Simultaneous neutron-activation analyses of scandium, cobalt, iron, and zinc in biological objects with the aid of a total-absorption gamma-spectrometer

Determining radiation exposure of astronauts by gamma analyses of neutron activated fecal samples from Apollo 12 and 13 missions

Total body neutron activation analysis of calcium in man

Neutron sources, energy, flux density, and moderation for uniform irradiation of target element in human subjects in total-body neutron activation analysis

Neutron Beams

Depth-dose experiments with monodirectional 14 MeV neutrons in low scatter environment, describing test facility

Neutron Irradiation

Visual discrimination task-trained monkeys performance and physiology after pulsed mixed gamma-neutron irradiation, noting blood pressure and respiratory and heart rate changes

Cosmic radiation effects in Concord prototype cabin, using photographic dosimeters for neutron dose measurement and nuclear emissions for all charged particle recordings

Dose response curves for pink mastic mutations in Tradescantia after neutron and X-ray irradiation

Monte Carlo calculations of neutron and proton damage and transport depths in tissue phantoms

Neutron sources, energy, flux density, and moderation for uniform irradiation of target element in human subjects in total-body neutron activation analysis

Neutron Scattering

Water absorber lateral scattering effect on absorbed dose from 400 MeV neutron and proton beams

Neutron Transmission

U Nuclear Reactions

Neutrons

Pyridyl tract neuro reactions to anticoagulant and different stimuli in cats, determining substantia nigra cortical neurons responses by intrac- and extracellular potential outlets

Nicotine

Separation of central effects of CO2 and nicotine on ventilation and blood pressure.

Nicotinic Acid

Effect of nicotinic acid on myocardial metabolism in man at rest and during exercise.

Night Vision

Color defective vision performance predictions during day and night tests of aviation color signal light discrimination

Landolt ring radioactive plaque night vision
tester comparison with electrophotography and Goldmann-Weekers dark adaption apparatus from special tests of night blind patients

Human vision sensitivity to covert Y illuminators for image intensification during night observation

Night vision performance measured on object recognition experiments with optical instruments, noting improvement with image intensifier

Hardware parameters related to human factors in training operators of night observation devices

Effect of high brightness (20,000 to 60,000 lux) on rate of human eye adaptation to darkness

Nitrogen

Lung ventilation nonuniformity determination by single cell breath method, showing nitrogen concentration in alveolar phases

Pulmonary EC network and multiple breath nitrogen washout time constants mathematical relationship for breathing mechanics measurement, discussing lung compliance and resistance

Gasometric nitrogen production in human, steady-state conditions, relating expired nitrogen minute volume increase after protein consumption to possible gastrointestinal and metabolic effects

Chloroethane population age structure and cell requirements correlation with nutrient medium nitrogen and phosphorus absorption

Four-parallel-compartment lung model for emptying pattern study, using expired nitrogen concentrations data to calculate alveolar dilution ratio and emptying rate

Regression analysis for steady state N2 inequality in O2 consumption calculations

Effects of nitrogen and helium upon pulmonary damage after rapid decompression to 2 torr.

Neurologic oxygen toxicity - effects of switch of inert gas and change of pressure.

Myth of nitrogen equality in respiration - its history and implications.

Nitrogen excretion as a measure of protein metabolism in man under different conditions of renal function.

Visual perception of accelerated nitrogen nuclei interacting with the human retina.

Metabolic weightlessness effects on calcium and nitrogen balance in skeletal and muscular systems of spacecrews on Gemini 7

Analysis of physiological changes associated with hyperbaric pressure to determine acceleration or adaptation to nitrogen narcosis

Development of methods for analyzing data and fitting curves derived from replicate nitrogen washout tests on human subjects

Role of nitrogen metabolism in biological productivity and marine food chain in temperate sea

Kielhald semicroscopic and mass spectrometric methods for studying atmospheric nitrogen assimilating ability of grass mealyb

Critical review of research on assimilation of nitrogen by higher organisms

Fabrication and operational procedures for processing lunar samples in sterile nitrogen atmosphere

Subject Index

NEUTRAL BEAMS

INSTRUMENTS, noting improvement with image intensifier

NITROGEN

Hardware parameters related to human factors in training operators of night observation devices

Effect of high brightness (20,000 to 60,000 lux) on rate of human eye adaptation to darkness

SUBJECT INDEX
Visual evoked response as measure of nitrogen narcosis in divers breathing compressed air from 0 to 250 feet [AD-737208] p0041 H72-25118
Low frequency pulsed electromagnetic field effects on carbohydrate energy and nitrogen metabolism of living organisms [JPBS-56583] p0471 H72-20061
NITROGEN COMPOUNDS
NT AMINES NT AMMONIA NT CAFFEINE NT HYDROGEN CYANIDES NT HYDROGEN SULFIDES NT LINES NT MORPHINE NT NICOTINE NT NITROGEN OXIDES NT NITROGLYCerin NT NITROUS OXIDES NT TRIFLUORINE NT TRYPPTOPHANE NT UREAS NT URIC ACID NT IAMINES
NITROGEN OXIDES
Toxicological data and human response to short term exposure to nitrogen oxides [PD-199003] p0037 H72-10093
NITROGLYCERINE
Clinical response to nitroglycerin therapy correlation with coronary angiography as diagnostic test for coronary artery disease in patients with chest pain p0160 A72-19993
NITROUS OXIDE
Gas induced anesthesia as factor in pulmonary homeostasis, showing differential retention in lungs ventilated with nonoxygen nitrous oxide compared with air p0421 A72-35970 Neurologic oxygen toxicity - Effects of switch of inert gas and change of pressure p0455 A72-38704
NOBLE GASES U RARE GASES
NOBLE METALS
NT SILVER NOISE (SOUND)
NT AERODYNAMIC NOISE NT AIRCRAFT NOISE NT JET AIRCRAFT NOISE NT SONIC BOOMS
U NOISE REDUCTION NOISE HAZARDS U HAZARDS U NOICE (SOUND)
NOISE INJURIES
Hearing damage scaling methods, discussing audiometric frequencies effect and damage risk criteria p0161 A72-20169 Physiological and psychological effects of noise noting vulnerability of circulatory apparatus, neurovegetative system and stomach p0339 A72-30696 Personal protection measures, environmental control, and noise reduction to avoid hearing loss among submarine crew personnel [AD-726217] p0082 H72-12034 Adverse biomedical effects of noise on man in military environment [AD-738432] p0351 H72-22081 Impulse noise damage to cochlear of Phasus macaque monkeys [AD-765105] p0570 H72-33091 NOISE INTENSITY
Cats cochlea and cochlear nucleus neural responses in auditory masking of low frequency tones, showing phase locked cells progressive desynchronization with intensity p0072 A72-15251 Duration effect on judged acceptability of noise, discussing interpretation and meaning of laboratory determinations p0108 A72-17765 Airport surrounding communities survey on attitudes toward aircraft noise, noting daily activity disturbance, emotional reactions, economic effects, noise abatement awareness, etc p0109 A72-17780 Perceived noise level correction for background noise effects based on frequency band SWR p0161 A72-20170 Loudness and nonlinearity judgment controversy, considering experimental subjective and objective conditions, subject age and sex and sound field characteristics p0162 A72-20171
A-281
Human performance under intense noise, measuring effects on muscle tension, metabolism, respiration rate, visual accommodation, saccadic eye movement and dark adaptation

White background noise intensity effects on human visual target detection performance considering display difficulty levels, target location, detection time and error

Preferences for signaled over unsignaled noise from subjectively rated noise intensity experiments, discussing preparatory response vs information cognitive control interpretations

Personal protection measures, environmental control, and noise reduction to avoid hearing loss among submarine crew personnel

Analysis of human sensory interactions between color perception and ambient white noise intensity

Effects of broadband noise intensity and vibration on mental performance

Effects of high intensity noise levels on human vestibular system and production of disorientation and nausea

Tests of broadband high intensity noise on human equilibrium

Reaction of subjects to simulated indoor sonic booms and comparison with reaction to noise of subsonic aircraft

Effects of prolonged wideband noise on functional condition of human organ

Influence of biological rhythms on daily periodical hearing in human subjects subjected to prolonged noise

Ambient noise measurement and speech reception levels associated with F-111 A flight preparation area to find noise attenuation features of ear protection devices

Noise measurement

Noise pollution

Regression analysis technique for determining human sensitivity to noise and noise annoyance

Social survey of annoyance caused by aircraft and road traffic noise

Noise stress effects on human life

Noise reduction

Earplug effect on passenger speech reception and intelligibility in rotary wing aircraft, noting protection against noise annoyance, fatigue and deafening

Flight helmet optimal fitting technique, using automatic recording audiometer and noise source for acoustic leakage detection

Design criteria for transportation system noise regulation, considering ambient noise, hearing damage, speech interference and subjective reactions

Aircraft noise protective earplug design, employing perforated and slit modifications for additional protection without tympanic membrane pressure excess risk

Helicopter noise and vibration testing and cabin soundproofing for improved comfort

Transistorized amplifier input elements design for biopotentials recording, providing minimum noise at high input impedance

USAF P-51B noise protector earplug modification to allow for pressure equalization during aircraft climb and descent
The design of a nonlinear multi-parameter model for the human operator.

Development and optimization of a nonlinear multiparameter human operator model.

Numerical and experimental analysis of nonlinear viscoelastic materials.

Dilatant suspensions impact energy absorbent properties, considering application to ejection seat cushions for occupant acceleration attenuation.

Reflection

U energy absorption

Nuclear physics

Ground and flying activity endurance training effect on urinary excretion of norepinephrine and adrenaline.

Heat production increase by muscular contractions due to norepinephrine in cold adapted rats.

Hypothalamus increased norepinephrine turnover after adrenal gland desensitization in rats given discontinuous inhibitor.

Protein biosynthesis inhibitors retardation of norepinephrine and serotonin induced hyperpolarization of neuron membranes in corticosteroid-seeded region of rabbits.

High altitude hypoxia proadaptation effects on left ventricle myocardium norepinephrine concentration in rats with experimental vitius cords.

Adrenaline and norepinephrine metabolic stages and production mechanism under various physiological and pathological conditions, noting application to flight emotional stress detection.

Norepinephrine

Epinephrine and norepinephrine effects on cerebral blood circulation volume and oxygen tension in tissues.

Antistress sickness drug effectiveness based on acetylcholine or norepinephrine induced changes of balance between vestibular and reticular neurons.

Modifications of the rate of renewal of norepinephrine in various peripheral organs of the rat during exposure and aclimatization to cold.

Normal force distribution

Normalizing

Long term weightlessness-induced physiological response normalization by muscle bioelectrostimulation, muscular tissue energy load increase and mineral metabolism stabilization.

Norepinephrine

Occhobiosophysical experimental organ response during hypokinetic antithorostatic bed rest for control, exercising and muscular electric-stimulated groups.

Grounding of flight crew personnel due to nasal and aural disorders.

Nasal and aural disorders and flight fitness in German armed forces.

Notation

Numbered steel

Noxious materials

U contaminants

Nuclear emulsions

Nuclear emulsion and solid track threshold dosimetry for ion spectrum division of heavy relativistic particles in primary cosmic rays.

Cosmic radiation effects in Concord prototype cabin, using photographic dosimetry for neutron dose measurement and nuclear emulsions for all charged particle recordings.

Nuclear energy

European research and atomic energy applications to agricultural crops and insect sterilization.

Nuclear fissions

Cosmic radiation effects in Concorde, prototype.

Health hazards and efficiency reductions of personnel exposed to simulated nuclear shock waves in protective shelters.

Human ear drum rupture and hearing loss injuries from nuclear explosions.

Nuclear interactions

High energy nucleon tissue doses calculation based on averaged characteristics of nuclear interactions.

Nuclear magnetic resonance

Proton magnetic resonance.

Synthesis and characteristics of iron dithiocarbonates based on infrared and Mossbauer spectroscopy, conductivity measurements, elemental analyses, and NMR methods.

Nuclear particles

Alpha particles

Beta particles

Nucleons

Photons

Nuclear physics

Quantum theory

Nuclear power

U nuclear energy

Nuclear radiation

Beta particles

Gamma ray beams

Gamma rays

Neutron beams

Nuclear reactions

Electron scattering

Neutron scattering

Nuclear interactions

Positron annihilation

Proton scattering

Primary cosmic ray interaction with tissues, emphasizing biological effects and nuclear reactions induced radioactivity in astronaut body.

Nuclear reactors

Gaseous fission reactors

Nuclear research and test reactors

Nuclear research and test reactors

Paired miniature ionization chambers used for research reactor dosimetry measurements.

Nuclear rocket engines

Space crew radiation damage calculation from Mars mission high impulse use core nuclear rocket engine exhaust phase fission fragments.

Nuclear scattering

Neutron scattering

The relationship of cosmic radiation effects in Concorde, prototype.
NUCLEAR SHIELDING

NUCLEAR SHIELDING
O RADIATION SHIELDING
NUCLEAR SUBAROMES
O SUBAROMES
NUCLEAR TEST REACTORS
O NUCLEAR RESEARCH AND TEST REACTORS
NUCLEI (NUCLEAR PHYSICS)
O CT ALPHA PARTICLES
O CT HEAVY NUCLEI
NUCLEIC ACIDS
O RIBONUCLEIC ACIDS
Site binding model of nucleic acid-protein
interactions for chemical evolution and genetic
code studies
Nucleic acid, protein and cell primordial
sequence, ribosomes and genetic code for life
orials, discussing experiments on homopolyamine
acids reaction with monosaccharides
Protobiont formation by random aggregation and
reproduction from proteins and nucleic acids
macromolecules
Protein evolution, discussing biological group
amino and nucleic acid structure variations from
photoractive tree of cytochrome c data
Comet collisions in planetary nebulae as source of
organic compounds in universe in preplanetary
era, noting nucleic acid bases in carbonaceous
meteors
Genetic organization emergence, considering
pretranslational evolution in montraslational
protein synthesis, nucleic acid evolution and
gene origin
Abiotic formation of nucleic acid bases and
nucleosides in photochemically synthesized self
sustaining coacervates
Role of the synthesis of nucleic acids and
proteins in the adaptation of the organism to
altitude hypoxia.
Nucleic acid contents in cholinergic and
adrenergic spinal cord neurons and in their
diatal satellite-cells during hypoxic hypoxia and
a post-hypoxia period
Wet extraction methods for proteins, amino acids,
nucleic acids, enzymes, and other organic
compounds in soils
NUCLEOGENESIS
Amino acid code comparisons of polypeptide chains
of globins due to mutations during vertebrate
evolution from ancestral gene
Site binding model of nucleic acid-protein
interactions for chemical evolution and genetic
code studies
DNA primary structure variability relation to
origin and evolution, discussing taxon scale in
existing animal, plant and microorganism systems
NUCLEI
High energy nuclear tissue doses calculation based
on averaged characteristics of nuclear
interactions
NUCLEOZIDES
O ADENOSINE DIPHOSPHATE (ADP)
O ADENOSINE TRIPHOSPHATE (ATP)
O ADENOSINES
Abiotic formation of nucleic acid bases and
nucleosides in photochemically synthesized self
sustaining coacervates
NUCLEOSIDES
O ADENOSINE DIPHOSPHATE (ADP)
O ADENOSINE TRIPHOSPHATE (ATP)
O ADENOSINES
Site binding model of nucleic acid-protein
interactions for chemical evolution and genetic
code studies

Biochemical processes and structures
interactions, amino nucleoprotein coacervate
models and ribonucleoside and polynucleotide
phosphorylase enzymes
Evolutionary significance of primary amino acid or
nucleotide base sequences of DNAs within various
phylogenetic groups
NUCLEIDES
O CARBON ISOTOPES
O GALLIUM ISOTOPES
O GOLDEN ISOTOPES
O LUTETIUM
O LUTETIUM ISOTOPES
O RADIOACTIVE ISOTOPES

NUMBER THEORY
Sequences of natural numbers mapped into
transcendental systems
NUCLEAR ANALYSIS
O NUCLEAR ANALYSIS
O NUCLEAR TECHNIQUE
O NUTRIENTS
Abichydroxycetone /DHAC/ as nutrient in growing.fats
Spinal mesenteric vascular reflexes of
vasoconstriction effect of pressure drop in
cocoeic artery relation to heat nutritional
hepatic reflex
Protein-rich food substitute from microalga
effects of pollutants and nutrients on growth of
several freshwater and marine algae
NUTRITION
Apollo 14 food system, describing new items, 
improvements in production methods, packaging
and preparation with emphasis on rehydratable
foods
Spinal mesenteric vascular reflexes of
vasoconstriction effect of pressure drop in
cocoeic artery relation to heat nutritional
hepatic reflex
Protein-rich food substitute from microalga
cultures for human nutrition, describing
experimental production, protein value
determination, special diets and food shortage
relief
Higher nervous activity of monkeys two years after
the extirpation of the dorsalateral frontal cortex
Transfer of food processing and preservation
technologies from NASA to industry
Annotated bibliographic data retrieval system on
space food and nutrition
NUTRITIONAL REQUIREMENTS
O CALORIC REQUIREMENTS
Chiorrella population age structure and cell
requirements correlation with nutrient medium
nitrogen and phosphorous absorption
YSTAGMUS
Narvigator pilots and airman trainees response to
Coriolis accelerations, investigating ystagmus
sensitivity coefficient relationship to motion
sickness resistance
Vestibular system tests using optokinetic
caloric, positional and rotational stimuli
Lateral geniculate body neurons activity during nystagmic eye movements in cats after vestibular stimulation related to visuo-motor mechanisms contrasting illusory shifts  

Eye movement control device for electroneystagmography, describing construction, line drawing and basic circuits  

Alcohol ingestion effects on tracking performance during angular acceleration, observing nystagmic eye movements and eye-hand coordination  

Nystagmus and illusory phenomena in man under simultaneous rotation in two perpendicular planes as function of vestibular excitation  

Nystagmus eye movements relationship to oculogyral illusion from test involving vestibular stimulation and visual stimuli velocity estimates  

Alcohol ingestion effect on vestibular responses to angular acceleration and Coriolis stimulation, discussing nystagmus and subjective responses  

Effects of different alcohol dosages and displays illumination on tracking performance during vestibular stimulation.  

Vestibular labyrinth reactions and nystagmus thresholds in dogs during negative angular accelerations and simulated chronic galactic radiation from Co 60 gamma source  

Horizontal nystagmus response during constant velocity rotation  

Nystagmus and visual performance during sinusoidal oscillation  

Nystagmus response parameters estimated by test procedure using short triangular waveforms of angular velocity about Y and Z axes  

Procedure for determining cases of mild intoxication based on postrotational fixation nystagmus  

Alcohol-induced postrotatory fixation nystagmus and detection of alcohol intoxication in pilots  

Physical models for visual - vestibular interactions in simulating human nystagmic eye movements  

Vestibular-ocular counterroll reflex for determining vestibular response dynamics of monkeys to acceleration  

OBESITY  

ECG P-wave-like deflections caused by strong diaphragmatic action potentials in obese woman with fever and erysipelas  

OBSERVATION  

BT SATELLITE OBSERVATION  

BT VISUAL OBSERVATION  

OCCIPITAL LOSES  

Spatio-temporal scalp mapping localization of human visual evoked responses to full field light adapted stimulation, comparing to half-field situation  

Occipital and vertex visual evoked responses relation to memory information, perception and stimulation  

Factor analysis of frontal and occipital brain regions EEG indices interzonal variability, relating autocorrelation function parameters to neuron ensembles force level  

Occipital electromyographic response to slowly repeated aperiodic light flashes, discussing alpha wave and rhythmic afteractivity  

amplitude changes  

Comparative EEG characteristics of frontal and occipital human brain cortex, relating psychophysiological and neurophysiological factors  

Occipital EEG activity during fluctuations of perception under stabilized image and simplified stimulus conditions.  

OCCUPATION  

Terminal area ATC specialists and trainee job attitude and motivation from questionnaire on challenge, tasks, salary, work schedule, etc  

OCEANOGRAPHY  

Biological resources of Chesapeake Bay and measurement of chemical, physical, and meteorological features to improve resources management  

Ocean-oriented industry in Florida and Southern California  

OCTABEDS  

NU MINERALS  

OCULOGESTUES  

OCLUSAL EQUILIBRUM  

Sjoberg hypothesis for zero gravity produced inversion illusion mechanism in aircraft parabolic flight, noting otolithic semicircular deflection result of force on macula  

Lateral geniculate body neurons activity during nystagmic eye movements in cats after vestibular stimulation related to visuo-motor mechanisms countering illusory shifts  

Contrast vision enhancement in Hermann grid with variable figure-ground ratio, using Hausgarter receptive field hypothesis  

Pilot and nonpilot vestibular sensitivity to rotation, determining oculogyral illusion and rotation perception thresholds  

Nystagmus and illusory phenomena in man under simultaneous rotation in two perpendicular planes as function of vestibular excitation  

Nystagmus eye movements relationship to oculogyral illusion from test involving vestibular stimulation and visual stimuli velocity estimates  

OCULOMETERS  

EEG and electrooculograms recording of chimpanzees asleep, noting rapid eye movement stages  

OCULOMOTOR NERVES  

Optic nerve axon diameters in central and peripheral cat retina related to conduction velocity groups  

Lateral geniculate body neurons activity during nystagmic eye movements in cats after vestibular stimulation related to visuo-motor mechanisms countering illusory shifts  

Alcohol ingestion effects on tracking performance during angular acceleration, observing nystagmic eye movements and eye-hand coordination  

Oculomotor accommodation and convergence as distance perception cues, showing size perception change relation to glasses adaptation  

Oculomotor cue-based distance perception, discussing glasses adaptation-caused accommodation and convergence changes in stereoscopic depth perception  

Phase shifts of circadian rhythm of optic nerve potentials from isolated eye of neurethane in darkness  

Eye movements and dynamic visual acuity as function of tracking velocity, analyzing pursuit and saccadic component by electrooculography  

A-285
An objective test for evaluating the functional state of the oculotor system during somnolence states

Involuntary eye movements during the performance of mental tasks

Conjugate and divergent optokinetic eye movements in the rabbit, evoked by rotatory and translatory motion.

Eye movements evoked by collicular stimulation in the alert monkey.

Otoolith organ response of normal vision people and persons with severe bilateral labyrinthine function loss exposed to prolonged tilt

Effect of continuous ultraviolet exposure on photokeratiti and ocular damage in humans, rabbits, and primates

Dynamic visual acuity in motion perception

Single olfactory bulb units under cyclic stimulation, observing activity related to inhalation cycle and odor quality

Olfactory receptor model sensitivity, discussing threshold dependence on adsorbed odoriferous agent amount and exposure time

Amygdala projection to accessory olfactory bulb in rats, discussing main bulb, olfactory tubercle, pyriform cortex accessory bulb and amygdala relationships

German book - Somatic sensitivity, smell and taste

Olfactory perception neurophysiological mechanisms, discussing receptor cells sensory thresholds and time, temperature and humidity effects

The effect of electrical stimulation of the olfactory bulbs on the behaviour of cats and on the electrical activity of the neo- and archepaleocortex

Effect of X ray stimulation on olfactory system of rabbits and rats

Olfactory stimuli and ultrasonic signal methods for individual recognition between mother and infant brown rats

Online identification on human describing function by iterative differential analyzer, noting application to man-machine systems and on-line adaptive control systems

Human neurovascular coordination control optimization, discussing preprogrammed open-loop control with feedback monitoring loop

Modifying Siegel-Holt operator simulation model for on-line operation

On-board computers

Operational problems

Human engineering requirements in aircraft system development

Operations research
SUBJECT INDEX

Optimum performance typewriter keyboard design, discussing biomechanical improvements in finger positioning, facility, operator posture, muscular strain reduction, etc [AD-740259]

Multichannel information processing in pursuit tracking. New complexity relation to operator performance for rapidly increasing input conditions [AD-725114]

Short sleep period and oxygen breathing effects on arousal level of air traffic controller during detection task performance [AD-725115]

Work-rest scheduling and sleep loss effects on operator performance in watchkeeping and active multiple visual tasks [AD-725116]

Change in Naval Flight Officer operational role due to modern equipment design in weapons systems, sensors and navigational aids [AD-729226]

Compensatory tracking task performance with continuous error information feedback via visual, auditory or electrocutaneous displays [AD-730105]

An objective test for evaluating the functional state of the oculocutor system during somnolence states [AD-730283]

Man machine systems operational effectiveness augmentation through human factors engineering, to enhance human operator capability for parallel data processing and decision making [AD-730284]

Visual optical system evaluation from viewpoint of human operator target detection under field conditions in terms of resolution, transfer functions, aberration and eye movements [AD-730316]

An assembly for studying the perceptive motor reactions of man under one-dimensional follow-up conditions [AD-730317]

The design of a nonlinear multi-parameter model for the human operator [AD-730318]

A psychologist’s laboratory approach to a human factors problem [AD-730319]

The influence of a prediction display on the human transfer characteristics during compensatory tracking. [AD-730320]

German monograph—Control performance as a function of the transmission ratio and the Coulomb friction in the operational element. [AD-730321]

The simultaneous action of stimulants and tranquilizers on the efficiency of a human operator [AD-730322]

Mathematical description of a human operator in ergatic control systems [AD-730323]

Algorithmic description of the generalized operational characteristic of a human operator [AD-730324]

Estimate of the operational efficiency of a human operator in the follow-up mode of a closed-loop control system [AD-730325]

Methodical aspects of studies of ergatic, differential-game systems [AD-730326]

Man in a control circuit during an information game synthesis [AD-730327]

Experimental determination of the distribution role for the time of failure-free operator action in the tracking mode with pursuit [AD-730328]

Aircraft interception avoidance problem solved by differential-game theory, discussing human operator decision making for random pursuit tracking [AD-730329]

Methods of measuring visual fatigue of workers engaged in tasks involving visual channel [AD-730330]

Development of laboratory technique for determining physiological effects of medication on flying personnel and spacecrews [AD-730331]

Development of method for assessing information workload based on physiological measurements [AD-730332]

Comparison of human performance in reading aircraft instrument display systems consisting of vertical tape and vertical light emitting diode devices [AD-730333]

Analysis of human subjects for air traffic duties based on visible brightness of landmarks [AD-730334]

Electroencephalogram analysis method as means for controlling human operator [AD-730335]

Adaptive human operator model in pursuit tracking problem [AD-730336]

Human operator errors in performing audio-video and audio only tracking tasks [AD-730337]

Nonlinear oscillatory system models for the representation of human operators to harmonic and random vibrational action [AD-730338]

Modification Siegel-Wolf operator simulation model for on-line operation [AD-730339]

Performance of personnel operating moving command and control system that monitors psychoactor tasks [AD-730340]

Effects of hypoxic stress on tracking performance by human operators [AD-730341]

Comparison of two methods of disting messages [AD-730342]

OPERATORS (PERSONNEL)

AIRCRAFT PILOTS

PILOTS (PERSONNEL)

TEST PILOTS

Frankfurt airport air traffic controller opinion survey of attitudes toward work and working environment [AD-731385]

Invariable transformation of the control laws in ergatic systems [AD-733111]

Scheduling factor analysis for flight controllers of long duration manned space flight missions [AD-733112]
OPTICAL COBBOHICATIOH
OPTICAL DATA PBOCESSIBG
OPTICAL CODPIIHG
OPTICAL COBBBCTIOH PBOCEDOHB

OPTICALBOLOGT
OPHTHALHODTHABOBBTBI

Image processing of diagnostic echocardiogram by motion thresholds for fovea and peripheral retina

The precise simulation of image transfer systems with the aid of an optical convolution obtained with a rotating slit of prescribed form

Effects of ultrasonic transducer manipulations on visual perception, and electrophysiological aspects of eye responses

Ocular laser protective filter with narrowband absorption, luminous transmission, and optical density of 3.5

OPTICAL EQUIPMENT

ONTU CABERES
ONFL NT COLLIMATORS
NT ELECTROPHOTOBETEBS
NT BFFICEBS
NT GEDISIERTHS
NT MICROCNISPONITORSES
NT OPTICAL MEASURING INSTRUMENTS
NT EFFECTOBETOBETOBETEBES
NT STEROBESOES

Photo-optical techniques in biomedical data acquisition, discussing cineangiography and x-ray tomography-applications in cardiological research work

Optical vision testing unit for testing eyes and visual system of human subject

Ocular laser protective filter with narrowband absorption, luminous transmission, and optical density3.5

OPTICAL GENERATORS

ULasers

OPTICAL ILLUSION

Poggendorff illusion depth processing theory, noting noncollinear line resolution effects on projective relationships within figure

Psychophysical perceived orientation experiments on Poggendorff illusion/transversal interrupted by parallax lines/ visual persistence and perceptual moment

Anisotropic responses to dot and line visual stimuli, obtaining judgments on apparent straightness for various visual field locations and dot densities

On the apparent orbit of the Palfrich pendulum

Division and orientation in the vertical-horizontal illusion

Back band measurement by psychological compensation technique, causing band disappearance by changes in stimulus pattern luminance and brightness distribution relations

Book - Aspects of motion perception.

Visual angle and apparent size of objects in peripheral vision.

Mathematical model of optical illusions and figural aftereffects

OPTICAL HABES MODULATIOH

ULIGHT MODULATION

ONFL NT LASBES
NT LASCERES

OPTICAL MEASUREMENT

NT COBODIREBT
NT IXOPTOBDY
NT OPTOBDY
Visual optical system evaluation from viewpoint of human operator target detection under field conditions in terms of resolution, transfer functions, aberration and eye movements

An assembly for studying the perceptual motor reactions of man under one-dimensional follow-up conditions

Dynamic characteristics and requirements in human visual perception of moving television images

Speed of motion and tracking time effects on human visual acuity in perception of moving objects

Comparison of human eye controlled and hand controlled tracking tasks

Visible optical system control for microbial inactivation by composite environment of heat and gamma radiation, using quadratic techniques

A method for the development and optimization of controller-models for man-machine systems

Development and optimization of a nonlinear multiparameter human operator model

Human decision making model for linear systems, based on optimal control model for pilot/vehicle systems

Optimal control algorithms for on-line closed loop blood pressure regulation

Optimization trends and operating parameters of space suit

Speed of motion and tracking time effects on human visual acuity in perception of moving objects

Comparison of human eye controlled and hand controlled tracking tasks

Optimal control algorithms for on-line closed loop blood pressure regulation

Optimization trends and operating parameters of space suit

Mathematical model for life support system optimization in terms of reduced mass minimization as quality criteria for energy conversion and metabolic processes

Determination of optimal stability augmentation system for minimizing pilot ratings for pitch tracking task

Models for head injury prediction and helmets, and prediction of optimal helmet performance

Optimization trends and operating parameters of integral molecular sieve bed heat exchanger for CO2 control in life support systems for manned orbital laboratories

Homographic determination of optimal oxygen parameters in environmental control system for orbital laboratories

Decision tree format for including human resources in decision task, routine performance and fatigue test

Mathematical model for life support system optimization in terms of reduced mass minimization as quality criteria for energy conversion and metabolic processes

Optimization trends and operating parameters of space suit

Determination of optimal stability augmentation system for minimizing pilot ratings for pitch tracking task

OPTIMAL CONTROL

Handbook of thermal comfort in man, using complex dual tests and subjective rating scales

Optimal cylindrical handle size determination by muscle electromyography, considering gripping task, routine performance and fatigue test

Genetic code numerical structure association with logarithmetic optimization rule for hierarchy of structures from molecular biology experiments

Development trends in airborne man machine flighcontrol, discussing optimal division between human pilot and machine in relation to man machine system performance and economic factors

Anthropotechnics 'human engineering' approach to man machine system optimization, discussing task allocation and adaptations of machine dynamics, displays and controls to human operator

Mathematical model for life support system optimization in terms of reduced mass minimization as quality criteria for energy conversion and metabolic processes

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Homographic determination of optimal oxygen parameters in environmental control system for spacesuit

Decision tree format for including human resources in decision task, routine performance and fatigue test
OPTOMETRY

OPTOMETRY

sensory mounted monkey eye orientation measuring system for performance of brightness discrimination tasks

Visual acuity measurement methods, comparing angular acuity by Boyce optometer and morphoscopic acuity by Bercier optometric scale

Visual acuity measurement by dynamic and static tests as function of target velocity and exposure time

ORBITAL SIMULATORS

U SPACE SIMULATORS

ORBITAL SPACE SIMULATORS

MT SALTUT SPACE STATION

The Space Station Prototype Program - The development of a reconfigurable life support system for extended-duration missions

ORBITER PROJECT

Timeline analysis of Shuttle Orbiter missions and requirements for man-in-the-loop simulation

Orbiting Focus Optolith

OFO A orbital flight recording of bullfrog vestibular gravity sensor nerve fiber poles for assessing necessity of artificial gravity during prolonged weightlessness

OFO-A mission as part of study program on vestibular physiology

ORGAN WEIGHT

Elastic lung shaped model for distribution analysis of weight induced stresses, strains and surface pressures in lung

Adrenal morphology changes in rats subjected to hypokinesia

ORGANIC CHEMISTRY

Life beyond solar system, discussing planetary formation and prebiological organic chemistry developments and interstellar communication

Life origin and primordial organic chemistry, considering Darwinian evolution, spontaneous generation, primitive atmospheres, interstellar matter, energy sources, macromolecular synthesis, moon and Jupiter


Quantum-chemical model of organic ring-shaped molecule with persistent magnetization at microscopic level

ORGANIC COMPOUNDS

NADH (NADPH) DIPHOSPHATE (ADP)
NADH (NADPH) TRIPHOSPHATE (ATP)
NADH (NADPH)
NADH (NADPH)

NADH (NADPH) ACIDS
NADH (NADPH) CARBONS
NADH OXONE CARBONS
NADH GLUTATHIONE
NADH FEPHTOINES
NADH NUCLEOTIDES
NADH ORGANIC LIQUIDS
NADH OXIDASE
NADH PEPTIDES
NADH PROTEINOSINE
NADH SIEBHLOAD

NADH TRIPHTOPHAN

Cosmic sources of organic compounds from chemical evolution viewpoint, discussing concepts in interstellar space, prestellar nebulae and cool stellar atmospheres

Vapor-liquid equilibrium analysis of water soluble volatile organic compounds in closed-airtight systems by gas chromatography

Service life of respirator cartridges in organic vapor atmospheres

Significance of water in biochemical processes and organic molecule synthesis for evolution of life

Production of complex organic compounds in vicinity of volcanoes as precursors of significant biological products and relation to genesis of life

ORGANIC LIQUIDS

Metabolism of pyruvic acid in yeast

ORGANIC MATERIALS

Device for irradiating biological materials with light at wavelengths between 250 and 650 nm

Vapor-liquid equilibrium-analysis of water soluble volatile organic compounds in closed-airtight systems by gas chromatography

Use of plasma cleaning and laser spectroscopy to remove and monitor organic contamination on Viking spacecraft surfaces

ORGANIC NITRATES

NITROGLYCERIN

ORGANIC PHOSPHORS COMPOUNDS

Physiological effects of transfusing 2,3-diphosphoglycerate /DPG/ depleted red cells with high oxygen affinity in anemic hypoxic patients

Kinetics of heat inactivation of phosphoglycerate kinase in soluble fraction from hydroxymonas facilis

Red blood cell metabolite 1,3-diphosphoglycerate determination method by rapid deproteinization, concentration by precipitation and enzymatic reaction

Cortical effects mechanism in animal vegetative systems, noting biological oxidation and organic phosphorus compound studies

ORGANES

Gravitational biology theory problems, discussing possibility of applying relativistic phenomena to living organisms in inertial or inertialless systems

Foresight, forecast and prognosis concepts in physiology, discussing intuition role and relation between molecular and cellular processes and organism activity

Flavin photoreceptor participation in contemporary organism metabolic systems

Biochemical functions of organisms in evolution of biosphere, discussing redox reactions, elementary compositions and metal compounds role in photosynthesis

Utilization of computation principles in living organisms to construct cognitive systems

Naturally heat resistant organisms in extended-duration missions

Set theory in developing mathematical model of entire organism

Effects of electromagnetic radiation on biological systems of living organisms
OSCILLOSCOPES

Studies of IP physiological processes

Techniques and procedures for differential ballistocardiography of extremities.

p0218 A72-22881

OSCILLOSCOPES

Cardiac cycle intervals measurement with multibeam cathode oscilloscope synchronized with multichannel polygraphic automatic recording machine

p0220 A72-23192

OSKIES COMPOSERS

The distribution of the long wave photoreceptors in the compound eye of the honey bee as revealed by selective osmic staining.

p0411 A72-34077

OSMOSIS

Early diagnostics of cerebral arteriosclerosis in flying personnel, investigating hypertonia, neurocirculatory dystonia and myocardic cardiocirculatory effects on flight performance

p0113 A72-18198

Improperly controlled learning processes relationship to hypertonic blood pressure irregularities pathogenetic in rats, investigating negative emotional reactions effects

p0159 A72-20659

Sex differences of chronological effect of environmental osmotic stress on blood pressure and information processing in rats, observing neurotic hypertonic blood pressure irregularity

p0170 A72-20660

Radial diffusion and convection capillary paper for analysis of tissue protein concentration and colloidal osmotic pressure changes during transcapillary fluid movement

p0173 A72-20896

Influence of hyperosmolality on left ventricular stiffness.

p0410 A72-34727

Influence of thermal, osmotic, and chemical stimulations on food and water intake

p0416 A72-35016

Gas induced osmosis as factor in pulmonary homeostasis, showing differential water retention in lungs ventilated with nontoxic nitrous oxide compared with air

p0421 A72-35970

Ideal tracer theory for transfer of chemical species through various membranes

p0198 A72-17034

OSMOTIC PRESSURE

U OSMOSIS

OTOLITHOGRAPHY

Prophylactic otolaryngological investigation of vestibular analyzer function in aviation medicine

p0355 A72-31769

Otolaryngological organ response during hypokinetic antiorthostatic bed rest for control, exercising and muscular electric-stimulated groups

p0543 A72-43917

Acoustic impedance bridge for clinical evaluation of eustachian tube function

p0243 A72-18095

OTOLITH ORGANS

Strobos hypothesis for zero gravity produced inversion illusion mechanics in aircraft parabolic flight, noting otolithic membrane deflection-result of force maculizes

p0200 A72-11710

Human centrifuge tests for gravitational force effect on ocular counterrolling in normal and deaf subjects

p0202 A72-11956

Neck proprioception effects and otolith organ activity in perceived visual target elevation under centrifuging stress

p0206 A72-28305

The vestibular apparatus. I - The physics and physiology of the otoliths and the semicircular canals

p0517 A72-42787

Otolithic function and orientation of somal spacecrew during prolonged space flight

p0119 A72-10061

Otolith organ response of normal vision people and persons with severe bilateral labyrinthine function loss exposed to prolonged tilt

p0117 A72-10061

SUBJECT INDEX

[ NACA-CR-127034 ]

OUTGASSING

Toxicological control and chemical analysis of outgassing products from nonmetallics in high temperature oxygen atmosphere, investigating use within IS crew compartment

p0033 A72-26058

Toxicological evaluation of some synthetic materials designed for airtight space equipment

p0491 A72-00434

Spacecraft functional properties degradation due to surface contamination with outgassing, discussing contaminant materials transport and sorption characteristics

p0541 A72-43619

Development of procedures for evaluating suitability of materials for spacecraft structures based on outgassing of objectionable odors

p0196 A72-16434

Toxic effects of volatile components from synthetic materials used in closed ecological systems

p0481 A72-29055

OUTPUT

U LASER OUTPUTS

OVERESTIMATION

U ERRORS

OVEREXPOSURE

U RADIATION DOSAGE

OVERPRESSURE

Sonic boom effects on sleep - A field experiment on military and civilian populations.

p0533 A72-29560

OVERSTRESSES

U MAVINICS

OXIDASE

Catechol oxidase drops oxidoreductases and stability in primitive prebiological systems, using polyphenol oxidase-carbohydrate-histone-quinones

p0101 A72-16645

Mechanical vibration induced physiological changes in rats, determining plasma Ca, Mg and inorganic phosphate concentration and xanthine oxidase activity response to frequency and q-levels

p0330 A72-29560

OXIDATION

Ordinary and macromolecular structured polycondensation oxidation-reduction polymers synthesis, discussing application to organic imperatives removal from atmospheric moisture condensates

p0101 A72-16645

Catalytic oxidation of gaseous products formed during thermal treatment of human wastes, considering hoppalite, Cu-Cr, Cu-Co, Pt and Pd systems, noting biological oxidation and organic compounds used in closed ecological synthesizers

p0042 A72-39174

Respiratory chain components correlation to tension production at various oxygen pressures in quiesce pig ductus arteriosus, investigating light absorption changes

p0042 A72-39174

Design and development of prototype wet oxidation system for water reclamation and fecal/urine slurry disposition on manned spacecraft

p0057 A72-33115

OXIDATION RESISTANCE

Multi-cycle plasma arc evaluation of oxidation inhibited carbon-carbon material for shuttle leading edges.

[ AMES PAPER 72-ENAV-26 ]

p0460 A72-29151

OXIDES

MT CARBON DIOXIDE

MT CARBON MONOXIDE

MT HYDROGEN PEROXIDE

MT NITROGEN OXIDES

MT NITROUS OXIDES
OXYGEN CONSUMPTION

in rat brains, noting anoxic limit value relation to age

Oxygen intake and cardiac output measurements during various treadmill and bicycle ergometer exercises, relating exercise type to heart rate and arteriovenous oxygen differences

o016 A72-20658

Hyperbaric chamber tests for hemodynamic response to oxygen inhalation at 1 and 2 atm pressure for myocardial infarction treatment assessment

o017 A72-20885

Respiration control during hyperoxia, discussing chemoreceptor significance in minute volume respiration and reduction mechanisms from panic mountain aborigines oxygen breathing reaction studies

Pore oxygen atmosphere effects at 450 and 600 m by on rate in vitro liver and adipose tissue lipid-synthesis measuring food intake and plasma components

o018 A72-20276

Cardiovascular responses to positive pressure oxygen breathing from blood pressure and heart and respiratory rate measurements

o027 A72-23739

Hyperoxia effect on human alveolar resistance during high pressure oxygen breathing

o026 A72-26017

Short sleep period and oxygen breathing effects on arousal level of air traffic controller during detection task performance

o025 A72-26614

Arterial blood gas tensions, using sequential phased dilution for pilot oxygen delivery

o020 A72-28255

Suppression effects of hyperoxic breathing gases on red blood cell and erythropoietin hormone production following blood loss

o025 A72-28298

High altitude natives cerebral arterial-venous oxygen difference measurement during ambient air and oxygen breathing, showing chronic hypoxia effect on cerebral blood flow

o035 A72-30708

Hemodynamic changes in man during immersion with the head above water

o036 A72-34543

Effects of in vivo inhalation of 100% oxygen at reduced pressure on serum and red cell lipids

o037 A72-34553

USAF custom fit oxygen mask program.

o040 A72-43459

Hypercapnia with relief of hypoxia in normal individuals with increased work of breathing.

o040 A72-44020

Effects of oxygen atmosphere in high pressure diving chamber-simulation on human body

o049 A72-12038

Hemodynamic determination of optimal oxygen parameters in environmental control system for spacesuit

o052 A72-29091

Parachute oxygen apparatus for jumps up to 14,000 ft [AD-743039]

o053 A72-31133

OXYGEN CONSUMPTION

Hypophysectomy in rats, resulting in prolonged red blood cell survival due to oxygen consumption decrease and altered erythrocyte enzymatic processes

o001 A72-10075

Human exercise capacity assessment from maximal oxygen intake estimates and Harvard step test

o002 A72-10116

Coronary blood flow measurement in various hemodynamic conditions by argon technique, determining oxygen consumption and coronary vascular resistance

o053 A72-13183

Training effect on oxygen consumption in negative muscular work, considering connective tissue strengthening and muscle viscosity changes

o054 A72-13676

Serum enzyme activity changes response to constant test exercise, discussing relation to maximal oxygen uptake

o054 A72-14897

SUBJECT INDEX

OXYGEN CONSUMPTION

OXYGEN BREATHING

Human mental and psychosensor performance measurements in compressed oxygen-helium atmosphere pressure chamber for dive between 100 and 1500 feet

o008 A72-11701

Human blood carboxyhemoglobin saturation relation to inspired air oxygen and CO concentrations from small closed rebreathing systems-tests [AD-740520]

o006 A72-14663

Respiratory adaptation to pure oxygen excess pressure after cockpit depressurization from flight simulator tests with pressure-suit pilots, presenting ECG reactions

o010 A72-16749

Hypoxia pretreatment for decreased pulmonary oxygen toxicity during high pressure oxygen breathing in rats

o013 A72-19328

Inhaled oxygen pressure variation effects on adenolines, glucose, lactate and pyruvate levels
OXYGEN CONSUMPTION

Physiological effects of transfusing 2,3-diphosphoglycerate (DPG) depleted red cells with high oxygen affinity in anemic hypoxic patients p0069 A72-15201

Hemodynamic and blood oxygen parameter changes in dogs during hypoxia at rest and muscle activity in various oxygen concentrations p0071 A72-15232

Pilots oxygen uptake vs flight time and altitude as an indicator of physical condition, noting large fluctuations and differences for individual pilots and different flights p0102 A72-16748

Maximal aerobic power response and oxygen consumption to training stimulus intensity, duration and frequency, using bicycle ergometer exercise p0748 A72-18965

Maximal oxygen intake prediction in acute moderate hypoxia during exercise, showing heart rate linearity with work load p0749 A72-18966

Maximal oxygen intake during exercise on treadmill compared with bicycle ergometer, analyzing circulatory dynamic factors and cardiac output relation to oxygen transport capacity p0767 A72-20711

Muscle blood flow relation to oxygen consumption from measurements during bicycle ergometer exercises, using To 133 clearance method p0771 A72-20888

Beta-adrenergic inhibitors effects on coronary blood flow and myocardial oxygen consumption of normal and coronary artery disease patients p0779 A72-21549

Hypoxic and normoxic gas mixture breathing during intense muscular activity, relating oxygen consumption and carbon dioxide elimination magnitudes and motor performance p0785 A72-22081

Aerobic work capacity indices of gas exchange pulse rate, pulmonary ventilation and acid base balance in runners, determining maximum oxygen utilization p0789 A72-23611

Oxygen consumption and body temperature in anesthetized, paralyzed and artificially ventilated dogs cooled in water bath at 34°C, measuring hypoxemia and beta-adrenergic blockade effects p0792 A72-24735

Seal automatic measurement of human oxygen uptake, discussing apparatus and accuracy p0795 A72-24991

Physical work capacity comparison during bicycle ergometry and treadmill walking tests, measuring oxygen uptake, ventilatory parameters and excess carbon dioxide production p0809 A72-26095

Maximal oxygen uptake and heart rate during laddersill climbing, inclined laddersill running and cycling ergometer tests p0817 A72-26612

Hemodynamic variables relation to oxygen flow and myocardial oxygen consumption during upright bicycle exercise p0817 A72-26618

Isotopic labeled microspheres for cat eaval and retinal blood flow and oxygen consumption determination, studying increased intracellular pressure and carbon dioxide tension effects p0827 A72-27081

Crowding phenomenon effect on blood cell oxygen consumption, using Cartesian diver technique for polymorphonuclear leukocyte, lymphocyte and platelet measurements p0827 A72-27082

Cold adaptation effects on rat skeletal muscle tissue Vent-Roff coefficient, considering phosphorylation and oxidation rate, PO and mitochondrial ATP-ase activity p0832 A72-28639

Pulmonary oxygen transport dynamic model representing lung gas-side airway and alveolar regions and blood-side capillary bed p0835 A72-28996

Six day bed rest effect on external respiration and subcutaneous tissue oxygen metabolism, noting oxygen consumption decline p0328 A72-29324

Gas mask-caused air flow resistance effects on respiratory and circulatory responses to exercise, assessing maximal oxygen uptake p0330 A72-29081

Work capacity evaluation from fatigue, biological rhythms, tissue respiration and oxygen consumption studies, discussing pharmacological stimulation effects p0335 A72-30376

Sweating relation to body temperature after exhaustive exercise for various oxygen uptakes and ambient temperatures p0339 A72-30702

High altitude natives cerebral arterial-venous oxygen difference measurement during ambient air and oxygen breathing, showing chronic hypoxia effect on cerebral blood flow p0339 A72-30704

Muscle cell ATP, creatine phosphate and lactate concentration changes relation to oxygen uptake during and after exercise p0340 A72-30705

Energy cost /oxygen consumption/ prediction for treadmill and various levels terrain walking at two speeds under three different pack loads p0340 A72-30706

Mountain inhabitants cardiocirculatory adaptation to chronic hypoxia, studying coronary flow and myocardial oxygen consumption and efficiency p0349 A72-32498

Regression analysis for steady state O2 inequality in O2 consumption calculations p0409 A72-34582

Cell proliferation in lungs of mice exposed to elevated concentrations of oxygen p0409 A72-34584

Thermal neutral temperature of rats in helium-oxygen, argon-oxygen, and air p0410 A72-34728

Ion alterations during myocardial ischemia p0414 A72-34994

Thermoregulation during positive and negative work at different environmental temperatures p0425 A72-36559

Self-paced ergometer performance - Effects of pedal resistance, motivational contingency and inspired oxygen concentration p0427 A72-36911

Coronary collateral circulation and myocardial blood flow reserve p0450 A72-37500

Influence of isotropic alteration on the severity of myocardial ischemia after experimental coronary occlusion p0458 A72-38552

Determination of oxygen consumption by use of the paramagnetic oxygen analyzer p0491 A72-40429

Comparative studies of the respiratory functions of mammalian blood p0498 A72-40919

Cardiac output, arterial and mixed-venous O2 saturation, and blood O2 dissociation curve in growing rats, adapted to a simulated altitude of 3500 m p0506 A72-41623

Influence of intracellular connection on the oxygen release by human erythrocytes p0506 A72-41625

Dependence of muscle efficiency on oxygen consumption in various venous blood p0509 A72-42157

The function of external respiration in mental activity p0510 A72-42288

Oxygen consumption in liquid breathing exercise p0511 A72-42488

Blood flow, oxygen uptake, and capillary filtration in resting skeletal muscle p0514 A72-42660

Effect of activity and temperature on metabolism and water loss in snakes p0514 A72-42669

Analysis of femoral venous blood during maximal muscular exercise p0515 A72-42742
Oxygen uptake kinetics for various intensities of constant-load work.

Excitation contraction correlates in canine ischemia.

Influence of a high oxygen content on the rate of formation and elimination of gasoline in rats.

A critical assessment of an open circuit technique for measuring oxygen consumption.

Physiologic effects of passive hyperventilation on oxygen delivery and consumption.

Measurement of heart rate and oxygen uptake of subjects at optimal speed on bicycle ergometer (AD-729831).

Response of ventilation parameters, pulse rate, oxygen uptake, and body temperature in man under acute and severe hypoxia (DLR-FB-71-65).

Hypoxygen effects on rat body weight, oxygen consumption, and tolerance to carbon monoxide exposure.

Validation of submaximal treadmill test for predicting maximal oxygen consumption (AD-740103).

Potential oxygen requirements for lunar-surface, lunar-orbit, and planetary missions.

OXYGEN DEFICIENCY

U HYPOXIA

OXYGEN DETECTORS

OXYGEN ANALYZERS

OXYGEN FLUIDIZES

Toxic hazards associated with handling and exposure to oxygen difluoride (AD-727525).

OXYGEN MASKS.

Custom fit oxygen mask for life support of crew members.

Physiological evaluation of modified jet transport passenger oxygen mask from altitude chamber experiments.

Disposable emergency oxygen mask for air passengers based on continuous flow, phase dilution principle, describing altitude chamber tests with human subjects to study physiological responses.

USAF custom fit oxygen mask program.

Continuous flow general aviation oxygen masks.

Performance and acceptance tests of oxygen and protective masks.

Method and apparatus for analyzing respiratory gas flow rate and inspiration-expiration frequencies in real time.

Physiological evaluation of disposable jet transport passenger oxygen mask at high altitude.

Power assisted breathing device for reducing gas mask resistance.

OXYGEN METABOLISM

Ventilatory and metabolic responses of unsensitized dogs exposed to various carbon dioxide concentrations at 2 and 18°C, discussing oxygen uptake related to cold.

Hypoxygen, hyperoxia and hypercapnia: short-period effect on rat brain oxygen supply, measuring blood gas values, tissue oxygen partial pressure time variations, etc.

External respiration-gas metabolism and energy consumption measurements for test-pilots during parabolic trajectory flights in weightlessness simulation experiments.

Free oxygen content and diffusion coefficient in adrenalectomized rat skeletal muscles after physical strain.

Human breathing metabolic simulation device for evaluating respiratory diagnostic monitoring, support and resuscitation equipment.

CO hypoxia effect on oxygen transport during exercise, discussing changes in cardiac and respiratory functions and work capacity.

Cardiorespiratory functions in child swimmers and nonathletes during training relating to oxygen transport system dynamics.

Laughing cut metabolism dependence on flight speed and angle during wind tunnel tests from oxygen consumption, carbon dioxide production and aerodynamic forces analyses.

Endurance exercise effect on respiratory capacity in white, red and intermediate muscles in rats, relating fiber type to oxidative capacity.

Stepswise adaptation to high mountain conditions effect on brain and muscle oxygen oxidation processes in rats.

Human oxygen intake and blood lactate acid removal kinetics during recovery from mild steady work on bicycle ergometer.

Six day bed rest effect on external respiration and ambulatory tissue oxygen metabolism, noting oxygen consumption decline.

High gravity, cold and strarvation space stress effects on oxidative metabolism of ethylmorphine, aniline and p-nitroanisole in male rat liver.

Myocardial metabolic changes in chronic hypoxia.

Blood oxygenating ability of helium and argon-oxygen environments relative to air, using alveolar gas equation to predict arterial oxygen pressure.

Hypoxic theory for atherosclerosis formation, noting blood plasma protein concentration effects on oxygen diffusion.

Lack of effect on high altitude on hemoglobin oxygen affinity.

Human plasma free fatty acids relation to lactic acid concentration and maximum aerobic power, noting carbohydrate availability as exercise capacity limiter.

Coronary blood flow and myocardial metabolism in man at high altitude.

Blood flow, oxygen uptake, and capillary filtration in resting skeletal muscle.

Effect of activity and temperature on metabolism and water loss in snakes.

Physiologic effects of passive hyperventilation on oxygen delivery and consumption.

Gas exchange mechanisms in lung alveoli and capillaries, discussing cell metabolism for oxygen uptake and carbon dioxide formation.

Effect of vibration on relationship of bioelectric activity and oxygen demand in cerebrum of rats.

OXYGEN PRODUCTION

Closed loop life support systems, discussing manned ninety day test in space station simulator, Soviet experiments and water and oxygen regeneration.
Catalytic effect of cobalt powder on sodium chlorate candles as source of oxygen

Six-month test program of two water electrolysis systems for spacecraft cabin oxygen regeneration.

Regeneration of oxygen from carbon dioxide and water.

Pressure sensitivity of Na-K-ATPase activity from rat intestine, studying vessel cellular changes and smooth muscle response to oxygen pressure

Irreversibility mechanisms in postpartum ductus arteriosus closure in guinea pigs, studying vessel cellular changes and smooth muscle response to oxygen pressure

Inhalation oxygen pressure variation effects on adenosines, glucose, lactate and pyruvate levels in rat brains, noting anomalous limit value relation to age

In vivo measurements of oxygen tension effect on teleost and amphibian retinal lactate dehydrogenase activity, discussing acetazolamide produced hyperoxic effects

High altitude acclimatization effects on human lung diffusing capacity for carbon monoxide at different oxygen tension

Pathological significance of high oxygen tension exposure effects on acid soluble collagen extracted from mouse skin

The intramyocardial oxygen pressure at normoxia and hypoxia.

Interaction of chronic hypoxia and hypercapnia upon blood gases and acid base status.

Influence of elevated partial oxygen pressure on adenosine, glucose, lactate and pyruvate levels in rat brains, noting anomalous limit value relation to age.

Effects of diffusion impairment on O2 and CO2 transport in pulmonary capillaries.

Blood oxygenating ability of helium- and argon-oxygen environments relative to air, using alveolar gas equation to predict arterial oxygen pressure.

Pulmonary gas exchange in Andean natives at high altitude.

Hypoxic pulmonary steady-state diffusion capacity for CO and alveolar-arterial O2 pressure differences in growing rats after adaptation to a simulated altitude of 3500 m.

Oxyn consumption in liquid breathing mice.

Respiratory chain components correlation to tension production at various oxygen pressures in guinea pig ductus arteriosus, investigating light absorption changes.

Influence of elevated partial oxygen pressure on the sympathetic-adrenal and acetyl-choline systems.

Experimental studies on the alkali-acid in vitro measurements of oxygen tension effect on rat intestine, investigating inhibiting effects of oxygen, nitrogen and helium tension increases.

In vitro microsomal studies of high positive acceleration effects on blood oxygenation and arterial oxygen and carbon dioxide tension relationships.

Catalytic effect of cobalt powder on sodium chlorate candles as source of oxygen

Six-month test program of two water electrolysis systems for spacecraft cabin oxygen regeneration.

Regeneration of oxygen from carbon dioxide and water.
OXYGEN TOXICITY

Regional myocardial contraction mechanics during transient ischemia and reoxygenation in anesthetized dogs

Human centrifuge studies of high positive acceleration effects on blood oxygenation and arterial oxygen and carbon dioxide tension

Hemoglobin-facilitated diffusion of oxygen - Interfacial and thickness effects.

OTHEOREOLOGY

Prolonged muscular work effects on erythrocyte 2,3-DPG generation relation to oxyhemoglobin affinity

Volumetric analysis of blood oxygen and CO, showing combination with hemoglobin without significant molecular volume increase

Hematochemical properties of human oxyhemoglobin comparison with complex of dog haptoglobin and human hemoglobin reactions in antihemoglobin sera

Physiologic effects of passive hyperventilation on oxygen delivery and consumption.

OXONE

Tabled oxygen effect on chromosome aberrations. B breath frequencies in circulating blood lymphocytes of irradiated Chinese hamsters

Environmental chamber tests for ozone exposure effects on human pulmonary function at rest and during bicycle exercise

PARACHUTING

SUBJECT INDEX P

PACER

ST APOLLO LUNAR SURFACE EXPERIMENTS PACKAGE

PAIN

Negative /painful/ stimulus cessation relation to emotionally positive zone activation in rat brain during self stimulation experiments

Electrical currents for controlling orofacial pain

PAIN SENSITIVITY

nociceptive chemical action in cat skin vessels, showing fiber types for impulse transmission in other sensory modes unaffected

Analogical electrical stimulation in rat brainstem with other sensory modes unaffected

Cardiac membrane pain sensitivity in vagotomized cats under sensitizing aceticholine influence during reduced cholineresterase activity

Micro wave induced cutaneous heat and pain perception thresholds, noting usefulness as possible radiation hazard warning

Vicarious influence effect on eliciting pain in individuals subjected to previously reported nonsensory electric shocks

Pain perception anatomical and neurophysiological mechanisms, discussing human response to mechanical, thermal and chemical pain induced stimuli

PAINEOLOGY

Molecular paleontology of fossil organic remains in molluscan shell proteins

Lower Carboniferous sediment spores from Exxonpete Gulf Basin of Western Australia and Northern Territory

Upper Cambrian trilobites from Gola Beds, western Queensland

PARACENTESIS

CARDIAC PUNCTURE

PALLADIAN

Catalysts for oxidation of vapor-gaseous phase formed during pyrolysis of human wood

PALBAR SWEAT INDEX

Galvanic skin response techniques for palmar and dorsal sweat detection during motion sickness by vestibular stimulation, comparing arousal and thermal sweat response

PANELS

Pancrtically introduced protein hydrolyzates and aminopeptides influence on human pancreas enzyme secretion activity

Noninvasive polygraphic technique to assess cardiovascular responses to intravenous glucagon injection

Pancreas insular apparatus biosynthesis of neurohumoral mechanism compounds stimulating coronary ectasia hormones discharge from brain into islets of Langerhans of islets of Langerhans

PAPILLAE

Human taste papillae sensitivity to chemical stimuli, showing stable quality and intensity response patterns

Force-velocity relations in cat papillary muscles

PAPILLARY

human pancreatic enzyme secretion in antihemoglobin serum

PAPILLARY SPECTRUM

Noninvasive polygraphic technique to assess cardiovascular responses to intravenous glucagon injection

Pancreas insular apparatus biosynthesis of neurohumoral mechanism compounds stimulating coronary ectasia hormones discharge from brain into islets of Langerhans of islets of Langerhans

PAPILLARY SINFUSION

Pancreas insular apparatus biosynthesis of neurohumoral mechanism compounds stimulating coronary ectasia hormones discharge from brain into islets of Langerhans of islets of Langerhans

PAPILLARY SINESES

Human taste papillae sensitivity to chemical stimuli, showing stable quality and intensity response patterns

PAPILLARY TUMORS

Chin-sternum-heart syndrome from partial parachute failure, with close reference to atrial endocardial and myocardial lacerations

Environmental effects on parachute impact injuries at 6,000 to 10,000 feet using parabolic-apex vented static line deployed parachute

PARABOLIC FLIGHT

Sjoberg hypothesis for zero gravity produced inversion illusion mechanism in aircraft parabolic flight, noting otolithic membrane deflection result of force on macula

PARACHUTE DESCENT

Heart and respiration rates response to free fall parachuting, using FM/FM telemetry

PARACHUTING

Heart and respiration rates response to free fall parachuting, using FM/FM telemetry

Parachuting and aerial towing physiological and force data FM telemetry for biomedical response assessment leading human equipment improvement and aid retrieval system development

Human coagulating and anticoagulating blood system changes due to emotional stress during parachute jumps, noting plasma recalcification time increase during parachute jumps, noting plasma recalcification time increase

Physiological index changes in parachutists of various ages, considering plasma recalcification, blood prothrombin, hepatic time, fibrinolytic activity, pressure and heart beat

 parachutists of various ages, considering plasma recalcification, blood prothrombin, hepatic time, fibrinolytic activity, pressure and heart beat

Parachute oxygen apparatus for jumps up to 14,000 m

PARACHUTING O PARACHUTE DESCENT

PARACHUTING TRAUMA

Chin-sternum-heart syndrome from partial parachute failure, with close reference to atrial endocardial and myocardial lacerations

Environmental effects on parachute impact injuries at 6,000 to 10,000 feet using parabolic-apex vented static line deployed parachute

PARABOLIC FLIGHT

Visual depth perception response functions for sine and square wave modulated binocular parallax

Visual stimuli distance estimation with head stationary or moving, discussing performance after monocular motion parallax training

PARABOLIC FLIGHT

Human taste papillae sensitivity to chemical stimuli, showing stable quality and intensity response patterns

Physiological index changes in parachutists of various ages, considering plasma recalcification, blood prothrombin, hepatic time, fibrinolytic activity, pressure and heart beat

Parachute oxygen apparatus for jumps up to 14,000 m

PARACHUTING

Heart and respiration rates response to free fall parachuting, using FM/FM telemetry

PARACHUTING TRAUMA

Chin-sternum-heart syndrome from partial parachute failure, with close reference to atrial endocardial and myocardial lacerations

Environmental effects on parachute impact injuries at 6,000 to 10,000 feet using parabolic-apex vented static line deployed parachute

PARABOLIC FLIGHT

Visual depth perception response functions for sine and square wave modulated binocular parallax

Visual stimuli distance estimation with head stationary or moving, discussing performance after monocular motion parallax training

PARABOLIC FLIGHT

Human taste papillae sensitivity to chemical stimuli, showing stable quality and intensity response patterns

Physiological index changes in parachutists of various ages, considering plasma recalcification, blood prothrombin, hepatic time, fibrinolytic activity, pressure and heart beat

Parachute oxygen apparatus for jumps up to 14,000 m

PARACHUTING

Heart and respiration rates response to free fall parachuting, using FM/FM telemetry

PARACHUTING TRAUMA

Chin-sternum-heart syndrome from partial parachute failure, with close reference to atrial endocardial and myocardial lacerations

Environmental effects on parachute impact injuries at 6,000 to 10,000 feet using parabolic-apex vented static line deployed parachute

PARABOLIC FLIGHT

Visual depth perception response functions for sine and square wave modulated binocular parallax

Visual stimuli distance estimation with head stationary or moving, discussing performance after monocular motion parallax training

PARABOLIC FLIGHT
PARTIAL PRESSURE

High energy nuclear tissue doses calculation based on averaged characteristics of nuclear interactions.

{CEBN-71-16] [p0026 A72-12067] Depth-dose experiments with monoenergetic 14 MeV neutrons in low scatter environment, describing test facility.

PARTICLE INTERACTIONS

{CEBN-71-16] [p0027 A72-12068] Neutron interactions with matter, nuclear reactions, nuclear reactions.

PARTICLE SITE DISTRIBUTION

Effect of soil particle size on microflora survival time and sterilization requirements.

[NASA-C-127633] [p0070 A72-28058] Particle size distribution.

Flexible fluid filters.

U BANDPASS FILTERS

Passenger behavioral inaction in survivable aircraft accidents, suggesting maladaptive behavior counteraction by leadership and/or training.


{p0256 A72-19122] Smoking effects on passenger health in transport aircraft.

Patching

U MAINTENANCE

Pathogenesis

Pathogenesis of in-flight illusory acceleration sensations, discussing amino acid level, protein metabolism rate and pyridoxin metabolism.

[PH-100 A72-16142] Arterial hypoxemia development during hypoxic ontogeny early stages related to age in dogs.

Electron microscope study of hypoxic-induced pathogenetic ultrastructural changes in rat lung.

Pathogenesis of prolonged hypoxemia and effect on gas exchange in dogs and rats.

{p0375 A72-1990] Pathogenesis of weightlessness syndrome during prolonged space flight.

Pathogens

Aliphatic hydrocarbons in phytopathogenic fungi spores, discussing similarity to higher plant alkanes, functional roles and species distribution and occurrence.

{p0311 A72-29834] Ecology of biting insects, birds, and mammals with their associated pathogens.

Pathological Effects

High energy proton irradiation late pathological effects on rabbit brains, discussing brain lesions and radiation dosages.

[CEBN-71-16] [p0025 A72-12056] Neuteric bone necrosis pathology from radioradiographic studies in dogs with decompression sickness noting articular cartilage erosion and joint dysplasia and exostosis.

{p0110 A72-17876] Cortical synthesis and information handling properties of evoked potential in human normal cortex.

{p0181 A72-21840] Electrophysiological, neurophysiological, metabolic, vegetative, psychological, chemical and pathological aspects of sleep, noting disturbance and wakefulness mechanisms for various clinical disorders.

{p0213 A72-22223] Pathological significance of high oxygen tension exposure effects on acid soluble collagen extracted from mouse skin.

{p0282 A72-27483] Case report of pilot near-syncopal episode with bradycardia due to hyperreactive right carotid sinus reflex.

{p0283 A72-27487] Physiological effects on anesthetized and conscious dogs during exposure at 80,000 ft for different decompression rates, discussing.
cardiovascular, biochemical and pathological effects.

Syndromic protein synthesis in acute myocardial
hypoxia and ischemia.

Pathological-anatomic characterization
induced by magnetic fields in experimental animals
Neuropathological evaluation of monkeys exposed to

Beef and conditional movement observation of
central nervous system function restitution in
Nacaca mulatta monkeys with cortical lesions,
studying pathological forced grasping
Effect of hyperoxic media on the stability of rats
inhibiting carbon monoxide exposure.
Adrenoline and norepinephrine: metabolic stages and
production mechanism under various physiological
and pathological conditions, noting application to
flight emotional stress detection.
Changes produced in the nerve structures of the
stellate ganglion by total X-ray irradiation.
Influence of ionizing radiation on the tooth organ
in humans suffering from chronic mountain sickness.
Heart function and pulmonary circulation in humans
transarterial leakage - a possible mechanism of
high altitude pulmonary oedema.
Analysis of survival and cause of death statistics
for mice under single and duration-of-life qama
irradiation.
Adrenal morphology changes in rats subjected to...
hypokinesis NATURAL aging and radiation-induced life
shortening in Drosophila melanogaster.
Relation between mitochondria and glycolysis
Pathology in animals exposed to high
concentrations of carbon monoxide for six months
Permeation tubes as calibrated sources of gas in
light variation threshold amounts for flicker and
rates, noting retinal ganglion cells selective
permeation during voluntary saccadic
sensitivity discrimination of pattern recognition in cats
Human visual system multiple channels sensitivity
patterns at low luminance or high drift
rates, noting retinal ganglion cells selective
sensitivity discrimination of pattern recognition in cats
Light variation threshold amounts for flicker and
pattern detection as function of
rates, noting retinal ganglion cells selective
permeation during voluntary saccadic
Light variation threshold amounts for flicker and
patterns at low luminance or high drift
rates, noting retinal ganglion cells selective
sensitivity discrimination of pattern recognition in cats
Image visual recognition during voluntary saccadic
eye movements, noting stimulable visible luminance
change effect
Human flexible processing accomplishment in
saccadic visual task with visual stimulus
dimension relevancy contingent upon other
dimension stimuli values
Perception of tachistoscopic binary patterns,
examining reproduction accuracy with respect to
pattern length and fixation and end-segmentation
reference points
Effect of set size, age, and mode of stimulus
presentation on information-processing speed.
Probability threshold of data element similarity
separation criterion for automatic
multimodal biomedical data classification
An electronic model of visual receptive fields.
General principles and detail similarities in
visual pattern analysis by single neuron
operation, computer programs and psychological
perception
Perceptual differentiation of sequential visual
patterns.
<table>
<thead>
<tr>
<th>Subject Index</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEALS</strong></td>
<td>Foot forces exerted at various aircraft brake-pedal angles, observing 20 degree zone with maximum effectiveness [AD-73355]</td>
</tr>
<tr>
<td><strong>PELOSTA</strong></td>
<td>Weightlessness effects on single cell, amoeba, Polysamo carolinensis [EPT-P-1035]</td>
</tr>
<tr>
<td><strong>PELVIS</strong></td>
<td>Hypergravity effects on bats spatial orientation, noting resistance to head-pelvis and pelvis-head accelerations [AD-734292]</td>
</tr>
<tr>
<td><strong>PERIDRAM</strong></td>
<td>On the apparent orbit of the Pelfrich pendulum. [AD-730924]</td>
</tr>
<tr>
<td><strong>PESTICIDES</strong></td>
<td>U CORPOSCULAR RADIATION</td>
</tr>
<tr>
<td><strong>PETROCHEMICALS</strong></td>
<td>NY RESEARCH</td>
</tr>
<tr>
<td><strong>PETROCARBONI SODIUM</strong></td>
<td>Base dependent hyperglycemia and hypolipemia response to pentobarbital sodium injection in rats from plasma glucose and fatty acid analysis [AD-724292]</td>
</tr>
<tr>
<td><strong>PEPTIDES</strong></td>
<td>Behavior alterations in pepper plant, Capsicum annuum, in response to weightlessness, rotation, vibration, and acoustic stress [EPT-P-1017]</td>
</tr>
<tr>
<td><strong>PEPTIDES</strong></td>
<td>Amino acid code comparisons of polypeptide chains of globins due to mutations during vertebrate evolution from ancestral genes [AD-724292]</td>
</tr>
<tr>
<td><strong>PETROLEUM</strong></td>
<td>Energy transfer conditions of transdehydration reactions on praseodymium earth leading to transphosphorylation, transacylation and peptide synthesis [AD-724292]</td>
</tr>
<tr>
<td><strong>PETROCHEMICALS</strong></td>
<td>Atmospheric model for proteins abiogenesis, considering heteropolypeptides formation from hydrogen cyanide and water [AD-724292]</td>
</tr>
<tr>
<td><strong>PETROCHEMICALS</strong></td>
<td>Antibiotic polypeptide synthesis of gramicidin S and tyrocidine, using primitive model of extraterrestrial life [AD-724292]</td>
</tr>
<tr>
<td><strong>PETROCHEMICALS</strong></td>
<td>Conversion of angiotensin to angiotensin 2 in dog plasma in vitro metabolism [AD-724292]</td>
</tr>
<tr>
<td><strong>PETROCHEMICALS</strong></td>
<td>Parenterally introduced protein hydrolyzates and aminoacids influence on human pancreas enzyme secretion activity [AD-724292]</td>
</tr>
<tr>
<td><strong>PETROCHEMICALS</strong></td>
<td>Biochemical analysis of cat brain regions for gamma-amino butyric, aspartic and glutamic acids, secretion activity [AD-724292]</td>
</tr>
<tr>
<td><strong>PETROCHEMICALS</strong></td>
<td>Evolutionary clock - Nonconstancy of rate in different species [AD-724292]</td>
</tr>
<tr>
<td><strong>PERCEPTION</strong></td>
<td>Recently published protein sequences. I. [AD-724292]</td>
</tr>
<tr>
<td><strong>PERCEPTION</strong></td>
<td>Automated auditory perception [AD-724292]</td>
</tr>
<tr>
<td><strong>PERCEPTION</strong></td>
<td>Intrathalamic hearing [AD-724292]</td>
</tr>
<tr>
<td><strong>PERCEPTION</strong></td>
<td>Neocortical hearing [AD-724292]</td>
</tr>
</tbody>
</table>
PERCEPTUAL TESTS

- Color defective vision performance predictions during day and night tests of aviation color signal light discrimination
- Selective attention dichotic listening test as flying proficiency prediction criteria, discussing omission and intrusion errors
- Human performance prediction dependency on task and equipment variables effects, using experimental data for performance classification system
- Vigilance performance prediction for difficulty-satched auditory and loosely and closely coupled visual intensity discrimination tasks
- Factor analysis of grades for successful performance skill identification among undergraduate and graduate jet pilot training
- Energy cost/oxygen consumption/prediction for treadmill and various levels terrain walking at two speeds under three different pack loads
- Psychological criteria for flying personnel selection in civil aviation, noting performance prediction based on marxim likelihood estimates
- Pilot landing performance prediction criteria based on day and night carrier qualification trials and flight training
- Crash helmet performance prediction through marxim strain criteria, using brain injury biodynamic model
- Thermal scale models utilization to predict spacecraft radiator system performance, presenting criteria for modeling fluid system with combined convection, conduction and radiation effects
- Two explanations of temporal changes in ability-skill relationships — A literature review and theoretical analysis
- Team size and decision rule in the performance of simulated monitoring teams
- California psychological inventory as a predictor of success in the Naval flight program
- Ground trainer in job sample approach to predicting pilot performance

PERFORMANCE TESTS

- ECG telemetry system parameters, discussing manufacturers specifications and standardized laboratory performance test data
- Plane resistant materials for aircraft fire fighter protective clothing from systems approach tests
- Detection range, color, brightness and flash subjective response tests to evaluate light signals for nighttime sea navigation and visual collision avoidance
- Performance measurement in helicopter training and operations
- Performance assessment in integrated water and waste management system onboard spacecraft, describing reliability and performance tests
- Automobile crash tests to determine effectiveness of inflatable occupant restraint systems
- Test procedures and resulting data from preliminary vehicle tests of inflatable occupant restraint systems
- Graphs illustrating daisy accelerations and other data obtained in preliminary vehicle tests of inflatable occupant restraint systems
Photographs of vehicles used in preliminary tests of inflatable occupant restraint systems (PN-200874) p0046 W72-11094

Tests procedures and instrumentation used in preliminary vehicle tests of inflatable occupant restraint systems (PN-200873) p0046 W72-11094

Mathematical model for adapting psychometric data in automated pilot performance evaluation [AD-726632] p0086 W72-12062

Attenation, effectiveness, and wearability of ear protection devices [AD-731182] p0185 W72-15119

Performance of closed circuit mixed gas underwater breathing apparatus p044 W72-27119

Tests for selected air traffic controllers by prediction job performance p0477 W72-28106

Job performance test for determining effectiveness of UH-1 helicopter used by Vietnamese air force [AD-745161] p0573 W72-33123

Maintenance personnel job performance tests for UH-1 helicopter used by Vietnamese Air Force [AD-745160] p0573 W72-33124

Advanced type job performance tests for assessment of effectiveness of UH-18 helicopter [AD-745159] p0573 W72-33125

PERIODIC OSCILLATIONS

U DIFFUSION

PERIODIC VARIATIONS

U OSCILLATIONS

PERIODIC VARIATIONS

U ANNUAL VARIATIONS

U DAILY VARIATIONS

Microorganisms effects on oxygen and compounds cycles, leading to changes in oxygen distribution in earth crust, hydrosphere, atmosphere and biosphere p0224 A72-23592

Constituency and origins of cyclic growth layers in pelecypod shells [NASA-126672] p0382 W72-26070

Influence of biological rhythms on daily periodical bearing in person subjected to prolonged noise [NASA-TP-18368] p0560 W72-32089

PERIODICITY

U PERIODIC VARIATIONS

U HYDRODYNAMICS

U BIORHYTHMS (BIOLOGY)

PERIPHERAL CIRCULATION

Physical conditioning effect on central and peripheral circulatory responses to are work, measuring cardiac output at 80 percent maximum aerobic power p0068 A72-18900

Blood circulation minute volume and peripheral resistance changes during human aging process, accounting for body weight p0184 A72-22073

Forearm skin and muscle blood flow change measurement during whole body heating, using plethysmography, isotopic labeling and blood sampling techniques p0271 A72-26617

Water filled volume and strain gage phlethysmography for forearm blood flow measurement during isometric exercise p0272 A72-26622

Peripheral venous reflux activity during 70 deg tilt and lower body negative pressure p0455 A72-38703

Resistance and capacitance vessels of the skin in permanent and temporary residents at high altitude p0513 A72-42595

Bhographic investigation of cerebral, pulmonary and peripheral circulation during bed rest in antithoracostatic position p0543 A72-43914

Comparative study of regional hemodynamics during tilt test and lower body negative pressure exposure p0554 A72-45131

PERIPHERAL NERVOUS SYSTEM

EEG study of cortical aftereffects to peripheral stimulation in cats p0148 A72-18666

Russian book - Neurophysiological background of tactile perception p0992 A72-40664

Pyramidal control of the activity of interneurons related to various types of peripheral afferents p0094 A72-40589

Subjective and objective sensory physiology, discussing transformation processes in sensory receptors and nerves, psychophysical scaling methods, chemoreceptors and peripheral adaptation p0516 A72-2777

Tactile information transmission for orientation and motor control, discussing somatic sensitivity peripheral mechanisms p0516 A72-2777

PERIPHERAL VISION

Motion thresholds for fovea and peripheral retina with/without correction for peripheral refractive error p0545 A72-3978

Human physiological responses to high magnitude short duration positive accelerations, considering peripheral vision loss as a function of time p0558 A72-45660

PERIMETER

Intereceptional administration of physiological solution as an alternative method for hydrating human body p0561 A72-32103

PERMEABILITY

Active Na-K transport and passive permeability temperature adaptation in ground squirrel erythrocytes p0073 A72-15546

Effect of vibration on the permeability of the blood-brain barrier p0508 A72-42070

PERMEABILITY

Permeation tubes as calibrated sources of gas in toxicological studies [AD-727516] p0036 W72-10091

PEROXIDES

HYDROGEN PEROXIDE

Epithelial follicle and mast cell role in peroxidase activity of thyroid gland during experimental burn development p0329 A72-29330

Lipid peroxidation on the human skin surface following erythrocytic UV irradiation p0453 A72-38087

PERSONALITY TESTS

Group composition and n-dominance personality trait effects on decision and communication task efficiency in laboratory triads p0176 A72-21200

Personality correlates of lateral eye movement and handedness p0427 A72-36905

California psychological inventory as a predictor of success in the Naval flight program, p0557 A72-45655

Multiple discriminant analysis method for determining index of item validity using military personnel [AD-727673] p0130 A72-14129

Rorschach inkblot test for determining personality changes of crewman during 90 day manned test [NASA-CR-112019] p0241 A72-18081

PERSONNEL

AIRCRAFT PILOTS

ASTROBORUITS

COSMONAUTS

CREWS

FLIGHT CREWS

FLIGHT SURGEONS

FLIGHT PERSONNEL

GROUND CREWS

INSTRUCTORS

MEDICAL PERSONNEL

NAVIGATORS

OPERATORS (PERSONNEL)

PHYSICIANS

PILOTS (PERSONNEL)

SPACECRAFT

TEST PILOTS

Terminal area ATC specialists and trainees job attitude and activation from questionnaire on challenge, tasks, salary, work schedule, etc
PEBSOBBEL SELECIIOB' 
PEBSOBBEL PBOPDLSIOB STSTEHS 
PEESOSHEL BASSGEBEHT 
"D SELF BANEDVEBIBG UNITS 
HI PILOT SELECTION 
• Psychological criteria for flying personnel 
• Organizational, psychological and physiological 
  stress factors in coronary heart disease among 
  personnel [NASA-CR-125217] 
• Navy research and instrumentation for analyzing 
  nonionizing radiation effects on human personnel 
• Bibliography of anthropological documents on human 
  body size and biochemical characteristics of Air 
  Force personnel [AD-740309] 
PERSONNEL DEVELOPMENT 
• Development of concepts to improve selection 
  and training of apprentices in aviation work [AD-729654] 
• Physical, psychological and physiological 
  capabilities of personnel 
PERSONNEL MANAGEMENT 
• Human resources data included in engineering trade 
  studies [AD-729207] 
• Personnel management system in aeronautical 
  engineering service of East German Air Force/Air 
  Force [AD-739217] 
PERSONNEL PROPULSION SYSTEMS 
• U SELF MAINTENING UNITS 
PERSONNEL SELECTION 
• PT PILOT SELECTION 
  Education and training of personnel for 
  photointerpretation, discussing psychological, 
  physiological and methodological aspects of 
  aerial photointerpretation 
• Soviet space crew selection and training based on 
  professional and scientific background, emphasizing 
  psychological qualities for working 
  compatibility in space environment 
• Aptitude screening test of ATC training 
  applicants, using directional heading 
  determination under nural distraction 
• Brief vestibular disorientation test technique for 
  assessment of potential nonpilot airborne 
  specialists or naval flight officers 
• Potential coronary heart disease susceptibility 
  indicators in ATC population, using Framingham 
  age/obesity parameters [AD-739217] 
• Sight impairment-caused flight personnel 
  disqualification analysis, establishing eye 
  disease structure, sight damage preconditions 
  and ophthalmological practice inadequacies 
• Psychological criteria for flying personnel 
  selection in civil aviation, noting performance 
  prediction based on marinus likelihood estimates 
• Systematic detection of myocardial infarction in 
  the course of medical screening of flight 
  personnel [AD-729654] 
  The Bacruz index and its clinical evaluation is 
  electrocardiography with regard to the selection 
  and control of air crews [AD-729654] 
• Interrelationships of age, aptitude measures, and 
  training performance scores for air traffic 
  controllers [FAA-AR-71-361] 
• Early aptitude-achievement discrepancies as 
  predictors of voluntary withdrawal from naval 
  aviation training [AD-728369] 
• Human factors making performance concerning 
  ambiguity tolerance 
[AD-729282] 
• Psychological evaluation of IEPF and RNF for item 
  ambiguity characteristics [FAA-AR-71-35] 
• Development of concepts to improve selection 
  and training of apprentices in aviation work 
[AD-729654] 
• Development of flexible psychosensor testing system 
  for use in pilot selection program [AD-732210] 
• Astronaut selection criteria for training and 
  compatibility in spaceship environment 
[JPBS-55505] 
• Validity of aptitude tests for air traffic 
  controller selections [FAA-AH-71-60] 
• Anthropometric requirements for \( ^ { \text{ } } \) entrance into 
  naval flight training program [AD-73530] 
• Motion picture test for air traffic control 
  aptitude for use in personnel selection and 
  evaluation [AD-735942] 
• Selection, training, and performance of command's 
  personnel during actual and simulated space flight - USSS 
[JPBS-56030] 
• Development and application of multiple tasks 
  performance tests for preliminary screening of 
  air traffic control trainees 
[FAA-AR-72-8] 
• Tests for selecting air traffic controllers by 
  predicting job performance 
• DBT aptitude screening procedure for selecting air 
  traffic controller trainees 
[FAA-AH-72-38] 
• Clinical analysis of coronary heart disease 
  susceptibility in air traffic controller 
  populations [FAA-AR-72-20] 
• Optical measuring instruments for assessing visual 
  standards in astronaut selection 
[NASA-CR-115763] 
• Regression analysis technique for selecting 
  Minnesota combat crew members 
[AD-740641] 
PEESEERATION 
• Peripheral modifications to exercise induced 
  central drive for sweating, determining rates as 
  functions of internal temperature 
• Human temperature regulation during upright and 
  supine exercise, showing nonlinear relationships 
  between perspiration and skin and core 
  temperatures [AD-729654] 
• Human diaphoretic system physiology, discussing 
  skin surface sweat excretion intensity relation 
  to optimal balancing process in thermoregulation 
[AD-739217] 
• Sweating regulation to body temperature after 
  exhaustive exercise for various oxygen uptakes 
  and ambient temperatures 
• Monograph on hot environments stress covering heat 
  exchange at skin surface, clothing effect, body 
  temperature regulation and sweating control 
• Heat strain in hot and humid environments. 
• Sweat sensor for monitoring perspiration response 
  during motion sickness [AD-739222] 
• Manufacturing process for making perspiration 
  resistant-stress resistant biopotential electrode 
[FAA-CASE-HSC-90153-2] 
• Sensitivity of using pepsinogen and asayline 
  present in perspiration as diagnostic tool 
[HUM-DIET-1980-3627-60] 
• Forehead sweating during motion sickness from 
  vestibular stimulation 
[AD-740641] 
PHYSIOLOGY 
• Ti leaching from granite rocks by Penicillium, 
  simplicissum, discussing extraterrestrial life 
  detection [AD-729654] 
PPB (MODULATION) 
• U PULSE FREQUENCY MODULATION 
• Intracellular pH prime regulation in rat brain 
  during acute and sustained hypercapnia, 
  discussing cellular bicarbonate accumulation 
[AD-729654] 
• Microorganisms life in extreme high temperature, pH 
  and solute concentration environments, noting 
  salt effect on enzyme activity 
[AD-729654]
Acid-base balance shift during muscular exercise, determining pH and bicarbonate content variation by spectrophotometric method
Continuous and intermittent maximal exercise effects on human muscle intracellular and capillary blood pH
Cerebrospinal fluid pH change effects on cat respiratory response before and after vagotomy, showing vagal activity relation to central chemical control of respiration
Mathematical model of extracellular pH in brain tissue from blood and cerebrospinal fluid acid-base parameters for respiration central chemosensitive mechanism study
Respiration control by extracellular pH in medullary tissue, studying chemoreceptor response to hydrogen ion concentration in cat cerebrospinal fluid
Dependent inhibition and reactivation of angiotensin 2 A and angiotensin 2 B and UDP-glucuronosyltransferase inhibition in aqueous human blood plasma
Abdominal injected barbaryl nonfatal and toxic effect on mice subjected to hypoxia and isolation
Central nervous system pharmacology, discussing somniferous, narcotic and neurotropic substances effects on brain activity
Russian book on pathophysiological principles of air and space pharmacology covering stresses and fatigue reduction and pilots and astronauts performance improvement
Medication effects on pilot performance, covering tranquillizers, sedatives, antibiotics, stimulants, antihistamine and hypotension drugs
Work capacity evaluation from fatigue, biological rhythms, tissue respiration and oxygen consumption studies, discussing pharmacological stimulation effects
Effect of Acetazolamide /Diazox/ at different dose levels on survival time of rats under acute hypoxia and on atropine /atropine 2 a/ atropine activity of rat tissue microsomes
Pharmacological effects on the central adrenergic regulation mechanisms of blood circulation
The effect of chloridiazepoxide on visual field, extracellular muscle balance, colour matching ability and head-eye co-ordination in man.
Studies of the influence of theophylline on the vasodilating action of different medications on the cerebral and coronary circulation of man
Apparatus for programmed oral administration of drugs to large priates in altered environments.
Influence of isotropic alteration on the severity of myocardial ischemia after experimental coronary occlusion.
Ocular and induced visual effects of systemic and topical drugs in terms of eye neuroanatomy and pharmacology, assessing glaucoma therapy
Problems and techniques of space pharmacology
Clinical analysis of hypokinesia caused changes in nervous system and effects of pharmacological preparations on hypokinesia disorders
Pharyngeal streptococcal flora transfer between human subjects isolated for 15 days.
PHOSPHATES

PHOSPHOBOS BBTABOLISH

PBOSPBOBOS COHPOOBDS

HI CALCIUB PBOSPBATES

BT ADEHOSIBES

HI ADENOSIBE TBIPBOSPBATB (UP)

HI ADBBOSIHE DIPBOSPHATE (ADF)

HT BOCLEOTIDBS

BT ADEBOSIHB TBIPBOSPBATE (ATP)

HT ADBHOSIBB DIPBOSPHATE (ADP)

HT PHOSPBATES

BT CALCItJB PBOSPBATES

HT NOCLEOTIDES

HT ADEBOSIHBS

Biological energy transformation origin and
Inorganic polyphosates effect on phosphorus
Neural tissues excitability relationship to
Chlorella population age structure and cell
Calcium and phosphorus excretion relation to bone
Bat pulmonary lipid metabolism during feeding and
Isolation stress effect on excretory products in
Potassium cyanide effect on phospholipid exchange
Inorganic polyphosates effect on phosphorus
Biological phosphate origin through
Biochemical processes and structures
Effect of neurohomologons phospholipids associated
organisms, noting polyphosphate glucokinase
metabolism evolution in primary living
polyphosphate distribuation in vertebrate tissues
evolution, discussing inorganic pyrophosphates
precursor to adenosine phosphates as energy
requirements correlation with nutrient medium
rAD-739<t671 P0163 A72-20179
CFAA-AB-72-12J p0138 H72-27080
psychrophilic clostridiuo at noderate temperatures
atmosphere-hydrosphere interrelations,
precursor to adenosine phosphates as energy
phosphoryla'se enzymes
models and ribonuclease .and polynucleotide
pyridoxine-phospholipid association
II - Biochemical aspects of the
toxication by asymmetrical•dimethylhydrazine.
interrelation, using nucleoprotein coacervate
with other substances on experimental
hucleosides in photochenically synthesized self
sustaining coacervates
movements by the use of photogrammetry.
photoelectric process limiting effects
fluctuations, noting light field and
digital autocorrelation of photon counting

PHOTOGRAPHIC EQUIPMENT

Effect of age on TCT produced hypocalceaia and
hypophosphatemia in rats
\[ \text{(NASA-TE-P-14358)} \]
p0470 A72-28053
PROPHOSPHATION

Energy transfer conditions of transdehydradation
reactions on prilamel earth leading to
transphosphorilation, transacylation and peptide
synthesis
\[ \text{(NASA-TE-P-14768)} \]
p0661 A72-14408
Bacterial respiration through oxidative
phosphorilation origi hypotheses, discussing
photosynthesis and sulfate respiration in
anoxicogenic atmosphere and thiobacillas and
aerobe evolution in oxygen atmosphere
\[ \text{(NASA-TE-P-14795)} \]
p0662 A72-14795
Cold adaptation effects on rat skeletal muscle
tissue Vol-Hoff coefficient, considering
phosphorilation and oxidation rate, P/O and
mitochondrial ATP-ase activity
\[ \text{(NASA-TE-P-14785)} \]
p0223 A72-28639
Prebiotic thymidine phosphorilation at 65 C by
urac-phosphate mixtures in simulated desert

PHOTODICTION

Light absorption by visual pigment in
photoreceptor, noting alivy disk diameter effect
\[ \text{(NASA-TE-P-14388)} \]
p0549 A72-4388
PROTOCHEMICAL REACTIONS

BT PHOTOSYNTHESIS

Photochemical reactions in pyrimidine base of DNA
after UV irradiation, relating mutagenic and
lethal effect to dimerization
\[ \text{(NASA-TE-P-14608)} \]
p0056 A72-14608

Pigments participation in lipid system formation,
considering chlorophyll photochemical activity
in surface active agents
\[ \text{(NASA-TE-P-14577)} \]
p0651 A72-32104
Allogenic formation of nucleic acid bases and
nucleolides in photochemically synthesized self
sustaining coacervates
\[ \text{(NASA-TE-P-13916)} \]
p0568 A72-33079

PHOTOCHRETRY

U PHOTOCHEMICAL REACTIONS

PHOTOCONDUCTIVITY

Physiological photococonductivity effect in
pigmented epithelial eye cell during action of
visible light
\[ \text{(NASA-TE-P-15048)} \]
p0134 A72-15048

PHOTOCURRENTS

U ELECTRIC CURRENT

PHOTOElastic ANALYSIS

Stress distribution analysis of feusal neck,
using three dimensional photoelastic model
\[ \text{(NASA-TE-P-12952)} \]
p0099 A72-12952
Photoelastic analysis of cardiovascular-magnitude
stress pattern produced by flow through
qelatin-agar vailed channels for analysis of
mechanical stresses on blood vessel walls
\[ \text{(NASA-TE-P-43936)} \]
p0545 A72-43936

PHOTOElastic STRESS MEASUREMENT

U PHOTOELASTIC ANALYSIS

PHOTOElastic EFFECT

Spectral line width measurement accuracy based on
digital autocorrelation of photon counting
fluctuations, noting light field and
photoelectric process limiting effects
\[ \text{(NASA-TE-P-32949)} \]
p0371 A72-32949

PHOTOELECTRIC PHOTOGRAPHY

U ELECTROPHOTOGRAPHY

PHOTOELECTROMAGNETIC DETECTORS

U RADIATION MEASURING INSTRUMENTS

PHOTOREACTIVITY

U EMISIVITY

PHOTOCAMERAS

The measurement of three-dimensional body
movements by the use of photocamera,
\[ \text{(NASA-TE-P-39606)} \]
p0465 A72-39606

PHOTOGRAPH INTERPRETATION

U PHOTOINTERPRETATION

PHOTOGRAPHIC EMULSIONS

BT NUCLEAR EMULSIONS

PHOTOGRAPHIC EQUIPMENT

BT CAMERAS

Camera slit lamp apparatus design for anterior eye
diagnosis in two dimensional and stereoscopic
photography and ophthalmic application
\[ \text{(NASA-TE-P-14725)} \]
p0059 A72-14725
PHOTOGRAPHIC MEASUREMENT

PHOTOGRAPHIC MEASUREMENT
NT PHOTOGRAPHY
Hering's law of equal innervation and the position of the bicuspid. p0451 A72-37828

PHOTOGRAPHIC RECORDING
Photo-optical techniques in biomedical data acquisition, discussing cineangiography and x ray tomography applications in cardiological research work. p0105 A72-17437

Involuntary head movement and helmet motion displacements during human centrifuge runs to 6 Gz from photographic recordings. p0299 A72-28288.

Design of photo-optical recorder, implantable electrodes, and magnetic/Doppler flow sensor. p0126 A72-14117

PHOTOGRAPHIC RECORDING INSTRUMENTS
U OPTICAL MEASUREMENT INSTRUMENTS
U PHOTOGRAPHIC RECORDING
U RECORDING INSTRUMENTS

PHOTOGRAPHY
NT MOTION PICTURES
PHOTOGRAPHY
NT AERIAL PHOTOGRAPHY
NT CEPHALOGRAPHY
NT COLOR PHOTOGRAPHY
NT HOLOGRAPHY
NT MULTISPECTRAL PHOTOGRAPHY
NT PHOTOGRAMMETRY
NT STEREOPHOTOGRAPHY

PHOTINTERPRETATION
Education and training of personnel for photointerpretation, discussing psychological, physiological and methodological aspects of aerial photointerpretation. p0221 A72-23298

Psychological aspects in aerial photointerpretation, discussing importance of perception of image contrast, contours and areal distribution. p0222 A72-23299

Psychophysical information content evaluation of aerial photographic images by human viewer for photointerpretation and search in reference library. p0459 A72-39042

Automated analysis of time lapse photographic data of unrestricted laboratory animals during spacecraft cabin toxicity experiments. p0036 A72-10090

Spot size scanning system for analyzing thermal infrared military targets (PRL-1971-34). p0386 A72-24691

PHOTOMETRY
NT ELECTROPHOTOMETERS
PHOTOMETRY
NT SPECTROPHOTOMETRY
NT VISUAL PHOTOGRAPHY

Whole blood flow dependence on optical density from light transmission measurement, showing photometric effects of red cell aggregation, deformation and orientation. p0364 A72-31639

PHOTOMICROGRAPHY
Internal scanning photomicrography for recording growth of microbial cell populations during incubation. p0330 A72-29749

PHOTON ABSORPTION
U ELECTROMAGNETIC ABSORPTION
PHOTON BARS
NT LIGHT BEAMS

PHOTO-ELECTRON INTERACTION
Photon trapping in photosystem II of photosynthesis - The fluorescence rise curve in the presence of 3,4-dichlorophenyl-1,1-dimethylurea. p0419 A72-35761

PHOTONS
NT LIGHT BEAMS
Spectral line width measurement accuracy based on digital autocorrelation of photon counting fluctuations, noting light field and photoelectric process limiting effects. p0371 A72-32999

Radiation damage in microscopic volumes exposed to energetic photons. p0419 A72-35761

SUBJECT INDEX

[AD-731709] p0200 A72-17049
Two Monte Carlo codes for calculation of dose distribution in human phantoms irradiated by external photon sources. p0306 A72-20082

PHOTORECEPTORS
Mammalian vertebrate retinal receptor rods and cones birefringence as function of fixation, temperature and irradiating medium. p0012 A72-10862

Flavin photoreceptor participation in contemporary organism metabolic systems. p0062 A72-17801

Optical image transfer functions characteristics and modulation in isolated retina and retinal receptors, noting similarity to optical fiber bundles. p0189 A72-19027

Coincidence model tests of photoperiodic time measurement relation to circadian pacemaker system in both Pectinophora gossypella, grain induction by skeleton photoperiods and light cycles. p0157 A72-19533

Phase shifting effect of light on circadian rhythms and photoreceptive pigment location in Drosophila in postpupation stages. p0157 A72-19536

Selective chromatic adaptation in cone photoreceptors of cynamolous macaque monkeys, using late receptor potential as response index. p0332 A72-29967

Lamellar structure and rhodopsin location in bleached and unbleached rod photoreceptor membranes of dark adapted frog retinas by X ray diffraction, study. p0367 A72-32199

The distribution of the long wave photoreceptors in the compound eye of the honey bee as revealed by selective osmic staining. p0471 A72-34877

Electroretinographic evidence for a photopic system in the rat. p0471 A72-34878

Fly colour vision. p0426 A72-36609

Isolated retina receptor potential amplitude relation to visual pigment bleaching kinetics, indicating excitation-inhibition receptor response generation mechanism. p0451 A72-37830

Threshold excitation, temporal summation, and impulse response function in the retina of the cat - Temporal receptive fields of retinal ganglion cells. p0455 A72-38648

The photopigment bleaching hypothesis of the complementary after-images - A psychophysical test. p0547 A72-44376

Component analysis of electroretinogram in dark and light adapted sheep eye, noting rod and cone receptor potentials and transient and dc responses. p0548 A72-44382

Light absorption by visual pigment in photoreceptor, noting airy disk diameter effect. p0549 A72-44388

Small field tritansit of central fovea in terms of dichromatic area color response mechanism and adaptation speed. p0549 A72-44390

Optical directionality of retinal receptors and corresponding points. I - Nasal-temporal asymmetry of retinal spatial values and orientation of receptors: Are the corresponding points concave. II - Variation of form of the experiential horopters, and possibility of reorganization of the retinal correspondence according to the orientation of the eyes. p0551 A72-44907

Functional organization of the periphery effect in retinal ganglion cells. p0552 A72-44908

PHOTODETCTION
U PHOTOCHEMICAL REACTIONS
U DETECTION (CHEMISTRY)
PHOTORESISTIVITY
U PHOTOCOHERGIBILITY
PHOTORESISTIVITY
U LIGHT ADAPTATION
Spectral photosensitivities for phase shifting of circadian body temperature rhythms in pocket mice

Photosensitized potentials of human visual cortex, determining retinal macular area involvement

Color discrimination threshold determination for spectral sensitivity in subjects with congenital color vision disorders

Blue-green algal nanochloridans are light-sensitive mutants of photosynthetic capacity following irradiation

Colorimetric photometric matching tests, showing subject differences in paravertebral spectral sensitivity indicated by photopic curve peaks

Spectral sensitivity after prolonged intense spectral light exposure of rhesus monkey corneas, demonstrating long-term loss of cone photopigment response

Sensitivity of the human EOG and VECP to sinusoidally modulated light

Visual sensitivity measurement in retinal areas with stepwise change from one monochromatic light to another, discussing eye movements effects and perception thresholds

Directional orientation of dragonfly relative to azimuth of sun

Effect of continuous ultraviolet exposure on photokeratitis and ocular damage in humans, rabbits, and primate

Effect of 3,3'-dichlorophenyl-1,1-dimethylurea on the presence of P700 in chloroplast fragments prepared by short time incubation with Triton X-100

Photosynthesis and photovoltaic technology

PHOTOTHERMOPHOSIS

PHOTOTHERMOTHERAPY

PHOTOTHERMAL EFFECTS

PHOTOTROPHIC EFFECT

Photosynthesis and photovoltaic technology

PHOTOSENSITIVE RADIATION HEATING INSTRUMENTS

PHOTOSENSITIVE PHOTOMETRIC MEASURING INSTRUMENTS

PHOTOMETER

PHOTOSYNTHESIS

Chlorella growth rate model, presenting specific photosynthetic and areas and carbon dioxide utilization rates

Acid base equilibrium effects on chlorophyll primary photosynthetic regulating mechanism, considering electron transfer to NADP and NPP formation

Photosynthetic and primary photosynthetic evolution, using comparative analysis of bacteriochlorophyll, bacterioviridin and chlorophyll

Bacterial respiration through oxidative phosphorylation enzyme complexes, discussing photosynthesis and sulfate respiration in anoxicogenic atmosphere and thiolactyls and aerobic evolution in oxygen atmosphere

Biochemical functions of organisms in evolution of biosphere, discussing redox-reactions, elementary compositions and metal compounds role in photosynthesis

Photon trapping in photosystem II of photosynthesis - The fluorescence rise curve in the presence of 3-3',6-dichlorophenyl-1,1-dietilurea

Thermodynamic properties and mathematical modeling of coupled biological systems, considering energy and mass exchange in photosynthesizing organisms for exobiological life support

The presence of P700 in chloroplast fragments prepared by short time incubation with Triton X-100

Photosynthesis and photovoltaic technology

PHOTOSENSITIVE PHOTOMETRIC MEASURING INSTRUMENTS

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PHOTOSENSITIVE RADIATION MEASURING INSTRUMENTS

PHOTONEUTRAL RESEARCH AND TEST REACTORS

PHYSICAL EXERCISE

Physical exercise effect on ECG atrial recovery monitoring

Electrocardiographic monitoring during submaximal dynamic exercise

Physical exercise on ECG atrial recovery wave duration and magnitude in humans with A-V blocks

Physical exercise effect on ECG atrial recovery measurement during exercise, noting unsuitability for patients with coronary disease

Exercise ECG correlation to morphological patterns of selective cinecoronary arteriography and ventriculography, revealing significant information on occlusion and atenosis

Xenon 133 method for coronary blood flow measurement during exercise, noting unsuitability for patients with coronary disease

Training effect on oxygen consumption in negative muscular work, considering connective tissue strengthening and muscle viscosity changes

Free oxygen content and diffusion coefficient in adrenalectomized rat skeletal muscles after physical strain

A-307
PHYSICAL EXERCISE COND.

- Heat acclimatization, work habitation and exercise effects on body thermo-regulation, measuring core temperature, sweat rate and oxygen intake
- Serum enzyme activity changes response to constant test exercise, discussing relation to maximum oxygen uptake
- Physical conditioning effect on central and peripheral circulatory responses to arm work, measuring cardiac output at 80 percent maximum aerobic power
- Peripheral modifications to exercise induced central drive for sweating, determining rates as functions of internal temperature
- Daily prolonged exercises effects on human muscle glycogen utilization, noting reduced lactate accumulation and increased free fatty acid levels
- Plasma renin activity during supine physical exercise as function of salt loading
- Hypertrophic effects of chronic exercise on plasma corticosterone and adrenal cortex in rat
- Exercise effects on pulmonary circulation in dogs, comparing oxygen intake and cardiac output during treadmill and bicycle ergometer exercises, using Xe 133 clearance method
- CO hypoxia effect on oxygen transport during exercise, discussing changes in cardiac and respiratory functions and work capacity
- Hypoxic and normoxic gas mixture breathing during treadmill exercise, relating oxygen consumption and carbon dioxide elimination magnitudes and motor performance
- Human blood serum 11-oxytocorticosteroid content after maximal stress exercise, noting heart rate and blood pressure changes
- Ventricular and supraventricular-arrhythmias incidence during maximal treadmill exercise in normal man, noting age factor and cardiovascular disease presence effects
- ECG, physical exercise and drug use in diagnostic and aero-chemical evaluation of supraventricular arrhythmias, presenting case histories of patients with wandering cardiac pacemakers
- Continuous and intermittent maximal exercise effects on human muscle intracellular and capillary blood pH
- Tachycardia role in coronary vascular bed hemodynamic response to severe exercise in dogs
- Beta-adrenergic blocking effect on canine coronary and systemic hemodynamic adaptation during treadmill exercise
- Bicycle ergometer measurements of thermoregulation input and output under wide range of work load and climatic conditions, deriving correlation equation
- Maximal oxygen uptake and heart rate during laddersill climbing, inclined treadmill running and cycling ergometer tests
- Weight loss due to respiratory tract evaporative water loss during exercise, from humidity change, ventilatory exchange and oxygen uptake data
- Speed and mechanical work measurements during knee bending and immediate or delayed leg extension exercise, showing muscle elastic potential energy utilization
- Hemodynamic variables relation to coronary blood flow and arterial oxygen consumption during upright bicycle exercise
- Water filled volume and strain gauge plethysmography for forearm blood flow measurement during isometric exercise
- Physical training effect on rat cardiac function and metabolic response to hypoxia
- Exercise role in ventilatory acclimatization to graded hypoxia in goats from carbon dioxide response curve measurements
- Hemodynamic response to physical exercise stress in dogs with angiotensin-induced acute arterial hypertension
- Stress vectorcardiography quantitative analysis of ECG response to treadmill exercise test to establish diagnosis criteria for coronary heart disease
- Plasma protein concentration, volume change and hematocrit changes during exercise, bed rest and high forward acceleration
- Cardiorespiratory response to breathing dense sulfur fluoride-oxygen mixture under physical exercise conditions

SUBJECT INDEX

- [PH-739063] p0171 A72-20887
- Muscle blood flow relation to oxygen consumption from measurements during bicycle ergometer exercises, using Xe 133 clearance method
- CO hypoxia effect on oxygen transport during exercise, discussing changes in cardiac and respiratory functions and work capacity
- Hypoxic and normoxic gas mixture breathing during exercise, relating oxygen consumption and carbon dioxide elimination magnitudes and motor performance
- Human blood serum 11-oxytocorticosteroid content after maximal stress exercise, noting heart rate and blood pressure changes
- Ventricular and supraventricular-arrhythmias incidence during maximal treadmill exercise in normal man, noting age factor and cardiovascular disease presence effects
- ECG, physical exercise and drug use in diagnostic and aero-chemical evaluation of supraventricular arrhythmias, presenting case histories of patients with wandering cardiac pacemakers
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- Weight loss due to respiratory tract evaporative water loss during exercise, from humidity change, ventilatory exchange and oxygen uptake data
- Speed and mechanical work measurements during knee bending and immediate or delayed leg extension exercise, showing muscle elastic potential energy utilization
- Hemodynamic variables relation to coronary blood flow and arterial oxygen consumption during upright bicycle exercise
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- Plasma protein concentration, volume change and hematocrit changes during exercise, bed rest and high forward acceleration
- Cardiorespiratory response to breathing dense sulfur fluoride-oxygen mixture under physical exercise conditions

A-308
Correlation between ergonetry, Buscle cell ATP, creatine phosphate and lactate
Cardiac stroke volume measurements during supine bicyle exercise and recovery period, using indicator-dilution technique
Sweating relation to body temperature after exhaustive exercise for various oxygen uptakes and ambient temperatures
Muscle cell ATP, creatine phosphate and lactate
Exercise cardiocatheteromeeter with heart rate display on beat to heart basis, wave recognition circuit and noise linear filtering efficiency
Cardiac output and body temperature response to prolonged intermittent exercise
Water loss replacement effect during rest and exercise in high temperature environment
Two compartment analog model of thermoregulation during rest and exercise, considering temperature, heat conductance, sweat rate and oxygen uptake
Cardiac cycle length /RE interval/ and QT interval
Myocardial lipid and carbohydrate metabolism in fasting men during prolonged exercise
Exercise capacity in a population of domestic fowl
Influence of exercise on spinal responses to heat acclimatization in man during exercise and recovery periods
Yield of ischemic exercise electrocardiograms in relation to exercise intensity in a normal population
Long volume changes of people in antithorostatic position in hospital beds for control, exercising and muscle electric-stimulated groups
Physical training as a prophylactic measure against the hypertrophic syndrome
Metabolic changes in healthy humans caused by prolonged bed rest in horizontal position, noting prevention by physical exercises and electric muscle stimulation
Animl studies of effect of chronic exercise on the heart and atherosclerosis - A review
Changes in certain hemodynamic indices during muscular strain in people with differing capacity to perform work
Changes in the pituitary-thyroid and in the pituitary-axonad systems under conditions of functional loading and of physiological immobilization
Longevity and cardiovascular mortality among former college athletes
Response of spacecrew cardiovascular systems to calibrated workloads during long duration space flight
Values of blood serum lipids in young men in relation to acute stress situation and regular sports activities
Effects of potassium on muscle functions during physical exercise
Physical exercise effects on rat skeletal muscle vasculatization in the course of ontogeny
Short and long term mental and physical work effects on central nervous system and motor apparatus in young people

Optimal duration of human circadian cycle with respect to energy cost during work hours, relating normal cycle change to prolonged space mission stresses

Rapid ventilatory response in man at work on set for different standard starting commands, discussing relation to work load and conditioning process

Heart pacemaker activity during muscular exertion, developing mathematical model based on system dynamics transient processes analysis

Acid-base balance shift during muscular exertion, determining pH and bicarbonate content variation by Astrup micromethod

Human oxygen intake and blood lactic acid removal kinetics during recovery from mild steady work on bicycle ergometer

Safe exposure times for men working in high temperature environments, showing hyperbolic heat collapse relationship to environmental severity

Physical work capacity comparison during bicycle ergometry and treadmill walking tests, measuring oxygen uptake, ventilatory parameters and excess carbon dioxide production

Simulated gravity environment tests of vertical jump features, recording work performed, body center of gravity upward velocity, potential and kinetic energy changes

Human visual accommodation biorhythm and reactions under hard physical work and visual stress

Possibilities and dangers during long working periods in space rescue

Natural acclimatization to work in severe heat, measuring expenditure during handcart, measuring expenditure during treadmill and outdoor asphalt circuit walking

Thermoregulation during positive and negative work at different environmental temperatures

Self-paced ergometer performance - Effects of pedal resistance, motivational contingency and inspired oxygen concentration

Relationships among isometric forces measured in aircraft control locations

The silent period in man during caloric restriction.

Physical work capacity comparison during bicycle ergometry and treadmill walking tests, measuring oxygen uptake, ventilatory parameters and excess carbon dioxide production

Acid-base balance shift during muscular exertion, determining pH and bicarbonate content variation by Astrup micromethod

Human oxygen intake and blood lactic acid removal kinetics during recovery from mild steady work on bicycle ergometer

Safe exposure times for men working in high temperature environments, showing hyperbolic heat collapse relationship to environmental severity

Physical work capacity comparison during bicycle ergometry and treadmill walking tests, measuring oxygen uptake, ventilatory parameters and excess carbon dioxide production

Simulated gravity environment tests of vertical jump features, recording work performed, body center of gravity upward velocity, potential and kinetic energy changes

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Possibilities and dangers during long working periods in space rescue

Natural acclimatization to work in severe heat, measuring expenditure during handcart, measuring expenditure during treadmill and outdoor asphalt circuit walking

Thermoregulation during positive and negative work at different environmental temperatures

Self-paced ergometer performance - Effects of pedal resistance, motivational contingency and inspired oxygen concentration

Relationships among isometric forces measured in aircraft control locations

The silent period in man during caloric restriction. 
PHYSIOLOGICAL DEFENSES

PHYSIOLOGICAL ACCELERATION
Cardiac acceleration by voluntary muscle contractions of minimal duration in men due to vasal tonal inhibition

Human leg muscle reflex excitability changes during angular acceleration, suggesting vestibular apparatus as coordination means in quasi-static and dynamic movement control

Alcohol ingestion effect on vestibular responses to angular acceleration and Coriolis stimulation, discussing symptoms and subjective responses

Airline pilot rotation perception during angular acceleration tests, noting power law description of subjective motion for three major body axes

Synchronous and asynchronous BASH /body acceleration synchroed with heart beat/ effects on hemodynamics and ventilation in dogs and humans

PHYSIOLOGICAL DEFENSES

Method and design for securing implanted electrodes during chronic experiments

PHYSIOLOGICAL EFFECTS

NT HEMODYNAMIC RESPONSES

Environmental noise induced human fatigue, considering physiological and psychological effects

Biocellular and physiological effects of apollo flight diet, noting no significant variations in serum electrolyte levels, endocrine values, body fluids and hematologic parameters

Physiological effects of localized ventilation, noting human comfort improvement association with reductions in average skin temperature and sweat rate

Physiological effects of transfusings 2,3-diphosphoglycerate /DPG/ depleted red cells with high oxygen affinity in anemic hypoxic patients

Adrenocortical steroids during acute exposure to environmental stresses, noting effects of injected cortisol removal, uptake and release

Erythrocytes catalase activity and number content relationship in human and ailing red blood, discussing compensatory effects

Anxiolyzing effects on pilot in-flight performance, discussing flight safety, alcohol potentializing and student pilot stress reactions and airsickness treatment

Harmful influence of random vibrations on human organs, discussing Yoder-Planck analysis and amplitude and frequency variation effects

Ultrasonic transducer monitoring of decompression-caused gas bubbles in rat thigh muscle tissue for decompression sickness time course development studies

Rhabdomyolysis as fundamental life characteristic analogous to hoboism, discussing human circadian rhythm and cycle desynchrony during air travel

Environmental chamber tests for ozone exposure effects on human pulmonary function at rest and during bicycle exercise

Physiological evaluation of modified jet transport passenger oxygen mask from altitude chamber experiments

Diurnal and beat-to-beat variation factors in vectorcardiograms, noting respiratory movements, electrode location shift, skin-electrode impedance and heart electrical center mobility

Sonic booms effects on domestic and wild animals, discussing field and laboratory findings

Medicobiological investigations of prolonged weightlessness effects on astronaut hemodynamic and physiological system based on Soyuz flight program

High altitude acclimatization effects on human lung diffusing capacity for carbon monoxide at different oxygen tensions

Cardiovascular changes produced by whole body vibration of dogs and pigs, obtaining resonant frequencies of organ systems

Clinical and laboratory examinations of workers exposed to trichlorotrifluoroethane vapor for long range health effects study

Food deprivation stress effects on urinary excretion values in unrestrained chimpanzees

Medical and physiological hazards for SST passengers and crews, discussing cumulative cosmic radiation and high altitude decompression tasks

Case report of rapid decompression in supersonic trainer aircraft pressurized cabin, discussing physical and blast effects, pressurization safety, decompression sickness and hypoxia

Medical evaluation of manned space flight physiological effects, considering Mercury, Gemini and Apollo programs

Time displacement effects on human circadian rhythm phase shift and performance deficits

Time zone transition induced circadian rhythm disturbance effect on military personnel mental and physiological performance

Weightlessness effects on human organs, discussing physiological changes, artificial gravity by spacecraft rotation and exercise to counter adverse reactions

Multihour immersion effects on blood plasma protein and electrolyte concentration in trained and untrained subjects

Physiological and clinical effects of long distance flight in pressurized commercial planes with simulated altitudes over 1500 meters

Magnetic storm strength ELF electromagnetic field effects on cats, dogs and bacteria, discussing changes in EEG, ECG and blood characteristics

Ascorbic acid influence on blood coagulation and anticoagulation systems in dogs with acute hypoxia, discussing plasma recalciification time and heparin tolerance
Physiological effects on animal voluntary motor activity and wakefulness from brain and muscle area electrical activity recorded during ballistic flight.

Space environment weightlessness induced perceptual deprivation, considering hand-eye coordination, visual judgments and motion and time perception.

Long term space flight weightlessness and hypodynamic effects on orthostatic and cardiovascular, biochemical and pathological effects.

Effects of long periods of clinical death from drowning or lethal blood loss on higher nervous activity in reanimated dogs.

Physiological and psychological effects of noise noting vulnerability of circulatory apparatus, neurovegetative system and stomach.

Russian book on functional morphology under extraneous space flight conditions covering overloads, hypoxia and hyperoxia effects on organism and cellular structure and metabolism.

Medical factors in air racing accidents, investigating drug, fatigue and gastrointestinal symptoms effects on pilot reaction to emergency.

Technology B and D program to qualify man for long term weightlessness effects on calcine and electrolyte metabolism.

Physiological effects on anesthetized and unconscious dogs during exposure at 80,000 ft for different decompression rates, discussing cardiovascular, biochemical and pathological effects.

Astronauts physiological and psychological reliability, discussing Apollo flights and prolonged missions to other planets.

Physiological and psychological effects of noise noting vulnerability of circulatory apparatus, neurovegetative system and stomach.

Studywise altitude acclimatization and subsequent reanimation after blood loss caused clinical death effects on dog peripheral blood erythrocytes, reticuloocytes, hemoglobin and hematocrit.

Astronauts physiological and psychological effects on prolonqed weightlessness, assessing space flight, investigating drug, fatigue and gastrointestinal symptoms effects on pilot reaction to emergency.

Flux light backscatter poisons on instrument rated pilots.

Blood coagulation changes at high altitude predisposing to pulmonary hypertension.

Subject index

Increased tolerance of leukemic mice to arabinosyl cytosine with schedule adjusted to circadian system.

The effects of acute hypoxia on lipid synthesis in the rat heart.

Effect of a magnetic field on the nervous system.

The effects of long term weightlessness, assessing space flight, using dietary control and excreta collection techniques.

Increased tolerance of leukemic mice to arabinosyl cytosine with schedule adjusted to circadian system.

The effects of acute hypoxia on lipid synthesis in the rat heart.

Effect of a magnetic field on the nervous system.

The effects of long term weightlessness, assessing space flight, using dietary control and excreta collection techniques.
The effect of chronic erythrocytic polycythemia and high altitude upon plasma and blood volumes.

Helium effect on cardiac mitochondria of mice.

Changes in the overall electrical activity of the mammalian reticular formation, the hippocampus, and the cerebral cortex under the influence of hydrocortisone and DOCA.

Significance of the nature of an increase in BNA content in the cortex neurons in connection with their function in a nervous system.

The silent period in man during muscle lengthening produced by loading.

Circadian rhythms in physiological and psychological functions related to jet travel, studying body temperature variations and psychomotor performance during isolation and varying light-dark cycle conditions.

Comparison of irregular vibrations of a limited frequency range with sinusoidal vibrations in regard to their effect on man.

Effect of hypoxia on the condition of skeleton muscles in rats under hypokinesia.

Morpho-functional changes in the endocrine system during oxygen starvation.

Separation of central effects of CO2 and nicotine on ventilation and blood pressure.

Blood serum enzymes activity changes in polytraumatized humans injured in automobile accidents.

Hematological modifications due to acute exposure to heat.

Effect of hypoxia and physical activity on plasma enzyme levels in man.

Neurophysiological mechanisms of the extinction of the orientating reflex.

Effects of the space flight environment on man’s immune system. I - Serum proteins and immunoglobulins.

Adaptive processes responsible for natural acclimatization of human organism to low altitudes in high altitudes of the orientattiion activity.

Morphometric evaluation of changes in lung structure due to high altitude.

Succinic and lactic dehydrogenases activities in homogenates from myocardial tissues of guinea pigs, rabbits and dogs in high altitude environments.

Coronary blood flow and myocardial metabolism in man at high altitude.

Anatomy of the coronary circulation at high altitude.

Effects of weightlessness on astronauts - A summary.

Effects of an 18-day flight on the human body.

Physiological and hematological effects of chronic irradiation.

Influence of a preliminary exposure to carbon monoxide on the development of hypoxic disturbances in albino rats.

Features of a speech signal during casuistic action of Coriolis accelerations.

Physiologic effects of passive hyperventilation on oxygen delivery and consumption.

Animal studies of effect of chronic exercise on the heart and atherosclerosis - A review.

Methods for evaluating pulsed sinusoidal, damped, and built-up vibrations of human body.

Method for evaluating compound sinusoidal and random vibrations of human body.

Systematic method for evaluating sinusoidal vibrations of human body in sitting, standing, and lying postures.

Minute blood volume dynamics in humans during prolonged hypokinesia studied with acetylene method.

Changes in hormonal activity in humans and rats during hypokinesia.

Development of laboratory technique for determining physiological effects of medication on flying personnel and spacecrews.

Effects of oxygen atmosphere in high pressure diving chamber simulation on human body.

Laboratory simulation of weightlessness in order to develop methods for preventing harmful effects to human subjects.

Physiological effects of microwave radiation on animals and interaction of electromagnetic waves with tissue to change structure and function.

Physiological and psychological tests to determine effects of isolation during long periods in underwater shelters during Tektite project.

Analysis of physiological changes associated with hyperbaric pressure to determine acclimatization or adaptation to nitrogen narcosis.

Effect of helium-neon and TAC laser radiation on retinas of rabbits at levels below those required to produce visible lesions.

Analysis of nonadiatory effects of noise on task performance, cardiovascular system, and general health of human subjects.

Modifications to A-weighted sound level procedures and comparison with critical limits based on octave-band data.

Development of methods for analyzing data and fitting curves derived from replicate nitrogen washout tests on human subjects.

Responses of anesthetized cats to acoustical stimuli imposed on auditory cortex.

Development of diving tables and procedures for trimmer delivery vehicles and various underwater breathing apparatus types.
Effects of excess calcium imbalance on human body functions
[NASA-TP-F-14155] p0169 77-2-16007

Abstracts and bibliographies on physiological effects of noise and weapon blast
[AD-731468] p0190 77-2-16103

Physiological effects of vibration on human body
[NASA-TP-F-14113] p0197 77-2-17029

Application of cycloquasmetric method for analyzing walking characteristics of crew members following flight of Soyus 9 spacecraft
[AD-745031] p0203 77-2-17069

Physiological effects of brief space flight on human subjects as measured by reflex excitability of neuromuscular system and contractility of muscles
[AD-738809] p0203 77-2-17070

Physiological effects produced by rotation of human subjects in summarized plane at various rates of rotation and accelerations
[AD-758808] p0204 77-2-17076

Research projects to determine biological and physiological effects of radius quasar rays [SYHO-2740-0] p0205 77-2-17083

Pulmonary resistance power spectral analysis for detecting radiation induced gastrointestinal disease and performance decrement in man
[AD-738810] p0208 77-2-17632

Techniques for eliminating disorders associated with prolonged weightlessness [JPBS-55714] p0353 77-2-22095

Immunosassay of pulmonary oat cell cancer extracts to confirm biochemical results and development of antibodies to oat cell and vasoressin [NASA-CR-126995] p0356 77-2-23070

Simulation tests to determine sonic boom effect on fish [NASA-TP-F-62163] p0382 77-2-24065

Effects of radiation from rubidium and neodymium lasers on components of human eye and applications to correct physical defects in eye structure
[JPBS-557011] p0382 77-2-24067

Effects of high intensity noise levels on human vegetative system and production of disorientation and nausea [ARML-79-71-59] p0393 77-2-25038

Occurrence of vertigo in hyperbaric atmospheres and among underwater divers with theoretical explanations of etiology involved
[JPBS-557012] p0393 77-2-25043

Development of theory concerning human reactions to whole body motion and explanation of individual differences to motion effects
[JPBS-557013] p0393 77-2-25044

Effects of toxic methyl isobutyl ketone vapor on physiological processes in dogs, monkeys, and rats during 90 day continuous exposure [NASA-TR-F-120748] p0400 77-2-25102

Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits
[NASA-CASP-HSC-12397-1] p0402 77-2-25119

Human factors engineering to determine effects of weapon noise on military personnel and development of criteria for performance prediction of personnel after exposure to noise [AD-738135] p0405 77-2-25145

Physiological and psychological effects of low and high magnetic fields on man in Terrestrial environment [NASA-TR-F-120749] p0432 77-2-26055

Nonlinear deflection of intervertebral discs in human spine subjected to shock loads involving axial compressive impact
[JPBS-557014] p0437 77-2-26057

Low frequency pulsed electromagnetic field effects on carbohydrate energy and nitrogen metabolism of living organism
[JPBS-557015] p0471 77-2-28061

Measurement of physiological effects on metabolism of personnel resulting from long periods of time in subaerial environment [AD-738089] p0473 77-2-28074

Effects of prolonged bed rest on physical work capacity, tilt-table tolerance, and calcium excretion
[NASA-TP-F-14349] p0559 77-2-32085

Hazards of bed rest as therapeutic measure
[NASA-TP-F-14349] p0563 77-2-32116

Data systems for studying hyperbaric physiology of human and animal subjects
[AD-764053] p0565 77-2-32129

Hazard physiological effects of prolonged hypokinesis
[NASA-TP-F-14563] p0568 77-2-33078

Psychological and physical factors

Effect of excess calcium imbalance on human body functions

Transporter statistical survey of clinical, physical and psychic causes of temporary and permanent flight service unfitness
[AD-758810] p0197 77-2-17029

Education and training of personnel for photointerpretation, discussing psychological, physiological and methodological aspects of aerial photointerpretation
[AD-738812] p0221 77-2-23298

Human performance dependence on time of day, discussing circadian and physiological rhythm rotation and environmental change effects
[AD-738813] p0274 77-2-26677

Transaxial air travel in a cause of psychological and physiological rhythm change effects on pilot performance
[AD-738814] p0276 77-2-26694

Visual stimulus orientation effect on movement, perception, relating physiological and psychological factors
[AD-738815] p0362 77-2-31368

Airline management and flight crew role in prevention, detection, and dealing with airlline pilot incapacitation in flight, noting physiological and psychological factor recognition
[AD-738816] p0410 77-2-34555

Habitability factors in a rotating space station

Mutual relations between different physiological functions in circadian rhythm in man.

Organizational, psychological and physiological stress factors in coronary heart disease among engineers, administrative, and scientific personnel [NASA-TR-F-125217-1] p0437 77-2-13053

Statistical study of physiological and psychological factors in grounding of Italian Air Force flight crews
[AD-738817] p0438 77-2-14091

Physiological factors in color vision, simulation of visual systems, aerospace environment effects on visual perception, and electrophysiological aspects of eye responses
[NASA-TP-F-650] p0432 77-2-15028

Physiological optics and psychophysiology of visual research in USSR
[AD-738818] p0132 77-2-15029

Polarization measurements and optical model for anisotropic areas in eye tissue
[AD-738819] p0136 77-2-15060

Circadian rhythms related to space missions noting endogenous rhythms
[AD-738820] p0193 77-2-16042

Physiological evaluation of disposable jet transport passenger oxygen mask at high altitude
[BS-AIR-72-10] p0048 77-2-25131

Literature survey and review of factors which appear to be critical in auditory comprehension for application to programs of listening abilities enhancement for Navy personnel
[AD-743946] p0570 77-2-33092

PHYSIOLOGICALacockg
Hypothermia induced by hypoxia in rats, discussing colonic temperature during high altitude exposures and seasonal variations

Physiological response to effective visual stimuli, observing signal value change effect on forehead pulse amplitude and galvanic skin response

Nerve tolerance to long term accelerations or supergravities, detailing physiological consequences

Short term response of insulin, glucose, growth hormone and corticosterone to acute vibration stress in rats

Receptor activity control from clinical physiological and electrophysiological observation data analysis, noting central nervous system role and feedback and self adaption capabilities

Inert gas narcosis under hyperbaric conditions relationship to mental performance and auditory and visual evoked responses in man

Heart and respiration rates response to free fall parachuting, using FR/78 telemetry

Pyransal tract euron reactions to atonicic and affrent stimuli in cats, determining somatosensor cortical neurons by intra- and extracellular potential outlets

Rats auditory cortex electrical responses to ultrasonic stimuli, determining maximum sensitivity frequency range

Vestibulary and metabolic responses of unanesthetized dogs exposed to various carbon dioxide concentrations at 2 and 18 C, discussing oxygen uptake relation to cold

Physical interpretations of physiological control, covering history, biochemical oscillator viewpoint of life and conferences

Alpha-L-fucosidase, beta- and alpha-D-galactosidases and alpha-D-mannosidase activity changes in human placenta at various embryogenesis phases

Retinal motor light/darkness responses phylogenetic variations, discussing retinal elements structural and functional development in fishes and amphibians

Visual response to monocularly and dichoptically presented flashed patterns, discussing physiological mechanism based on cortical visual field concept

Heat exposure effect on Sidman avoidance performance in rats, discussing organa thermoregulatory capacity disruption and shock and body temperature regulation

Physical exercise effect on ECG atrial recovery wave duration and magnitude in humans with A-V blocks

Astronaut zero gravity adaptive responses in performance, locomotion, orientation, sleep and physiological and functional characteristics

Operant conditioning for producing gross motor responses, discussing application to physical medicine and rehabilitation with mentally retarded Down syndrome children

Daily prolonged exercises effects on human muscle glycogen utilization, noting reduced lactate accumulation and increased free fatty acid levels

Human coagulation and anticoagulation blood system changes due to emotional stress during parachute jumps, noting plasma recalcification time increase

Subject Index

Physiological responses contd

Human vestibulo-ocular responses to oscillatory rotational stimulation during various sleep and arousal stages, discussing Sugi-Jones reflex system mathematical model

Cats cochlear and cochlear nucleus neural responses in auditory masking of low frequency tones, showing phase locked cells progressive desynchronization with intensity

External biodynamic models for human mechanical response to various environmental forces, emphasizing injury mechanisms

Exercise effects on pulmonary circulation in dogs, measuring palatable arterial flow and pressure and vascular input impedance, resistances and hydraulic power

Single olfactory bulb units under cyclic stimulation, observing activity related to inhalation cycle and odor quality

Hypoxia effect on diurnal autonomic activity rhythms of narrow arthropod system of quinea pigs in pressure chamber

Human craniocerebral trauma dependence on impact conditions, giving case histories

Rapid ventilatory response in rats at work on set for different standard starting conditions, discussing relation to work load and conditioning process

Human taste papillae sensitivity to chemical stimuli, showing stable quality and intensity response patterns

Occipital and vertex visual evoked response relation to sensory information, perception and stimulation

Electrophysial study of antagonist muscles reactions to achilles tendon percussion or whole body sudden motion via test stand jerking

Electrophysiological responses to maximum exercise in healthy humans from polargraphographic display of heart vector changes

Suppression of visual evoked responses to low intensity light flashes and shifting stripe patterns during naccadic eye movements

Extraretal inflow eye position information awareness from experimental load application to eyes in total darkness

Computerized simulation from model of human pupillary motor behavioral response to light, accommodation and farsional inputs

Acid base balance in arterialized capillary blood in men after maximal short duration exercise

Eastbound and westbound transmeridian flights effect on body temperature and psychomotor and visual performance circadian rhythms, discussing readjustment times

Cardiovascular and respiratory responses to intrarterial injection of K and Na ions in dogs for peripheral receptor site determination

Hyperbaric oxygen exposure effect on cardiovascular system in rats, discussing pulmonary edema relation to hyperensive left ventricular failure

Galvanic skin response techniques for palmar and dorsal sweat detection during motion sickness by vestibular stimulation, comparing arousal and thermal sweat response

Human performance and exhaustion predictive model from responses to exercise and environmental stressors, considering circulation, thermal regulation, work load and oxygen pressure effects
PHYSIOLOGICAL RESPONSES CONTD

Inhaloed oxygen pressure variation effects on adenosine, glucose, lactate and pyruvate levels in rat brains, noting anoxic limit value relation to age

Light-dark cycles and physiological stress stimuli effects on circadian rhythm in rat blood serum serotonin levels

Endurance exercise effect on respiratory capacity in white, red and intermediate muscles in rats, relating fiber type to oxidative capacity

Animal response to sonic booms, considering shock reactions in detail

Respiration in altered gas environment for spontaneous breathing and voluntarily maintained pulmonary ventilation level conditions

Arterial chemoreceptor denervation influence on rat respiratory response to hypoxic and hyperoxic gas mixture breathing

Human reactions to sonic boom acoustic stimulus, noting startle reflex responses

Calorimetric study of sweating man response to drinking hot saline solution as function of temperature, volume and malodor of ingested liquid

Isolated specific color dependent waveform of visual evoked response to strong colored lights relating luminance and wave amplitude changes

Sympathetic responses in human skin nerves with accompanying vasomotor reactions induced by emotional, thermal and respiratory stimuli

Single lateral geniculate neuron recording during receptive field-centered flashing spots showing variations for intensity response function comparison with optic neurons in cats

Lenticular conditioning-shock stimulation effect on cat visual cortex response to light stimuli, noting lateral gyrus photically evoked potential amplitude increase

Cardiovascular responses to positive pressure oxygen breathing from blood pressure and heart and respiratory rate measurements

Electroeyosgrams and myograms responses in phasic stretch reflex under strabismus conditions as index of fascimotor activity level in normal humans

Mountain sickness relation to ventilation response to hypoxia, noting response intensity dependence on peripheral chemoreceptor sensitivity

Cat and rat cardiac and cardiovascular reflexes response to electric pole stimulation of sensoriomotor cerebral cortex

Cat auditory cortex neurons response to auditory and vocalic anesthetic body electrical stimulation

Cerebrospinal fluid pH change effects on cat respiratory response before and after vagotomy, showing vagal activity relation to central chemical control of respiration

Metabolic and hormonal response adaptation to prolonged hypodermatia in water immersion/heat out, noting diurnal and nocturnal differences in circadian rhythms

Parachutist biomedical responses in aerial tow at 110-175 knots, determining heart and respiration rates and urinary catecholamines

Acceleration stress effects on splanchic blood flow due to organ displacement and neurogenic vasorestriction in vascular beds

SUBJECT INDEX

Periodic, continuous and aperiodic white noise effects on human serial decoding performance, relating subjective and automatic responses

Physiological and biochemical responses of Paramecium caudatum to hyper- and hypoxic stresses, discussing protoplasmic inactivation by high oxygen pressure

Thermoregulation changes during simulated weightlessness of prolonged bed rest, noting lower sweating threshold and decreased vasodilation/autonomic dysfunction

Circadian rhythm of visual accommodation responses and physiological correlations during target tracking, recording monocular focus state by IR optometer

Physiological, and subjective responses of physically fit young men to combined exercise-carbon dioxide stress tests

EEG recording and analysis by analog technique as means of studying human responses to hyperventilation

Cardiorespiratory response to breathing dense sulfur fluoride-oxygen mixture under physical exercise conditions

Pilot and back-seat man physiological responses during high-g aerial combat maneuvers in F-4E aircraft, discussing ECG, respiratory rate and minute volume

Neuroendocrine responses in microwave radiation exposed rats, correlating thyroid and thyrotropic activity

Miniature swine as human analog to investigate physiological response to high positive acceleration, comparing human and animal tolerances

Physiological evaluation of diastole mechanism in rat hypertrophy myocardium as function of heart rate, Ca ion concentrations and temperature

Disposable emergency oxygen mask for air passengers based on continuous flow, phase dilution principle, describing altitude chamber tests with human subjects to study physiological responses

Rat adrenal cortex morphology after 24 hour transpulmonary stress tests, studying changes in lipid, ascorbic acid and BHA content and acid phosphate activity

Quantitative model to describe vestibular detection of body sway motion in postural response mode

Mechanical vibration induced physiological changes in rats, determining plasma Ca, Sc and inorganic phosphate concentration and xanthine oxidase activity response to frequency and g-levels

Gas mask-caused air flow resistance effects on respiratory and circulatory response to exercise, assessing maximal oxygen uptake

Alveolar carbon dioxide pressure-ventilation response curve measurement by Campbell rebreathing method in consecutive daily trials

Five-component cyclic model of retinal circadian rhythms: photopigment kinetics for photochromic changes corresponding to rod adaptation in rat and man in dark

Consensual photopupil responses to intermittent light flashes recorded in full dark adaptation, noting bleaching and backgrounds effects

Povial and nonpovial afterimages effects on saccadic behavior of eye movement

A-316
PHYSIOLOGICAL TELEMETRY

Physiological aspects of visual perception and pattern recognition
[AD-731898] p0193 W72-16036

Respiratory perception and behavioral responses of dogs and mice to gas composition changes
[NASA-CH-77-305] p0196 W72-16062

Analysis of vestibulo-ocular counterroll reflex in Rhesus monkeys subjected to high gravity forces
[AD-703156] p0198 W72-17032

Physiological responses and heat tolerance for work induced heat stress in man wearing liquid cooled garments
[NASA-CP-115420] p0201 W72-17055

Time series method for measuring human behavioral and physiological response rhythms
[AD-725279] p0204 W72-15154

Biotelemetric equipment for measuring physiological responses of freely moving human beings
[AD-731154] p0311 W72-20147

Biotelemetric measurements of physiological responses during labor and sports activities
[AD-731154] p0311 W72-20168

Effects of nocturnal jet aircraft noise on psychological arousal patterns in sleeping humans
[NASA-CP-2036] p0357 W72-23073

Procedure for determining cases of mild intoxication based on postrotational fixation systems
[AD-729611] p0472 W72-28069

Clinical evaluation of human physiological acclimatization processes in Antarctica
[AD-733622] p0477 W72-28012

Physiological characteristics of human physiological acclimatization in Antarctica
[BAE-697-15863] p0560 W72-28030

Effects of high intensity anticollision light pulses on physiological responses of instrument-rated pilots and non-pilots
[AD-732935] p0336 W72-26065

Computer analysis of cerebrovascular system response during exercise, atrial pacing, and drug injections
[AD-737747] p0472 W72-28068

Effects of low altitude high speed flight on physiological responses, cumulative fatigue, and decrease in performance capabilities of aircrafts
[AD-737727] p0472 W72-28069

Temperature regulatory adjustment in men in response to work and heat
[AD-739038] p0472 W72-28084

USSR aerospace research on artificial gravity environments and space suits
[JPBS-5658] p0477 W72-28090

Artificial gravitational environment for maintaining physiological processes and astronaut workability during prolonged space flight
[AD-740457] p0717 W72-28013

Physiological potential shifts in chinchillas exposed to noise stresses of 500 Hz and 95 dB
[AD-740207] p0463 W72-29076

Biodynamic cerebellar model for mammalian acceleration response
[TH-11527] p0473 W72-30074

Models for measuring human response to impact shocks and vibration
[AD-739040] p0524 W72-30066

Effects of confined submarine environments on crew performance and biological processes during prolonged subcruise
[AD-740796] p0535 W72-31129

Measurement of arrhythmia in relation to physical and mental work loads
[RAF-LIB-THAPS-1585] p0560 W72-32092

Effects of space flight on changes in blood composition and body functions
[NASA-77-7-14535] p0566 W72-32139

PHYSIOLOGICAL TELEMETRY

TH E BIOTELEMETRY

PHYSIOLOGICAL TESTS

MT BODY SLOPE TEST

MT CARBOXYHEMOGLOBIN TEST

MT EAR PRESSURE TEST

MT VESTIBULAR TESTS
Screening test for physical fitness on bicycle ergometer, comparing endurance indices derived from heart rate, oxygen consumption, oxygen debt and work rate measurements p0009 A72-10212

Optimum muscle work conditions experiments with rabbits, correlating total work performance and power output with muscle temperature variations p0023 A72-12013

Percutaneous blood pressure third order wave onset mechanism in arteriosclerotic dog showing changed blood and respiration dynamics p0023 A72-12014

Acute hypoxemia norethopitropic effect in rabbits, describing carbon dioxide inhalation period, presyncaptic and synaptic phases and recovery phase p0017 A72-12015

Non-monotonous auditory stimulation frequency effects on human orienting reaction habituation and sleep onset p0010 A72-12494

Auto- and cross correlation functions for neuron reactions in vasomotoric center to adequate stimulation of cat's vestibular apparatus p0016 A72-17673

Organism blood volume and loss determination by measuring human body electrical resistance, noting unsatisfactory results p0111 A72-19998

Visual acuity measurement methods, comparing angular acuity by Bayne otopmeter and morphoscopic acuity by Merckle otopsotmetic scale p0151 A72-19246

ECG evidence of myocardial ischemia in patients without arteriographic evidence of coronary artery disease, studying avascular oxygen supply p0160 A72-19995

Anesthesia evolution and treatments in armed forces aircraft, noting acetycholine test p0176 A72-21270

Temporal summation function form change during dark adaptation, noting relationship to change under other stimulus manipulations p0215 A72-22616

Respiration function testing device using spirometographs and gas analyzers p0221 A72-23256

Physiological index changes in parachutists of various ages, considering plasma recalcification, blood prothrombin, hemoglo- tine, fibrinolitic activity, pressure and heart heat p0278 A72-26988

Visual acuity measurement by dynamic and static tests as function of target velocity and exposure time p0314 A72-30042

Standardization of microwave irradiation experiments on animals, discussing density level evaluations and local vs. whole-body irradiation effects p0340 A72-30766

Annual clinical and physiological evaluation of test pilots physical performance over ten year period from body composition, pulmonary function and work capacity measurements p0348 A72-31093

Effects of instructions on measures of state and trait anxiety in flight students p0409 A72-34648

Hemorrhage retina in ultral trabecular alteration, and damage in rods and cones produced by Q-switched ruby laser shockwave radiation p0417 A72-35396

Study of bilateral cortical nerve connections between the preoral gyms and various cortical regions p0463 A72-39323

Problems of artificial gravitation in terms of experimental physiology p0492 A72-40444

Separation of central effects of CO2 and nicotine on ventilation and blood pressure p0498 A72-40916

Body orientation under vertical sinusoidal vibration p0499 A72-41019

The Bacruz index and its clinical evaluation in electrocardiography with regard to the selection and control of air crews p0500 A72-41193

Potassium chloride test for electrocardiogram evaluation in flight personnel medical appraisal p0506 A72-41747

Prediction of vegetative reactions in the case of stress and extreme effects upon the organism p0508 A72-42069

Thirty day experiment for assessment of weightlessness simulation test methods and evaluation of applicable prophylactics p0543 A72-43912

Health condition changes in test subjects during strict bed rest in hypokinetie recumbent and antinotoxic position subject to lower body negative pressure p0543 A72-43913

Changes in the impulse activity of cortical neurons during selective reinforcement of a chosen range of their interpulse intervals p0546 A72-44087

Post-sympathetic potentials of motor neurons of the facial nerve nuclei evoked by afferent and corticonuclear pulse stimulation p0546 A72-44091

Procedure for determining cases of mild intoxication based on postrotational fixation nystagmus p0554 A72-45128

Physiological tests of vestibulo-ocular reflex by counterroll to determine effects of positive acceleration on dynamics of vestibular system of rhesus monkeys (ABR-TB-71-59) p0593 A72-25040

Design and operation of IMELS (NASA-CR-115664) p0605 A72-25143

Method for testing hypoptic, hystroptic, mesoecopic, and antigent vision using speckle patterns of laser (AD-742792) p0632 A72-31107

Experimental determination of visual field dependency of human test subjects in erect and supine positions (NASA-TN-D-6603) p0734 A72-31121

STUDY INDEX

PHYSIOLOGY

AT AERODYNAMICS

AT BODY COMPOSITION (BIOLOGY)

AT ELECTROPHYSIOLOGY

AT HEMOPHYSIOLOGY

AT NEUROPHYSIOLOGY

AT PSYCHOPHYSIOLOGY

AT RESPIRATORY PHYSIOLOGY

Foresight, forecast and prognosis concepts in physiology, discussing intuition role and relation between molecular and cellular processes and organism activity p0029 A72-12346

Energetic motor-activity rule hypothesis for physiological mechanisms of certain ontogenesis patterns, suggesting motor activity as excess anabolism induction factor p0213 A72-22225

Russian book - mechanisms regulating physiological functions p0394 A72-35014

Clinical observations as a research method in physiology p0416 A72-35017

Effects of very low calcium diets on human calcium metabolism and osteoporosis development (NASA-CR-11524a) p0608 A72-12617


Analysis of human subjects to determine skeletal configurations of operator in pulling or pushing heavy loads (AD-729827) p0414 A72-15106
PIASECKI MILITARY AIRCRAFT

Analysis of histologic substrate of atherosclerotic transpiring without symptoms in young human subjects p0204 A72-17073

Effects of gravity on neurosecretory physiology in fresh water teleost fish [NASA-CR-125689] p0269 A72-19072

Effects of partial and whole body radiation on biochemistry and physiology in humans [AD-730205] p0254 A72-19110

Clinical observation of massive injury causing serum enzyme activity in man after crash accidents p0258 A72-19138

Physiology of wheat seed germination and seedling growth during orbital flight [KERT-P-16296] p0302 A72-20056

Physiological stressing and conditioning ergometer system [NASA-CASP-MPS-21019] p0310 A72-20112

Environmental and endogenous timing factors as stimuli for bird migration p0397 A72-25082

Intraperitoneal administration of physiological solutions as alternative method for hydrating human body [NASA-TT-P-16574] p0561 A72-32103

PIASECKI MILITARY AIRCRAFT

U MILITARY AIRCRAFT

PIECING

PIECING U MILITARY CLEANING

PIECING U SENSORS

PIECING U SENSORS

PIECING

Inflatability and flotation of one man life raft after puncture to main wall [NASA-CASP-LAR-10246-1] p0317 A72-21076

PIECING

Piezoelectric transducer for indirect on-wrist blood pressure measurements for clinical environment p0288 A72-27961

PIGONS

Component duration and relative response rates in multiple schedules of pigeon training p0186 A72-22175

Measurement of neurovascular excitation variations in course of acute glucidic nutritional imbalance in pigeons [NASA-TT-P-16403] p0034 A72-10074

Analysis of effects of toposcape on homing ability of pigeons as determined by ground release and helicopter tracking p0397 A72-25077

Analysis of cues used by homing pigeons with emphasis on effects of sun location and magnetic fields p0397 A72-25079

Light source position mechanism of homing pigeons p0397 A72-25080

Pigeons as navigation aids to homing pigeons p0399 A72-25098

Influence of discriminative training and stimulus control on key pecking behavior in pigeons [NASA-CR-127772] p0400 A72-25049

Effects of Phosdrin, cholinesterase-inhibiting antibiotic, on pigeons and squirrel monkeys in relation to aerial application poisoning [NASA-AH-72-29] p0567 A72-33075

PIGMENTS

BY CHLOROPHYLLS

Chlorophylls

Porphyrin exobiology, discussing organic and random biosynthesis and extraterrestrial existence based on stellar spectral evidence p0097 A72-16130

Phase shifting effect of light on circadian rhythms and photoreceptive pigment location in Drosophila in posttreatment stages p0157 A72-19536

Apollo 12 material effect on tobacco tissue cultures, noting pigment increase p0284 A72-27626

Five-component cyclic model of retinal photopigment kinetics for photochemical changes corresponding to rod adaptation in rat and man in dark p0284 A72-27626

SUBJECT INDEX

Human retinal rod rhodopsin bleaching and regeneration measurements, tracing dark adaptation curves p0332 A72-29966

Dark adaptation studies of bleach-induced visual threshold rise and subsequent return to rhodopsin level p0361 A72-31364

Lamellar structure and rhodopsin location in bleached and unbleached rod photoreceptor membranes of dark adapted frog retinas by X ray diffraction study p0367 A72-32199

The distribution of the long wave photoreceptors in the compound eye of the honey bee as revealed by selective osmic staining. p0411 A72-34077

Electroretinographic evidence for a photopic system in the rat. p0411 A72-34078

Fly colour vision. p0426 A72-36609

Isolated retinal receptor potential amplitude in relation to visual pigment bleaching kinetics, indicating excitation-inhibition receptor response generation mechanisms p0451 A72-37300

Spectral sensitivity after prolonged intense spectral light exposure of rhesus monkeys in cone corneas, demonstrating long term loss of cone photopigment response p0495 A72-40739

The presence of F700 in chloroplast fragments prepared by short time incubation with Triton X-100. p0597 A72-44325

The photopic pigmentation hypothesis of complementary after-images - A psychophysical test. p0597 A72-44376

Light absorption by visual pigment in photoreceptor, noting Airy disk diameter effect p0549 A72-44388

Laser microspectral analysis of inorganic and metallic components and pigmentation mechanisms in insects and man [NASA-TT-P-18353] p0529 A72-30116

PIGS (SWINE)

U SWINE

PIG FOUNDATIONS

Portable air supply and monitoring system for personnel working on offshore platforms p0446 A72-27123

PILOT ERROR

Aircraft accident statistical projections from human error review, analyzing situational circumstance limitations p0343 A72-31086

Airplane attitude display motion relationship to external world as factor in pilot error due to visual frame of reference shift p0345 A72-31151

Grouping of the causative factors in investigation of aircraft accidents attributed to pilot errors. p0410 A72-34557

Relation between a pilot's memory perceptual of linear accelerations and the aircraft motion. p0557 A72-45654

Pilot steering error in simulated instrument flight approach to terminal area flight path approach to terminal area p0439 A72-27085

PILOT PERFORMANCE

Foot forces exerted at various aircraft brake-pedal angles, observing 20 degree zone with serious effectiveness [AD-733551] p0007 A72-10567

Soyuz 9 flight crew physiological data, discussing mental and physical performance and adaptation and readaptation to space-earth environments [AD-732025] p0012 A72-10533

Navigators, pilots and airman training response to Coriolis accelerations, investigating nystagmus sensitivity coefficient relationship to motion sickness resistance p0014 A72-11286

Disorientation and related experiences reported by pilots flying several aircraft types, comparing with previous reports
PILOT SELECTION

Airplane attitude display motion relationship to external world as factor in pilot error due to visual frame of reference shift

Aircraft pilot reaction capability for switch activation in response to voice commands, tone initiation and termination, noting standard deviation

Airline pilot rotation perception during angular acceleration tests, noting power law description of subjective motion for three major body axes

Airline management and flight crew role in prevention, detection and dealing with airline pilot incapacitation in flight, noting physiological and psychological factor recognition

Performance measurement in helicopter training and operations

Congruent and spurious motion in the learning and performance of a compensatory tracking task

Resumption of flight after retinal surgery

Active leisure effect on pilot work efficiency, health maintenance and job longevity

Studies in pilot training - The anatomy of transfer

Results of the investigation of different extrapolation displays

Influence of prolonged longitudinal accelerations on control habits

Biological rhythms origin and mechanism, discussing 24-hour cycle, subcellular biological clock and rhythm disruption effects in neuropsychiatriasts and pilots

Pilot workload assessment technique during transport aircraft approach and landing, correlating with aircraft serviceability, crew efficiency, navigation aids, meteorological conditions and control procedure factors

Intoxicating liquor and the general aviation pilot in 1971

Effect of combined environmental stresses during flight on pilot performance

Measurements of pilot stress in simulated aircraft control tasks

Analysis of international aviation standards for colors and color perception required for civil aircraft pilots

Development of model to determine effects of pilot performance and aircraft dynamics on accuracy of tactical weapon delivery

Mathematical model for adapting psychometric data in automated pilot performance evaluation

Technological forecasting of future pilot-aircraft interface requirements

Analysis of pilot performance and response to collision threats provided by pilot warning instruments

Statistical study of physiological and psychological factors in grounding of Italian Air Force flight crews

Determination of optimal stability augmentation system for minimizing pilot rating for pitch tracking task

Convergence effects in visual distance perception of pilot during aircraft landing

Pilot tracking and scanning performance and strategy alteration for two tracking situations

SUBJECT INDEX

Husan factors engineering to determine visual discrimination of helicopter pilot and effect on helicopter control

Vertical cockpit acceleration and vibration measured in Boeing 707 noting pilot performance

Development of flexible psychomotor testing system for use in pilot selection program

Effects of different alcohol dosages and levels of instrument display illumination on pilot tracking performance during vestibular stimulation

Pilot performance in target acquisition tasks compared in experiments involving transition from direct to TV mediated viewing and for color vs monochrome TV displays

Prediction and measurement of multiaircraft pilot performance, and system design implications for pilot capability and limitations

Measurements of multiaircraft pilot response during simulated instrument approach

Analysis of effects of alcohol level on performance of aircraft pilots during simulated instrument landing approach

Measuring describing functions by using cross power spectral density of pilot output and error

Contribution of reduced visibility and turbulence to loss of aircraft control and inadvertent aircraft maneuvers

Analysis of aircraft pilot reports on occurrence of unreality and detachment during flight and relation to spatial disorientation

Mathematical models for describing pilot performance during multiple input-output control tasks

Mathematical model for describing pilot performance during single input-output control tasks

Pilot tracking performance during in-flight simulated instrument approaches with single engine general aviation aircraft

Pilot performance and reaction time in response to auditory signals during low level helicopter flight

Effects of high temperature on pilot performance as determined in flight simulator during simulated instrument flight

Effectiveness of training transfer by pilot trainees from ground based simulators to actual flight

Pilot describing function technique for analyzing secondary task influence on tracking performance

Effect of preview on pilot describing functions in simple tracking task

Husan performance in transfer of instrument flight training with flight simulator

Autostereoscopic techniques for measuring flight performance of helicopter trainees and pilots

Correlation between subjective pilot opinion and performance factors of in-flight-pilot dynamical system

Neurological effects of drug isoniazid on pilot performance

Pilot selection - "SELECTIOB"

Long term prognosis of transient hypertension in young male adults, evaluating importance in pilot selection

Student naval aviator selection by multiple correlation technique using noncognitive college and flight background questionnaire to reduce attrition rate

A-322
PITCH ATTITUDE CONTROL

Role of flight surgeon and physician-pilot in evaluation and treatment of jet fighter pilots
p0124 H72-14094

Physiological factors possibly contributing to coronary risk among German Air Force pilots
p0126 H72-14104

Ophthalmological reasons for grounding pilots of German Air Force
p0126 H72-14108

Psychological factors in pilot grounding in German Air Force
p0127 H72-14111

Six display formats used by three instrument-rated pilots to regulate against random disturbances for precision tracking
[AD-731950] p0240 H72-18125

Radiological observations of spinal injuries to pilots caused by sudden ejection
p0259 H72-19148

Conventional and high frequency audiograms of prop, jet, and rotary pilots
[AD-732606] p0476 H72-20801

Poor in-depth studies of flight training skill trial and error vs prompted learning on efficiency transfer, and stress
[AD-739614] p0479 H72-28120

Binocular disparity tolerances of pilots viewing dynamic head-up displays
[AD-741218] p0486 H72-29095

EEG as indicator of sensory and motor response in pilot studies
[AD-740824] p0535 H72-31127

Effect of maneuvers and flight conditions on helicopter pilot eye movements
[AD-742276] p0565 H72-32130

PITCH BEAMS

Linear energy transfer distribution for negative pions beams in human tissue, calculating relative biological efficiency and oxygen enhancement ratio
[CBEH-71-16] p0026 H72-12064

PIONS

Absorbed doses at various depths in water target exposed to charged pions, muons and electrons beams, using Monte Carlo program
[CBEH-71-16] p0026 H72-12063

PIPE FLOW

Flow of Casson fluid under periodic pressure in rigid tube, and quasi-steady solutions applicable to blood flow
[AD-731726] p0242 H72-18089

PIPES (TUBES)

Permeation tubes as calibrated sources of gas in toxicological studies
[AD-727516] p0036 H72-10091

Open type urine receptacle with tubular housing
[NASA-CASE-BSC-12324-1] p0353 H72-22093

Measuring method for cutaneous perception using instrument with elongated tubular housing
[NASA-CASE-BSC-13609-1] p0403 H72-25122

PITCH

An aspect of the problem of pitch dependence on the duration of short sinusoidal signals
p0425 H72-39217

PITCH ATTITUDE CONTROL

U LONGITUDINAL CONTROL

PITUITARY GLAND

Hypophysectomy in rats, resulting in prolonged red blood cell survival due to oxygen consumption decrease and altered erythrocyte enzymatic processes
p0001 H72-10075

PITUITARY HORMONES

Shock-induced fighting effect on pituitary adenocorticotrophic hormon ACTH and adrenocortical steroids plasma concentrations in rats, relating physiological stress to physiological function
p0096 H72-16080

Human male gonadotropin secretion relation to sleep stages, using electrophysiologic recordings and radioimmunoassay techniques
p0103 H72-17128

Changes in the pituitary-thyroid and -pineal systems under conditions of functional loading and of physiological immobilization.
 p0551 H72-44023

SUBJECT INDEX

Interrelationships of anterior pituitary hormones in stress situations
[AD-732554] p0244 H72-18100

PLANAR POSITIVE INDICATORS

Sonar operator visual scanning of simulated PPI display
[AD-736175] p0354 H72-22108

PLANET OBIERS

U PLANETARY EVOLUTION
PLANETARY ATMOSPHERES

NT JUPITER ATMOSPHERE
NT MARS ATMOSPHERE
NT VENUS ATMOSPHERE

Divine operations medical aspects significance for manned planetary surface exploration in high density atmospheres, considering protective clothing, breathing apparatus and gas mixtures, etc
p0280 A72-27415

PLANETARY ENVIRONMENTS

NT JUPITER ATMOSPHERE
NT MARS ATMOSPHERE
NT MARS ENVIRONMENT
NT PLANETARY ATMOSPHERES
NT VENUS ATMOSPHERE

PLANETARY EVOLUTION

Planetary atmospheres composition diversity, discussing evolution of Mars, Venus, earth and Jupiter from primitive solar nebula
p0184 A72-22012

Life beyond solar system, discussing planetary formation and prebiological organic chemistry developments and interstellar communication
p0184 A72-22016

PLANETARY EXPLORATION

U SPACE EXPLORATION

PLANETARY QUARANTINE

Papers on planetary quarantine covering microbial survival in deep space, contamination by nonsterile flight hardware and sterilization
p0010 H72-10617

Planetary quarantine microbiological and engineering problems, discussing cost, international policies, contamination and sterilization
p0010 H72-10618

Planetary quarantine cost and mission success constraints, formulating mathematical models for international goals and implementation systems
p0010 H72-10619

Planetary quarantine microbial contamination control, considering clean room concept and microbiologic barrier techniques
p0010 H72-10621

Nonsterile space flight hardware effects on planetary quarantine, evaluating contamination sources, design and mission parameters, cleanliness conditions and bioload
p0011 H72-10624

Development of planetary quarantine in the United States.
p0539 A72-43382

Effects of aeolian erosion on microbial release from solids.
p0539 A72-43384

Application of planetary quarantine methodology and spacecraft sterilization technology to improved health care delivery.
p0554 A72-45148

Requirements for effective planetary quarantine and spacecraft sterilization

Mathematical models for predicting safety margins in planetary quarantine
[NASA-CR-126032] p0313 H72-21050

Planetary quarantine laboratory experiments on thermal resistance of airborne spores and microbiological examination of space hardware
[NASA-CR-126213] p0315 H72-22079

Planetary quarantine bibliography
[NASA-CR-127112] p0355 A72-26074

Sterilization procedures and experimental designs for planetary quarantine programs
[NASA-CR-127835] p0522 H72-30004

Progress report for development of planetary quarantine measures
[NASA-CR-126367] p0556 H72-33076

PLANETARY RADIATION

Brief survey of the problems of space radiobiology
Gravity effects on plant organ orientation, with respect to force direction from Chara rhizoid cell statoliths

Action of a constant magnetic field on plant growth

Determination of copper, iron, cobalt, nickel, and manganese in biological samples of vegetable origin

Effects of space flight factors on formation of anomalous metabolites and activity of enzymes in plants

Production of condensates from man occupied chambers and application to repeated cultivation of plants

Fearn-infrared reflective vs low visual reflectance of green plant tissue

Experiments with invertebrates, plants, and cellular systems on Biosatellite 2 flight

Effect of weightlessness and spacecraft environment on spontaneous and radiation-induced genetic mutation rates and cytologic changes in Tradescantia

Effect of weightlessness on biochemical response of monocot seedlings

Space plant growth in the presence of radiation

Biological effects of Zond 5, 6, and 7 flight on man occupied chambers and application to repeated cultivation of plants

Analysis of carbon monoxide absorbing capability of soils and plants

Critical review of research on assimilation of nitrogen by higher organisms

Plant cultivation in closed ecological system in space flight

Influence of closed microbial ecologies on atmospheric processes and effects on plant life

Effect of high pressure on physicochemical systems in animals and plants

Multi-cycle plasma arc evaluation of oxidation inhibited carbon-carbon material for shuttle leading edges.
PLASTISOLS

Pollution problems in Sweden, due to use of insecticides, heavy metals, and plastics p0087 N72-13960

PLASTISOLS

ET SMOKE

PLATELETS

Human epicardial arterial circulation platelet aggregates role in sudden coronary death, discussing relation to atherosclerotic atherosclerosis and acute attacks to thrombosis p0096 A72-16013

Dietary liquid effect on platelet adhesion and aggregation, blood coagulation and fibrinolysis and relation to atherosclerosis and thrombosis p0178 A72-21543

Crowding phenomenon effect on blood cell oxygen consumption, using Cartesian diver technique for polynuclearleukocyte, lymphocyte and platelet measurements p0287 A72-27842

Platelet electrophoretic mobility response to adenosine diphosphate (ADP) in patients with coronary artery disease p0361 A72-31283

Platelet aggregates role in intravascular vessel circulation impedance in patients dying suddenly of coronary artery disease p0365 A72-31770

PLETHYSMOGRAPHY

Respiratory flow resistance measurements in man, comparing esophageal catheter, plethysmographic, forced pressure oscillations and airway interrupter methods p0070 A72-15222

Combined photoelectric-photographic and plethysmographic technique for continuous measurement of rabbit ear vein diameter and tissue volume changes p0223 A72-23843

Plethysmographic and laryngoscopic investigation of glottis opening and airway resistance, relation to lung volume during panting and continuous slow expiration p0270 A72-26611

Water filled volume and strain gauge plethysmography for forearm blood flow measurement during isometric exercise p0272 A72-26622

Whole body plethysmograph system for use in measuring airway resistance under ambient hyperbaric conditions for normal breathing patterns [FAD-723-4562] p0317 N72-27081

Plethysmograph for measuring human body impedance changes during space flight FAD-76866] p0847 N72-29097

PLESS

U PORTABLE LIFE SUPPORT SYSTEMS

PLUGS

U ROCKET EXHAUST

PLUTONIUM

U PLUTONIUM ISOTOPES

Effects of atmospheric distribution of plutonium on ecological systems of desert areas (UCLA-12-846) p0354 N72-22101

Biological implications of Pu accumulation in man and his environment (LA-DC-13083) p0357 N72-23075

PLUTONIUM ISOTOPES

Tissue equivalent human phantasms used to measure radiation dose rate of prototypic plutonium circulatory support heat sources [BBNL-3A-4121] p0564 N72-32123

PLUTONIUM 238

Vapor cycle engine for driving Pu 238 fueled heart assist system [FPU-20547] p0318 N72-21056

PLUGS

U RECORDING INSTRUMENTS

PHYSIOGRAPHY

PHYSIOLOGIC CONTROL

Operational performance of pneumatic seal-type facemask design p0455 N72-27130

PHYSIOgraphic EQUIPMENT

Designs for electro-pneumatic flow control valves for artificial limbs [AD-72692] p0042 N72-10129

PHYSIOgraphic PROBES

Pneumatic thermistor transducer to measure steep
PORTABLE LIFE SUPPORT SYSTEMS

**SUBJECT INDEX**

**POLUTATION**
- MT AIR POLLUTION
- MT ENVIRONMENTAL POLLUTION
- MT WATER POLLUTION

**POPBEBEBI**
- Polycarbonate merits as visual solid detector in high energy radiation dosimetry (CAS-71-33-6)

**POLYTHENIA**
- The effect of chronic erythrocytic polycythemia and high altitude upon plasma and blood volumes
- Ordinary and macroporous structured polycondensation oxidation-reduction polymers
- Synthesis, discussing application to organic impurities removal from atmospheric moisture condensates

**POLYBEBES**
- Contractile and muscle-like fibers and osmopumping systems for polymer engine and spring action studies

**POLYMERIZATION**
- MT COPOLYMERIZATION

**POLYBES**
- Entry and exit participation in prebiotic polymers, discussing ribosome bonds and messenger RNA
- Ion selective accumulation model of carbohydrates diffusing through artificial polymer membranes, relating prebiological systems to catalytic microsystems
- Toxicological evaluation of some synthetic materials designed for airtight space equipment
- Dynamic and static techniques for determining odor thresholds of polymers used in constructing human-occupied isolation chambers

**POLYBEBEPBES**
- Osmosis and polymeric properties and formation by Golgi complex, discussing role in neurocyte structure restitution following gamma irradiation

**POLYACREZABDES**
- MT CLYCOGBNS

**POLYBEBPEBEPBES**
- Development of materials for providing flotation capability for personnel wearing body armor

**POLYPOP**
- Interval scanning photomicrography for recording growth of microbial cell populations during incubation

**POLYBEBES**
- Compressible electrolyte saturated sponge electrode for biological applications

**POUBEBEBE**
- Ablogenic formation and fluorescence spectra of porphin, chlorin and bacteriochlorin during chemical evolution, using pyrroly-forsadehyde model

**POPBEBEBES**
- Photoporphyrin, chlorin and bacteriochlorin during random biosynthesis and extraterrestrial existence based on interstellar spectral evidence
- Ablogenic formation and fluorescence spectra of porphin, chlorin and bacteriochlorin during chemical evolution, using pyrroly-forsadehyde model

**PORTABLE EQUIPMENT**
- Results of development tests performed on portable clean room for controlling surgically induced infections
- Portable equipment for detecting myocardial activity (AD-735882)
- One hand backpack harness (NASA-CASE-LAB-70102-11)
- Portable device for dispensing potable water to crew members aboard operating spacecraft

**PORTABLE LIFE SUPPORT SYSTEMS**
- Design, development, and characteristics of portable life support system for extravehicular activity
- Feasibility and efficiency of portable recompression chamber for treating decompression sickness
- Conference on portable life support systems for human protection
- Effectiveness and limitations of current portable oxygen breathing equipment for mine rescue operations
- Design of gas mixture breathing systems for underwater diver equipment
- Portable life support systems for astronauts working outside of lunar module
- Performance of Apollo portable life support system on lunar mission
- Portable life support system for protective fully enclosed suits of shipboard personnel
- Portable breathing apparatus contains chlorate candle oxygen source for mine rescue operations
- Regenerative portable life support system development for extravehicular human activities during advanced space missions
- Carbon dioxide- and thermal-control in regenerative life support system for extravehicular human protection during advanced space missions
- Design of auxiliary survival shelter as portable life support system in mines
- Design of portable decompression chamber with sealed gon gas recirculation system for treating underwater divers
- Modified Apollo portable life support system for Skylab astronauts
- Design of deep sea heavy duty diving equipment for salvage divers
- Performance of closed circuit mixed gas underwater breathing apparatus
- Diving suit and heat element combinations for thermal protection of underwater divers
- Performance of liquid cooled gargant system inside pressure suit of pilot
- Design and performance of prototype portable heat source for providing thermal insulation in diving suit
- Portable air supply and monitoring system for personnel working on offshore platforms
- Water cooled pressure suit with regional body cooling for metabolic heat removal
- Automatic controller of liquid cooled space suit using human sweat rate as input signal
- Neck cooling collar for improved thermal comfort in hot weather
- Operational performance of pneumatic seal-type facemask design
Development of bactericide agent for space shuttle potable water system [NASA-CASE-NPS-21163-1] p0476 A72-28098
Sanitary and chemical evaluation of water regenerated from atmospheric condensate by extraction with sodium and alkyl phosphonate acids [NASA-CASE-NPS-21155505] p0478 A72-28108

SLEEP DEPRIVATION
Sleep deprivation affects on diurnal urine potassium excretion, showing individual circadian rhythms variations [NASA-TT-F-14124] p0328 A72-29320
Exchangeable potassium is heart disease - Long-term effects of potassium supplements and amiloride. [NASA-TT-F-14127] p0412 A72-36932
Ion alterations during myocardial ischemia. [NASA-TT-F-14127] p0416 A72-36994
Respiratory effects of hypochloremic alkalosis and potassium depletion in the dog. [NASA-TT-F-14127] p0490 A72-40416
Excitation contraction correlates in true ischemia. [NASA-TT-F-14127] p0562 A72-43814
Intracellular potassium in cells of the distal tubules. [NASA-TT-F-14127] p0555 A72-45231
Effects of potassium on muscle functions during physical exercise [NASA-TT-F-14127] p0519 A72-17031
Effect of potassium ion injection on quainocine, bretylium, and hexamethonium control of hypotension in rats [NASA-TT-F-14127] p0239 A72-18061
Influence of potassium and synthetic sugar diats on swimming duration in rats [NASA-TT-F-14127] p0260 A72-18071
Effects of chronic potassium deficiency on skeletal muscle cell excitability, resting potential, and latency time [NASA-TT-F-14127] p0241 A72-18075
Correlation between stress and urinary levels of 17 Ketogenic steroids and sodium-potassium ratio during 90 day manned test [NASA-CB-112020] p0252 A72-19099
Active transport of Na and K ions and reaction mechanisms for ATPase [NASA-CB-112020] p0438 A72-27075

POTASSIUM CHLORIDES
Potassium chloride test for electrocardiograms evaluation in flight personnel medical appraisal [NASA-CB-112020] p0244 A72-15174

POTASSIUM COMPOUNDS
BY POTASSIUM CHLORIDES
BY POTASSIUM OXIDES
POTASSIUM OXIDES
Sealed cabin air regeneration by means of potassium superoxide, noting weight and space savings [NASA-CASE-NPS-21155505] p0565 A72-33080

POTENTIAL ENERGY
BY BIOELECTRIC POTENTIAL
BY SPIKE POTENTIALS
POTENTIAL FIELDS

POTENTIAL FLOW

POTTING COMPOUNDS
Formaldehyde gas for sterilizing potting compounds and spacecraft and mated surfaces [NASA-CASE-NPS-21155505] p0565 A72-33080

POWDER (PARTICLES)
BY FIBERS
BY METAL POWDER
POWDER METLALLOY
Dry electrode manufacture, using silver powder with cement [NASA-CASE-NPS-21155505] p0402 A72-25121

U METAL POWDER
SUBJECT INDEX

POWER SPECTRA
Measuring describing functions by using cross
power spectral density of pilot output and error
[AD-734933] p0390 N72-24133

PPI (POSITION INDICATORS)
U PLAN POSITION INDICATORS
PRECAMBRIAN PERIOD
Hereditary endosymbiotic model of microbial
evolution of Precambrian prokaryotic and
eukaryotic cells
p0064 A72-14800

PREDICTIONS
U ACCIDENT PREVENTION
PREDICTION ANALYSIS TECHNIQUES
Forecasting technique for accumulated particulate
contamination on spacecraft assemblies,
discussing cleanliness optimization and test
procedures
p0147 A72-15763

Estimation of proton penetration and absorption of
heavy nuclei from cosmic rays during space
missions
[NASA-TH-P-6600) p0240 N72-18074
Temporal decay in predicting pilot proficiency
during flight training
[AD-733191) p0247 N72-18122
Techniques for predicting etiology of decompression
sickness in unpressurized aircraft above 20,000
feet
[AD-733116) p0254 N72-19106
Models and methods for quantitative predictions of
human performance in man machine systems
[AD-734432) p0263 N72-19180

Target background metric for predicting ability of
aircrew in unusual target acquisition tasks
[AD-736793) p0391 N72-24140
Validation of submaximal treadmill test for
predicting maximal oxygen consumption
[AD-736103) p0533 N72-31110

PREDICTIONS
U PERFORMANCE PREDICTION
Prediction rule in execution of manual control
with display device to aid human operator
adaptation
p0502 A72-41806

Prediction displays based on the extrapolation
method.
p0502 A72-41809

Psychophysical signal detection and predictions
based on two-state theory
[TIP-1971-16) p0381 N72-24062

PREDICTIONS
U PREDICTIONS
PREGNANCY
Testicular cerebelli microstructure and leaflets
strength in study of chronic and acute hypoxia
injury to fetuses during pregnancy and labor
p0229 A72-23193

Lymphoblastic transformation test for studying
immunity of pregnant women
[NASA-TT-F-14531) p0562 N72-32106
Non-specific placental extracts introduced into
pregnant and nonpregnant women for studying
repeated spontaneous abortions
[NASA-TT-F14602) p0567 N72-33074

PREHEATERS
U HEATING EQUIPMENT
PREHISTORIES
Tables and bibliographies on preserving biological
materials
[NASA-CH-114422) p0241 N72-16080

PREHISTORY
Transfer of food processing and preservation
technologies from NASA to industry
[NASA-CH-129415) p0087 N72-13071

PRESSURES
U VASCOCONSTRICTOR DRUGS
PRESSURE
U ATMOSPHERIC PRESSURE
U BLOOD PRESSURE
U GAS PRESSURE
U HIGH ALTITUDE PRESSURE
U HIGH PRESSURE
U HYDROSTATIC PRESSURE
U HYPERTENSION
U HYPERSONIC
U HYPOXIA
U ILLINESS
U IMPACT LOADS

PT INTRAOCULAR PRESSURE
PT INTRACRANIAL PRESSURE
PT LONERANGE
PT LONGEVITY INTENSITY
PT OVERPRESSURE
PT OUTER TENSION
PT PARTIAL PRESSURE
PT RADIATION PRESSURE
PT SOUND PRESSURE
PT STATIC PRESSURE
PT STOOL PRESSURE
PT WIND PRESSURE

PT FRENCH PRESSURE

Standardized treatment of decompression sickness
occurring while diving under pressure
[AD-737700) p0440 N72-27080

PRESSURE BREATHING
High pressure gas mixture breathing effects on
intracardiac external muscular electrical
activity and respiratory cycle time in rats
p0323 A72-28541
Vasoconstrictor /antidiuretic hormone/ role in central
vascular volume and fluid balance maintenance
during continuous positive pressure breathing in
dogs
p0420 A72-35917
Development and tests of sensitive technological
equipment for measuring sensory and motor impairment in
hyperbaric environments
[AD-735117) p0315 N72-21062

PRESSURE CARRIES
U PRESSURIZED CABS
PRESSURE CHAMBERS
U HYPERBARIC CHAMBERS
U VACUUM CHAMBERS
Pressure chamber training effects on rats chain
motor reflexes hypoxia adaptation, noting
minocycline gas recirculation system importance in
compensatory-adaptive reactions
[AD-735117) p0315 N72-21062

Prediction of vegetative reactions to external
actions on the organism
p0509 A72-42168

Feasibility and efficiency of portable
recompression chamber for treating decompression
sickness
[AD-733704) p0263 N72-19178
Design of portable decompression chamber with
monoclinic gas recirculation system for treating
underwater divers
p0443 N72-27116

PRESSURE DISTRIBUTION
Elastic lung shaped model for distribution
analysis of weight induced stresses, strains and
surface pressures in lungs
p0332 A72-28479
Effects of exposure to blast induced winds and
pressure variations on biophysical parameters
[AD-734208) p0313 N72-21054

PRESSURE EFFECTS
Human mental and psychomotor performance
measurements in compressed oxygen-bellum
atmosphere pressure chamber for dive between 100
and 1500 feet
p0149 A72-19026

Constrained microphone sensitivity and frequency
response characteristics measurement at normal
and elevated atmospheric pressures in hyperbaric
chamber air and sea-air environments
p0108 A72-17808

Mathematical-physical model for laser pulsing
radiation-induced pressure wave transmission
through surface and internal biological tissues
p0113 A72-18150

Extraretinal inflow eye position information
awareness from experimental load application to
eyes in total darkness
p0108 A72-17808

Airplane noise protective earplug design,
employing perforated and slit modifications for
additional protection without tympanic membrane
pressure excess risk
p0168 A72-20187

Splanchic vascular bed role in human blood
pressure regulation from lower body negative
pressure tests, measuring blood flow from
hepatic dye removal rates
p0172 A72-20089

A-329
Compression cycles effects on alveolar volumes of sea lions and dogs exercised lungs, noting decompression sickness prevention by airways 
cartilaginous reinforcement. 

Chinchilla and guinea pig tolerances to hypoxia 
and hyperoxia in pressure chamber tests, 
suggesting relation to red blood cell size and number. 

Increased atmospheric pressure influence on blood 
coagulation in rabbits, showing post-decompression hypercoagulation followed by hypocoagulation. 

Pressure sensitivity of Na-K-ATPase activity 
from rat intestine, investigating inhibiting effects of oxygen, nitrogen and helium tension increases. 

Chest strapping-induced increased lung recoil 
pressure effects on maximal expiratory flow 
relationship to lung surface compliance decrease. 

Cardiovascular responses to positive pressure 
oxygen breathing from blood pressure and heart rate and respiratory rate measurements. 

Pathological significance of high oxygen tension exposure effects on acid soluble collagens 
extracted from mouse skin. 

USAF V-51H noise protector earplugs modification, 
to allow for pressure equalization during aircraft climb and descent. 

Stapedectomy postoperative complications as flying hazard, discussing pilot reaction to middle ear pressure changes. 

Surface electrode distance, area and pressure 
effects on electromyogram recording of large 
skeletal muscle electrical activity during defined muscular tensions. 

Mathematical model for flow limitation in collapsible tube in relation to pressure in 
pulmonary and circulatory system. 

Neurologic oxygen toxicity - Effects of switch of inert gas and change of pressure. 

Oxygen consumption in liquid breathing mice. 

Speech intelligibility during exercise at normal 
and increased atmospheric pressures. 

Case report on dive decompression induced 
sarillar sinus barotraumas due to sinus pressure buildup caused by oticula blockage. 

Lower-body negative pressure as a method of 
preventing shifts associated with changes in the 
hydrostatic pressure of blood. 

Influence of elevated partial oxygen pressure on 
the sympathetic-adrenal and acetyl-choline systems. 

Unconjugated urinary corticosterone excretion in 
laboratory rats exposed to high pressure 
and hyperoxia environments. 

Modification of cardiovascular mathematical models for application to lower body negative pressure response. 

Pressure fields I pressure distribution 
Pressure gages 
Pressure meters 
Pressure gradients 
Pressure measurement 
Pressure regulators 
Pressure sensors
intrasurally implanted radio pressure transducers, describing receiver-detector-recorder system p0159 A72-19911

Respiration rate transmitter with miniature pressure transducer for measuring pneumograph variations in animals over FM-FM telemetry system p0173 A72-20898

Piezoelectric transducer for indirect on-wrist blood pressure measurements for clinical environment p0288 A72-27961

Optimal vascular pressure measurements with transducers located outside body with rigid and elastic tube couplings p0457 A72-37757

Simplified manufacturing techniques for ultraminiature capacitive pressure transducers for physiological measurements p0246 A72-18117

Baroreceptors as pressure transducers in cardiovascular system p0357 A72-23077

Implantable pressure transducers suitable for both arterial and venous applications p0478 A72-28110

PRESSURE SUITS

Pressure suit effects on psychomotor skills, testing mental dexterity, tracking skills, hand strength, steadiness and coordination for pressurized, unpressurized and shirtsleeve conditions p0233 A72-27496

Life support equipment and pressure suit operational requirements from viewpoint of flight crews and test pilots p0283 A72-27516

Tyalms and F-1 maneuvers acceleration tolerance protective effects during high-g centrifuging with and without anti-g suits p0298 A72-28318

Acceleration protection properties of modified partial pressure suit, determining tolerance limits by vision impairment criteria during centrifuge tests p0298 A72-28319


Evaluation of oxygen-sensing warning device for use in damage control suit system [AD-735377] p0317 A72-21062

Restraint torso for increased mobility and reduced physiological effects while wearing pressurized suits [NASA-CASE-MSC-12399-1] p0402 A72-25119

Device for regulating and monitoring pneumatic pressure in underwater space suit [NASA-CASE-RSP-20332-2] p0403 A72-25124


Portable life support system for protective fully enclosed suits of shipboard personnel p0404 A72-27111

Divine suit and heat element combinations for thermal protection of underwater divers p0404 A72-27120

Performance of liquid cooled garment system inside pressure suit of pilot p0404 A72-27121

Design and performance of prototype portable heat source for providing thermal insulation in diving suit p0444 A72-27122

Water cooled pressure suit with regional body cooling for metabolic heat removal p0444 A72-27124

HYPOXI INCIDENTS IN STRATEGIC AIR COMMAND DUE TO CABIN PRESSURIZATION MALFUNCTION p0179 A72-21566

Case report of rapid decompression in supersonic trainer aircraft pressurized cabin, discussing physical and blast effects, pressurization safety, decompression sickness and hypoxia p0267 A72-26020

Physiological and clinical effects of long distance flight in pressurized commercial planes with simulated altitudes over 1500 meters p0283 A72-27486

Viability of staphylococci isolated from humans subjected to long term isolation in pressurized cabins [MIL-1RTS-7117] p0438 A72-27074

PRESSURIZATION Coveralls and helmet for physiological protection in space environment p0390 A72-24136

PREVENTION

NT ACCIDENT-PREVENTION PRIMARY COSMIC RAYS NT SOLAR COSMIC RAYS Nuclear emission and solid track threshold doimetry for ion spectrum division of heavy relativistic particles in primary cosmic rays [CEBN-71-16] p0026 A72-12065

Primary cosmic ray interaction with tissue, emphasizing biological effects and nuclear reactions induced radioactivity in astronaut body p0049 A72-12911

Light flashes observed by astronauts on exposure to primary cosmic radiation during transular flights, investigating effect upon vision in man and animal p0366 A72-31917

Biophysical aspects of primary galactic and solar cosmic radiation p0193 A72-16044

Secondary radiation dosage from heavy galactic cosmic rays [NASA-CS-125592] p0241 A72-18077

PRIVATE

NT CHIMPANZEES NT HUMAN BEINGS NT MONKEYS Medical primatology - Conference, New York, September 1969 p0050 A72-13068

Anatomical-physiological, optical and behavioral-visual similarities of nonhuman and human primates p0050 A72-13069

Mechanical impedance and phase angle time variation in restrained primate during prolonged sinusoidal vibration [ASAE PAPR 71-WASH-6] p0095 A72-15946

Skeletal bone ash content in man and primates, implying differences due to adaptive physiological function p0227 A72-23736

Data management techniques and designs for integrating OPE with INLMS for manned space flight [NASA-CS-111949] p0127 A72-14115

Effect of 6 MeV x-ray irradiation on blood plasma reducing substances in primate [AD-731091] p0282 A72-18087

Three primate species undergoing whiplash injuries p0256 A72-19127

Indirect measurement of primate vestibular system function through analysis of vestibulo-ocular reflex response to various input stimuli [AD-734545] p0345 A72-21065

Sham-exposed controls and body weight variation in primate exposed to 55 MeV protons [AD-747789] p0315 A72-21066

PRIVATE AIRCRAFT

U GENERAL AVIATION AIRCRAFT U PROBABILITY DISTRIBUTION PROBABILITY THEORY U GENERAL AVIATION AIRCRAFT U PROBABILITY DISTRIBUTION PROBABILITY THEORY

U PROBABILITY DISTRIBUTION SUBJECCE

Subjective probability distributions for random device-generated Bernoulli process unknowns, discussing distribution median and quartiles and
PROBABILITY THEORY

hypothesised sample impact assessment techniques
p0695 A72-15812

Objects visual detection probability distribution
as function of angular size, contrast and search
time, comparing binocular and monococular searches
effectiveness
p0160 A72-19919

PROBABILITY THEORY

Probability threshold of data element similarity
as separation criterion for automatic
multivariate biomedical data classification
p0160 A72-19919

Temporal bimodal detection variation with
ratio of left eye to right eye detection
probabilities
p0695 A72-40734

Analytical models for estimating probable
terrestrial microbial release from unmanned Mars
landing spacecraft
(NASA-CR-125846)
p0400 A72-25105

PROBLEM SOLVING

Problem solving research, discussing trouble
shooting, logic, light patterns, search, fire
control, code transformation, perceptual maze,
and computer administered tasks
p0013 A72-11192

Learning and solving complex problems of reasoning
- A test-theoretical investigation of the
complexity of compound problems of predictive
logic
p0555 A72-85244

Automatic protocol analysis as task for artificial
intelligence
[AD-734286]
p0262 A72-19175

Effects of alcohol on problem solving tasks and
ventricular stimulation
[FAA-AM-72-11]
p0401 A72-25108

PROCEDURES

MT FINITE ELEMENT METHOD
MT OPTICAL CORRECTION PROCEDURE
PROCESSORS (COMPUTERS)
U CENTRAL PROCESSING UNITS
U COMPUTERS
PRODUCT DESIGN
U PRODUCT DEVELOPMENT
PRODUCT DEVELOPMENT
MT WEAPONS DEVELOPMENT
Human engineering requirements in aircraft system
development.
p0504 A72-81423

PRODUCTION ENGINEERING

Control center relation to process control
computers in production engineering, discussing
information flow and communication in man
machine systems
p0554 A72-38310

Graphical method for optimal selection of check
points for human monitor in industrial process
p0261 A72-19166

PRODUCTION METHODS

U PRODUCTION ENGINEERING

PROFICIENCY

U ABILITIES

PROFICIENCY MEASUREMENT
U HUMAN PERFORMANCE
U PERFORMANCE TESTS

PROGNOSIS

Foresight, forecast and prognosis concepts in
physiology, discussing intuition role and
relation between molecular and cellular
processes and organis activity.
p0029 A72-12346

Prognostic value of an electrocardiographic sign
in acute myocardial infarction.
p0452 A72-37671

PROGRADED INSTRUCTION

Automated instructional monitors for diagnosing
student difficulties in acquiring complex
concepts and skills
[AD-736212]
p0319 A72-21090

Automated technical training devices for Air Force
instruction program
[AD-736301]
p0360 A72-23095

Evaluation of recorded instructions for visual
aircraft recognition training of personnel
[AD-739521]
p0480 A72-28122

PROJECTS

Model of machine hand-eye coordination and program
specifications for topological machine vision
system
(NASA-CP-127546)
p0476 A72-28098

PROGRAMS

MT APOLLO PROJECT
MT GEMINI PROJECT
MT NASA PROGRAM
MT SKYLAB PROGRAM
MT SPACE PROGRAMS
MT TERTIARY PROJECT
MT U.S.S.R. SPACE PROGRAM
MT UNIVERSE PROGRAM

PROJECT PLANNING

Development of planetary quarantine in the United
States.
p0539 A72-43382

PROJECTS

MT APOLLO PROJECT
MT GEMINI PROJECT
MT ORBITER PROJECT

PROPELLATION VELOCITY

Human pulse wave propagation velocity measurement,
using biotelemetry system of phototransistors
sensors and endoscopic bulbs connected to
electrocardiograph
p0031 A72-12519

PROPELLANTS

MT LIQUID ROCKET PROPELLANTS
MT SOLID PROPELLANTS
PROPELLER DRIVE

MT HELICOPTER PROPELLER DRIVE
PROPELLER SYNCHRONIZERS
U SYNCHRONIZERS

PROPYLETHYLIS

Isomethyl tuberculostab chemotherapy prophylaxis safety in
aviation personnel, discussing renal function,
serum transaminase activity, hematology,
electrocardiograms and neurological examinations
p0604 A72-14872

Automatic ECG recording and analysis by electronic
data processing equipment, discussing methods of
data acquisition and transmission for routine
diagnosis and prophylactic mass examinations
p0286 A72-27821

Thirty day experiment for assessment of
weightlessness simulation test methods and
evaluation of applicable prophylactics
p0543 A72-43912

Physical training as a prophylactic measure
against the hypodynamic syndrome
p0543 A72-43920

A special vitamin complex for prophylaxis of
atherosclerosis in aviation personnel
p0546 A72-44153

PROPRIORCEPTION

MT AUTOKINESIS

Extraocular inflow eye position information
awareness from experimental load application to
eyes in total darkness
p0180 A72-19026

Neck proprioceptive effects and otolith canal
activity in perceived visual target elevation
under centrifugeing stress
p0296 A72-28305

Human brain sensoror region EKG dependence on
proprioceptive influence, instruction for active
movements and preparation passive movement of hand
p0372 A72-32992

The design of a nonlinear multi-parameter model
for the human operator.
p0504 A72-41421

PROPRIORCEPTORS

Sensorior mechanisms of proprioceptors in
muscles and tendons, considering reflexive
control of position and motion
p0517 A72-42781

The reflex and mechanical response of the
inspiratory muscles to an increased airflow
resistance.
p0552 A72-44958

Spatial sensitivity of visual system
[AD-744325]
p0570 A72-33090

PROPELLIZOS

MT JET PROPULSION
PROPELLIZATION
U MATHEMATICAL MODELS

PROPULSIVE DEVICES

Hydrodynamic model of human systemic arterial
PHOTOGRAPHIC

PROTECTIVE CLOTHING

NT SPACE Suits
NT EADIATION PROTECTION

NT ACCELERATION PROTECTION

NT PEESSDE Suits

NT THEBHAL PROTECTION

NT BADIATION SHIELDING

NT EYE PROTECTION

Circulation to test artificial heart pumps

Medical equipment advancements through NASA sponsored aerospace research program describing prosthetic heart valve, ear oximeter, radiation dosimeter and electrocardiographic muscle trainer

Artificial heart-lungs model with contractile polymer membrane as synthetic muscles to react with gases and liquids, discussing design features

Pure biocarbons for skeletal fixation of limb environments to -65 F and 35 mph wind velocities

Non-invasive assessment of prosthetic skeletal paravascular and intravascular reperfusion

Designs for electro-pneumatic flow control valves for artificial limbs

Prosthetic device with sensing means for detecting tactile stimuli (NASA-CASE-RPS-16570)

Biomechanical research and development at Army Medical Research Lab.

Activity, quantifying force in artificial hand by operator

Principles for controlling machines and living organisms by biopotential control

Facility design for development and evaluation of thermal protective clothing in reproducible, aircraft fuel fire environment

Effect of gas masks on endurance of personnel in exhausting work and improved performance following training activity

Frictional performance tests on rubber compounds containing additives for use in shoes

Materials and designs of protective armbands

Performance tests of protective clothing to determine effectiveness against air blast during high speed ejection

Factors, standards, and techniques involved in testing protective headgear

Environmental tests of commercially available abandon-ship survival suit

Air conditioned undergarment for use in environmentally controlled suit in sterile chamber

Suit for personnel handling liquid rocket propellants for protection from chlorine trifluoride and elemental fluorine

Flight glove material development for mechanical performance characteristics similar to leather, but flameproof and thermally stable

Coveralls and helmet for physiological protection in space environment

Steady state and transient temperature distributions in human thigh covered with cooling pad

Inflatable, thermally insulative emergency survival suit for subzero weather

Comparison of water cooled, convective air, and reverse flow system for flight personal conditioning noting hot environmental condition simulation

Human factor evaluation of cold weather face masks

PROTEIN METABOLISM

PROTEIN METABOLISM

PHOTOGRAPHIC

PROTECTIVE CLOTHING

BIOCHEMISTRY

PROTEIN METABOLISM

PHOTOGRAPHIC

PROTECTIVE CLOTHING
Plasma protein concentration, volume and hematocrit changes during exercise, bed rest and high forward acceleration

Myocardial protein synthesis in acute myocardial hypoxia and ischemia.

Disproportional changes in hematocrit, plasma volume, and proteins during exercise and bed rest.

Hypoxic theory for atherosclerosis formation, noting blood plasma protein concentration effects on oxygen diffusion

Protein synthesis in the cell-free system of the human thyroid gland

Effects of free amino acid doses and of amino acid metabolism cofactors on the distribution of regional free amino acid resources in the brain and blood of animals

Thyroglobulin content and variations in the proteolytic activity of the thyroid gland tissue in animals under hypoxic conditions

Human tryptophan and tyrosine metabolism - Effects of acute exposure to cold stress.

Incorporation of methionine-S 35 in the proteins of the digestive organs of rabbits under the action of radiation and vibration

Nitrogen excretion as a measure of protein metabolism in man under different conditions of renal function.

Changes in blood serum proteins under the effect of hyperoxia in intact rats with thyroid gland dysfunction

Body fluid analyses on Gemini spacecrews to determine metabolic costs of manned space flight (FISP-M05)

Hypokinetic effect on synthesis of tissue proteins in rats

Acceleration, vibration, and subsequent irradiation effects on RNA and protein metabolism in digestive system organs of rabbits

Effect of continuous noise and vibration on carbohydrate, fat, and protein metabolism in white rats

Proteins

Molecular evolution of biological membrane from lipid film to lipoprotein particle assembly, using bacterial biochemistry

Protein evolution, discussing biological groups and nucleic acid structure variations from phylogenetic tree of cyctochrome c data

Eibosomes origin and RNA evolution, considering biogenesis from coacervate to protocell and protein biosynthesis

Protein-rich food substitute from microalgae cultures for human nutrition, describing experimental production, protein value determination, special diets and food shortage relief

Molecular aspects of structural and functional circadian rhythms in chloroplasts of unicellular algae acetabularia, emphasizing protein synthesis role

Thermal stability variations in blood serum proteins after electrical stimulation of rabbit hypoblastic structures

Thyroid gland iodine concentrations, blood proteins and morphological changes in rats with acute hypoxic hypoxia and pulmonary edema

Gaseous nitrogen production in humans under steady-state conditions, relating expired nitrogen minute volume increase after protein consumption to possible gastrointestinal and metabolic effects

Radial diffusion and convection capillary model for analysis of tissue protein concentration and colloidal osmotic pressure changes during transcapillary fluid movement

Amino acid sequences of proteins from living organisms, considering evolutionary processes

Genetic organization emergence, considering pretranslational evolution in nontranslational protein synthesis, nucleic acid evolution and gene origins

Blood serum proteins thermal stability in patients with vegetative vascular and neuroendocrine syndromes, discussing ATP effects

Parenterally introduced protein hydrolysates and aminopeptides influence on human pancreas enzyme secretion activity

Protein biosynthesis E and D, discussing rate control, structure and medical and nutritional applications

Role of the synthesis of nucleic acids and proteins in the adaptation of the organism to altitude hypoxia.

Adaptability limits on protein-nucleic-water life under exobiological extremal conditions, considering macromolecules, extraterrestrial life search and origin

Electron tunneling as possible semiconduction mechanism in solids composed of protein molecules (NASA-PK-D-6559)

Development of facility and technique for producing nutritional single cell bacteria from waste sugarcane bagasse (NASA-CR-123368)

Determination of serotonin in intact blood of rats, using butanol in first stage of extraction

Electron energy levels in intact blood cells and proteins in the adaptation of the organism to altitude hypoxia.

Electron tunneling as possible semiconduction mechanism in solids composed of protein molecules (NASA-PK-D-6559)

Development of facility and technique for producing nutritional single cell bacteria from waste sugarcane bagasse (NASA-CR-123368)

Determination of serotonin in intact blood of rats, using butanol in first stage of extraction

Electron energy levels in intact blood cells and proteins in the adaptation of the organism to altitude hypoxia.

Adaptability limits on protein-nucleic-water life under exobiological extremal conditions, considering macromolecules, extraterrestrial life search and origin

Electron energy levels in intact blood cells and proteins in the adaptation of the organism to altitude hypoxia.

Adaptability limits on protein-nucleic-water life under exobiological extremal conditions, considering macromolecules, extraterrestrial life search and origin

Electron energy levels in intact blood cells and proteins in the adaptation of the organism to altitude hypoxia.

Adaptability limits on protein-nucleic-water life under exobiological extremal conditions, considering macromolecules, extraterrestrial life search and origin

Electron energy levels in intact blood cells and proteins in the adaptation of the organism to altitude hypoxia.

Adaptability limits on protein-nucleic-water life under exobiological extremal conditions, considering macromolecules, extraterrestrial life search and origin

Electron energy levels in intact blood cells and proteins in the adaptation of the organism to altitude hypoxia.

Adaptability limits on protein-nucleic-water life under exobiological extremal conditions, considering macromolecules, extraterrestrial life search and origin

Electron energy levels in intact blood cells and proteins in the adaptation of the organism to altitude hypoxia.

Adaptability limits on protein-nucleic-water life under exobiological extremal conditions, considering macromolecules, extraterrestrial life search and origin

Electron energy levels in intact blood cells and proteins in the adaptation of the organism to altitude hypoxia.
<table>
<thead>
<tr>
<th>SUBJECT INDEX</th>
<th>PSYCHOACOUSTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>'Electrophysiology of embryonic rat surface cells stimulate by protein fraction of fetal calf serum</td>
<td>by proton nuclear magnetic resonance. p0551 A72-4477a</td>
</tr>
<tr>
<td>[VASA-77-F-14306]</td>
<td></td>
</tr>
<tr>
<td>PROTOPLASM</td>
<td>PROTON SCATTERING</td>
</tr>
<tr>
<td>Life origin in space from point of hydrocarbons, cyanides, aleiogenic organic synthesis and</td>
<td>water absorber lateral scattering effect on absorbed dose from 400 MeV neutron and proton beams</td>
</tr>
<tr>
<td>proebiotics evolution</td>
<td>[CEBY-71-16]</td>
</tr>
<tr>
<td>Ribosomes 'origin and RNA evolution, considering biogenesis from prokaryotes to protocell and</td>
<td>p0206 A72-12062</td>
</tr>
<tr>
<td>cell biosynthesis</td>
<td></td>
</tr>
<tr>
<td>p0059 A72-14752</td>
<td></td>
</tr>
<tr>
<td>PROTON BEAMS</td>
<td>PROTONS</td>
</tr>
<tr>
<td>Relative 'biological' effectiveness of 3-GeV proton beams in producing carcinates in rabbits</td>
<td>NT SOLAR PROTONS</td>
</tr>
<tr>
<td>(CBAA-CONF-1783)</td>
<td></td>
</tr>
<tr>
<td>PROTON IRRADIATION</td>
<td>PROPLASM</td>
</tr>
<tr>
<td>Relative biological effectiveness of energetic protons for somatic effects induction in mice during</td>
<td>Physiological and biochemical responses of Paranema caudatus to hypo- and hyperbaric stresses, discussing protoplasmic inactivation by high oxygen pressure p0295 A72-28299</td>
</tr>
<tr>
<td>whole body irradiation, using mean energy of solar event protons</td>
<td></td>
</tr>
<tr>
<td>[CEBY-71-16]</td>
<td></td>
</tr>
<tr>
<td>Mitotic index and aberrant mitosis frequency in mice central and intestinal epithelial cells exposed</td>
<td></td>
</tr>
<tr>
<td>to 50-60 MeV protons, estimating relative biological efficiency coefficients</td>
<td></td>
</tr>
<tr>
<td>[CEBY-71-16]</td>
<td></td>
</tr>
<tr>
<td>High energetic ion irradiation late pathological effects on rabbit brains, discussing brain lesions</td>
<td></td>
</tr>
<tr>
<td>and radiation dosages</td>
<td></td>
</tr>
<tr>
<td>[CEBY-71-16]</td>
<td></td>
</tr>
<tr>
<td>Biological efficiency of secondary radiations from 70 GeV protons interaction with target,</td>
<td></td>
</tr>
<tr>
<td>discussing dose dependencies and restoration process relative rates</td>
<td></td>
</tr>
<tr>
<td>[CEBY-71-16]</td>
<td></td>
</tr>
<tr>
<td>Nonuniform high energy proton irradiation of dogs, evaluating and predicting biological effects</td>
<td></td>
</tr>
<tr>
<td>[CEBY-71-16]</td>
<td></td>
</tr>
<tr>
<td>Average radiation Q factor and dose radiation spectrum measurement in phantoms irradiation by</td>
<td></td>
</tr>
<tr>
<td>proton beams</td>
<td></td>
</tr>
<tr>
<td>[CEBY-71-16]</td>
<td></td>
</tr>
<tr>
<td>Illumination effect on proton and gamma irradiated cabbage plant growth, height and foliage,</td>
<td></td>
</tr>
<tr>
<td>indicating radiation protective effect for certain light intensities</td>
<td></td>
</tr>
<tr>
<td>p0027 A72-12069</td>
<td></td>
</tr>
<tr>
<td>Biological dosage inflicted to rats by protons, X rays and gamma rays</td>
<td></td>
</tr>
<tr>
<td>p0101 A72-16649</td>
<td></td>
</tr>
<tr>
<td>Proton irradiation effects on monkey central nervous system, showing inflammatory reaction and</td>
<td></td>
</tr>
<tr>
<td>neuroglial astrocyte glycogen accumulation</td>
<td></td>
</tr>
<tr>
<td>p0331 A72-29833</td>
<td></td>
</tr>
<tr>
<td>Spacecraft bacteria population resistance to simulated Jovian trapped radiation electron and solar</td>
<td></td>
</tr>
<tr>
<td>wind protons, noting radiation dose rate onboard French prototype of Concorde 001 supersonic</td>
<td></td>
</tr>
<tr>
<td>transport aircraft</td>
<td></td>
</tr>
<tr>
<td>p0206 A72-12061</td>
<td></td>
</tr>
<tr>
<td>Brain tumors in irradiated 'monkeys.'</td>
<td></td>
</tr>
<tr>
<td>p0366 A72-31993</td>
<td></td>
</tr>
<tr>
<td>Body weight decrease in some proton exposed primates</td>
<td></td>
</tr>
<tr>
<td>p0241 A72-36477</td>
<td></td>
</tr>
<tr>
<td>Electron abundance equilibrium as factor in biological effectiveness of proton beam irradiation</td>
<td></td>
</tr>
<tr>
<td>of animals</td>
<td></td>
</tr>
<tr>
<td>p0921 A72-40450</td>
<td></td>
</tr>
<tr>
<td>Summary of latent effects in long term survivors of whole body irradiations in primates</td>
<td></td>
</tr>
<tr>
<td>p0541 A72-43393</td>
<td></td>
</tr>
<tr>
<td>Monte Carlo calculations of neutron and proton dosage and transport depths in tissue phantoms</td>
<td></td>
</tr>
<tr>
<td>p0207 A72-17617</td>
<td></td>
</tr>
<tr>
<td>Proton penetration calculations for tissue of astronauts in simulated spacecraft environment</td>
<td></td>
</tr>
<tr>
<td>bombarded by solar flares and radiation beta protons</td>
<td></td>
</tr>
<tr>
<td>p0207 A72-17618</td>
<td></td>
</tr>
<tr>
<td>Effects of protons and gamma rays on carcinogenesis, mortality, and chemical protection against</td>
<td></td>
</tr>
<tr>
<td>radiation in laboratory rats</td>
<td></td>
</tr>
<tr>
<td>p0205 A72-17687</td>
<td></td>
</tr>
<tr>
<td>Shew-exposed controls and body weight variation in primates exposed to 55 MeV protons</td>
<td></td>
</tr>
<tr>
<td>p0315 A72-21066</td>
<td></td>
</tr>
<tr>
<td>PROTON MAGNETIC RESONANCE</td>
<td></td>
</tr>
<tr>
<td>The state of water in muscle tissue as determined</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PITCH PERCEPTION, PERIODIC PALATE AND WHITE NOISE.
HARMONIC AUDIBILITY, MASKING BEHAVIOR, ETC.

PSYCHOLOGICAL EFFECTS

INTRAINDIVIDUAL AND INTERSUBJECT DIFFERENCES
OF NOISE ANNOYANCE SUSCEPTIBILITY, NOTING
RELATIONSHIP TO BORSCHEK TEST

LATENT INHIBITION IN AUDITORY PERCEPTION PROVED
BY PSYCHOLOGICAL STUDY OF NOISY ACTIVITY
STIMULUS PATTERNS, NOTING ERRONEOUS MEASUREMENT
OF PURE TONE MASKED THRESHOLD

SONIC BOOM STARTLE - A FIELD STUDY IN KOPEN, WEST
GERMANY.

EFFECTS OF HIGH INTENSITY NOISE LEVELS ON HUMAN
VESTIBULAR SYSTEM AND PRODUCTION OF
DYSFUNCTION AND Nausea

HUMAN FACTORS ENGINEERING TO DETERMINE EFFECTS
OF WEAPON NOISE ON MILITARY PERSONNEL AND
DEVELOPMENT OF CRITERIA FOR PERFORMING
PREDICTION OF PERSONNEL AFTER EXPOSURE TO NOISE

TESTS OF PERCEIVED NOISENESS UNDER ANECHOIC,
SEAL-REVERBERANT, AND EARPHONE LISTENING
CONDITIONS FOR PREDICTIVE RELATIVE ANNOYANCE
OF VARIOUS AIRCRAFT NOISES


PSYCHOLOGICAL EFFECTS

PSYCHOLOGICAL FACTORS

EFFECTS OF PSYCHOLOGICAL CONDITIONING ON FLIGHT
PERSONNEL STATISTICAL SURVEY OF CLINICAL,
PHYSIOLOGICAL AND PSYCHOLOGICAL EFFECTS

PSYCHOLOGICAL FACTORS

BORSCHEK INKBLOT TEST FOR DETERMINING PERSONALITY

PSYCHOLOGICAL FACTORS

PSYCHOLOGICAL FACTORS

PSYCHOLOGICAL FACTORS
PSYCHOHOTICS

Multiple discriminant analysis method for determining index of item validity using military personnel (AD-72-10117)

Computer program for correlating human reactions to psychological stress (AD-730452)

Automatic protocol analysis as task for artificial intelligence (AD-732061)

Subjective and objective sensory physiology, discussing transformation processes in sensory receptors and nerves, psychophysiological scaling methods, chemoreceptors and peripheral adaptation (p.22 72-42777)

PSYCHOMOTOR PERFORMANCE

Optimal psychomotor performance in relation to thermal comfort conditions in man, using complex visual tasks and subjective rating scales (p.102 72-20117)

Human mental and psychomotor performance measurements in compressed oxygen-helium atmosphere pressure chamber for dive between 100 and 1500 feet (p.34 72-33920)

Concurrent and terminal display exposure effects on perceptual adaptation for localizing movements with displacing primes (p.55 72-13878)

Dopant conditioning for producing gross motor responses, discussing application to physical medicine and rehabilitation with mentally retarded down syndrome children (p.559 72-17006)

Short and long term mental and physical work effects on central nervous system and motor apparatus in young people (p.707 72-15300)

Bioelectric activity study of cat and human cerebral intercentral relations during various motor activities and poses (p.707 72-15231)

Frontal lobe damage effect on conditional motor reflexes, communication capability and emotional behavior in baboon apes (p.703 72-15503)

Simulated sonic boom effect on tracking performance and autonomic responses, noting heart rates, skin conductance and startle reflex (p.705 72-17068)

Mental rehearsal and physical practice: relation to learning rate for rotary pursuit tracking skill acquisition (p.704 72-18001)

Natural visual capture result of vision and touch conflict in bilateral comparisons of object length (p.729 72-24270)

Pressure suit effects on psychomotor skills, noting normal dexterity, tracking skills, hand strength, steadiness and coordination for pressurized, unpressurized and shirtsleeve conditions (p.223 72-24796)

Choice reaction task times for responses to signals by middle, little and index fingers (p.523 72-24905)

Sleep loss and work-rest cycle effects on combat efficiency, considering psychomotor reactivity, vigilance and decision making capacity (p.725 72-26688)

Inspiration, expiration and hand muscle control comparison in psychophysical category production method for human voluntary breathing regulation (p.328 72-27043)

Statistical evaluation of feedback role in simple movements in terms of index of preprogramming (p.371 72-32761)

Weightlessness effects on animal voluntary motor activity and wakefulness from brain and muscle area electrical activity recordings during ballistic flight (p.374 72-33548)

Altitude effects on decision making performance of cognitive, psychomotor and complex card sorting tasks (p.379 72-34096)

PSYCHOPHYSICS

Vestibular behavior of fish during diminished g-force and weightlessness (p.40 72-35508)

Increase in skeletal muscle performance during emotional stress in man (p.412 72-35942)

Circadian rhythms in physiological and psychological functions related to jet travel, studying body temperature variation and psychomotor performance during isolation and varying light-dark cycle conditions (p.464 72-39723)

Influence of prolonged longitudinal accelerations on control habits (p.507 72-41750)

German monograph - control performance as a function of the transmission ratio and coulomb friction (p.476 72-44077)

Behavior concept formulation for visual sensory systems, considering subjective systems data and extension from motor function concepts (p.450 72-48586)

Carbon monoxide exposure effects on human sleep patterns and psychomotor performance involving time estimation, mental arithmetic, tracking, and vigilance under moderate or high workloads (AD-727506)

Proportional relationship between reaction time and information processing in humans as factor of system design (AD-728217)

Development of flexible psychomotor testing system for use in pilot selection programs (AD-73210)

Analysis of models and explanations for temporally decreasing predictive relationships between ability measures and complex motor task performance (AD-732612)

Effects of high altitude and oxygen deficiency on psychomotor performance of flight crews (SLR-PR-72-02) (p.328 72-23800)

Performance of personnel operating moving command and control system that monitors psychomotor tasks (AD-738113)

Graf driving machine for determining sobering effect of caffeine and pervitin on intoxicated individual (NASA-TT-F-19564) (p.516 72-32099)

Effect of ionization on psychomotor performance of aviator instructors (AD-728223) (p.564 72-32120)

PSYCHOPHYSIOLOGY

Psychology of visual form perception in relation to neurophysiological principles of lateral interaction and organization, considering retinal images, aftereffects, binocular vision, etc (p.505 72-10469)

Psycho-physical theory of human mind, discussing molecular biological processes of neuron recording in terms of quantum mechanics (p.513 72-18191)

Psychophysical comparison methods for evaluating noisiness or annoyance values of sounds (p.516 72-20168)

Inspiration, expiration and hand muscle control comparison in psychophysical category production method for human voluntary breathing regulation investigation (p.528 72-27843)

Experimental testing of theory of signal detectability derived psychophysical models application to two-pulse visual stimuli temporal discrimination (p.532 72-31379)

Response bias and sensitivity variations in psychophysical test of rats discrimination between standard and attenuated auditory signal intensities (p.537 72-33648)

Evidence for the role of the transient neural 'off-response' in perception of light decrement - A psychophysical test derived from neuronal
PSYCHOPHYSIOLOGY

Data in the cat.  

Determining the detectability range of camouflaged targets.  

Psychophysical procedures to investigate selective visual adaptation to light of different wavelengths from test gratings with various orientations and spatial frequencies.  

Psychophysical information content evaluation of aerial photographic images by human viewer for photointerpretation and search in reference library.  

Measurement of specific mechanical impedance of the skin - Effects of static force, site of stimulation, area of probe, and presence of a surround.  

Subjective and objective sensory physiology, discussing transformation processes in sensory receptors and nerves, psychophysical scaling methods, chemoreceptors and peripheral adaptation.  

Effects of criterion variance on sensitivity.  

Psychophysical signal detection and predictions based on two-state theory.  

Environmental noise induced human fatigue, considering physiological and psychological effects.  

Psychophysical potentials of pilots in simulated emergency situations, investigating motor reaction time, signal selection time, error number and type and processed information.  

Disorientation in naval aircraft accidents from psychophysiological and environmental factors, suggesting flight scheduling and training improvements.  

Physiology of sleep phases and dreams, discussing data on highly organized and interacting neurohumoral mechanisms exhibiting alternating forms of brain bioelectric activity.  

Soviet book on psychic phenomena and brain, covering cybernetics, dialectical materialist implications, consciousness, psychophysiology and cerebral neurodynamic structures.  

Self estimated distractibility in subjects related to attention lapses during perceptual motor performance, indicating psychophysiological changes.  

Future spacecraft habitable compartment layout, from psychophysiological viewpoint, considering human visual and motor field parameters and crew member social needs.  

Low-altitude flight imposed psychophysiological stress due to air turbulence discomfort, instrument dial vibration and ground-based navigational objects recognition difficulty.  

Psychological principles of active rest during long space flights.  

Critique of Pavlov conditioned reflex role in higher nervous activity and association principle role in psychic activity.  

Psychophysiological data acquisition with hybrid analog circuits.  

Psychophysiological factors of human adaptation to Antarctic life.  

Human factors: engineering viewpoint of psychophysiological measurements applied to maintainability evaluation of equipment design.  

Review of psychophysiological mechanism involved in selective attention.  

Psychophysiology of evoked cortical potentials and brain information processing.  

Psychophysical scaling applications of digital simulated models of human visual system.  

Civil aeronautics environment relation to circulatory responses to high altitude in subjects with previous history of high altitude pulmonary edema.  

Hydrostatic pressure and temperature effects on growth of psychrophilic marine bacterium, emphasizing inhibited amino acid transport and respiration.  

Hydrostatic pressure and temperature effects on growth of psychrophilic marine bacterium, emphasizing inhibited amino acid transport and respiration.  

Computer controlled scintiscanning for pulmonary blood flow distribution, discussing real time data monitoring, contour plots and three dimensional and wall reflection maps.  

Resonodynamics, pulmonary gas exchange and circulatory responses to high altitude in subjects with previous history of high altitude pulmonary edema.  

Exercise effects on pulmonary circulation in dogs, measuring pulsatile arterial flow and pressure and vascular input impedance, resistance and hydraulic power.  

Conversion of angiotensin to angiotensin 2 in dog pulmonary circulation, studying pentagastrin, somatostatin, radioimmunoassay and in vivo and plasma in vitro metabolism.
Acute, short and long term and life long high altitude hypoxia, exposure effects on pulmonary gas exchange control and efficiency during physical exercise...p0011 A72-10847

Inspiration time correction factor for pulmonary diffusing capacity measurement by single breath method...p0011 A72-10808

Altitude hypoxia human pulmonary compliance relation between static transpulmonary pressure and inspired volume...p0023 A72-11958

Lung ventilation nonuniformity determination by single calm breath method, showing nitrogen concentration in arterial phases...p0031 A72-12515

Pulmonary EC network and multiple breath nitrogen without time constants mathematical relationship for breathing mechanics measurement, discussing lung compliance and resistance...p0064 A72-18452

Respiratory flow resistance measurements in man, comparing esophageal catheter, plethysmographic, forced pressure oscillations and arterial interrupter methods...p0070 A72-15222

Single breath method for pulmonary gas diffusing capacity measurement with respect to total lung capacity and inspiration time...p0104 A72-17174

Hypoxia pretreatment for decreased pulmonary oxygen toxicity during high pressure breathing is rats...p0153 A72-19328

Cardiovascular and respiratory responses to intravascular injection of K and Na ions in dogs for peripheral receptor site determination...p0162 A72-20177

Hyperbaric oxygen exposure effect on cardiovascular system in rats, discussing pulmonary edema relation to hypertensive left ventricular failure...p0163 A72-20182

Environmental chamber tests for ozone exposure effects on human pulmonary function at rest and during bicycle exercise...p0171 A72-20884

Cardiorespiratory functions in child swimmers and nonathletes during growth, relating training to oxygen transport system dimensions...p0172 A72-20894

Respiration in altered gas environment for spontaneous breathing and voluntarily maintained pulmonary ventilation level conditions...p0175 A72-22077

Laryngeal motoneuron activity during Breuer-Breuer reflexes, noting inspiratory fibers firing inhibition and activation during lung inflation...p0218 A72-22975

Acidoic work capacity indices of gas exchange during bicycle exercise...p0225 A72-23596

High altitude acclimatization effects on human lung diffusing capacity for carbon monoxide at different oxygen tensions...p0231 A72-24046

Chest strapping-induced increased lung recoil pressure effects on maximal inspiratory flow relation to lung surface compliance decrease...p0231 A72-24078

Elastic lung shaped model for distribution analysis of weight induced stresses, strains and surface pressures in lung...p0232 A72-24079

Pulmonary atelectasis and arterial-venous shunting and heart displacement prevention during contributing or dominant liquid fluorocarbon in water immersion respirator...p0270 A72-26609

Plethysmographic and laryngoscopic investigation of glottis opening and airway resistance relation to lung volume during panting and continuous slow expiration...p0270 A72-26611
Digital computer technique for computation of pulmonary mechanics parameters, using phasor method and Fourier series analysis of respiratory flow signals... p0272 A72-26620

Native highlander and lowlander chemoreflex ventilatory response to transient carbon dioxide inhalation at low and high altitudes... p0286 A72-27728

Pulmonary oxygen transport dynamic model representing lung gas-side airway and alveolar regions and blood-side capillary beds... p0325 A72-28996

Four-parallel-compartment lung model for emptying pattern study, using expired nitrogen concentration data to calculate alveolar dilution ratio and emptying rate... p0339 A72-30703

Annual clinical and physiological evaluation of test pilots physical performance over ten year period from body composition, pulmonary function and work capacity measurements... p0344 A72-31093

Nonlinear theory of pulmonary ventilation distribution in two compartment model of human lungs... p0372 A72-33025

Rebreathing studies of carbon dioxide pressure level effect on carbon dioxide content difference in arterial blood and alveolar gas during exercise and rest... p0408 A72-38346

Respiratory frequency and alveolar oxygen and carbon dioxide tension relationship to hypercapnia in man... p0421 A72-35965

Gas induced osmosis as factor in pulmonary homeostasis, showing differential water retention in lungs ventilated with nonosmotic nitrous oxide compared with air... p0421 A72-359790

Pulmonary gas exchange in Andean natives at high altitude... p0425 A72-36570

Left pulmonary lipid metabolism during feeding and fasting from studies of lung lecithin half life after C-14/1-palmitate and H-1/3-glucose injection... p0426 A72-36573

Regional lung function in man during immersion with the head above water... p0455 A72-38701

Pulmonary air-trapping induced by water immersion... p0456 A72-38711

Evaluation of cardiologicaly function and work function in man during caloric restriction... p0490 A72-40423

Regional lung function during early acclimatization to 3,100 m altitude... p0490 A72-40425

A method for spirographic display of functional residual capacity and other lung volumes... p0491 A72-40427

Electrically sensed changes in chest and abdomen diameter for tidal volume, respiratory frequency and minute ventilation measurements... p0491 A72-40428

Hypoxic pulmonary steady-state diffusing capacity for CO and alveolar-arterial O2 pressure differences in growing rats after adaptation to a simulated altitude of 3500 m... p0506 A72-41622

Control of the circulating blood mass in the case of a functional detachment of various amounts of pulmonary tissue... p0507 A72-41625

Effects of externally imposed mechanical resistance on breathing dense gas at exercise - Mechanics of breathing... p0511 A72-42489

Transmural leaVe - A possible mechanism of high altitude pulmonary edema... p0513 A72-42588

Lung volume changes of people in antithoraxic position in hospital beds for control, exercising and muscle electric-stimulated groups... p0543 A72-43918

Possibility of determining the lung ventilation volume by the mathematical modeling method... p0551 A72-44597

Determination of the diffusional capability of lungs by the method of delayed respiration... p0551 A72-44598

Respiratory gas analyzer for aircrew pulmonary function measurements... p0395 W7-25057

Spirographic examination of human pulmonary functions during stay in Antarctica... p0434 W7-26070

Digital simulation and experimental evaluation of CO2-Epilus) control of pulmonary ventilation... p0534 W7-30056

Calculation method for estimated rate of onset and severity of pulmonary oxygen toxicity of the lungs [AD-762648]... p0527 W7-30052

Etiology of pulmonary edema and plasma volume changes during decompression in hybrid swine... p0568 W7-31301

PULMONARY LESIONS

Effects of nitrogen and helium upon pulmonary damage after rapid decompression to 2 torr... [AD-764603]

Influence of prolonged ataxation on the frequency of occurrence of decompression-induced pulmonary hemorrhage... p0409 A72-34544

PULSATING FLOW

U UNSUSTAIN FLOW

PULSE AMPLITUDE

Physiological response to effective visual stimuli, observing signal value change effect on forehead pulse amplitude and galvanic skin response... p0411 A72-10854

Calibrated LF acceleration vibrocardiography to examine hemodynamics indices relation to main wave amplitudes... p0361 A72-31313

PULSE DURATION

Foveal light pulse duration effects on reaction time, showing stimulus intensity-time reciprocity... p0363 A72-31509

An aspect of the problem of pitch dependence on the duration of short sinusoidal signals... p0662 A72-39217

The detectability of a brief gap in a pulse of light as a function of its temporal location within the pulse... p0499 A72-40123

Determining effective flashing light intensity as a function of duration and area at threshold and suprathreshold luminance with different background luminances... [AD-728507]

Effects of accelerated particles and cosmic rays on light flashes in human eye... p0129 W7-14120

Effects of accidental particles and cosmic rays on light flashes in human eye... p0432 W7-26051

Effect of various magnesium salts on lungs of guinea pig with varying membrane potential and superthreshold luminance with different background luminances... p0563 W7-32112

PULSE FREQUENCY MODULATION

Data processing in isolated crab biological strain... p0283 A72-27577

PULSING GENERATORS

Receptor membrane pulse generation electronic model with tunnel diode negative resistance circuit... p0284 A72-27578

PULSE HEIGHT

PULSE AMPLITUDE

PULSE MODULATION

PULSE FREQUENCY MODULATION

Determination and operation of completely implantable three channel temperature biotelemetry system... p0567 W7-32141

PULSE RATE

Human pulse wave propagation velocity measurement, using biotelemetry system of photoreseistance sensors and endoscopic bulbs connected to electrocardiograph... p0301 A72-12519

Pneumonic stimulator transducer to measure steep ejection time interval between cardiac volume pulse upstroke start and maximum rise rate occurrence... p0273 A72-26633

SUBJECT INDEX
PIBOVATES

SUBJECT IHDBX

Chanqes in the impulse activity of cortical
neurons durinq selective reinforcement of a
chosen range of their interpalse

PUBIHES
BT CAPFIISE
HI OBIC ACID
HT IASTBIHES
. •
PUBSOIT TBACKIH6
Hental rehearsal and physical practice relation to
learning rate for rotary pursuit tracking skill
acquisition
'
P0117 A72-18801
pilot pursuit tracking performance under
acceleration stress, simulating high performance
aircraft dynamics via human centrifuge equipped
Kith simulated head-up predictive gansight
P0298 472-28320
Tracker recovery strategy during temporary target
obscuration in pursuit tracking task, analyzing
control stick movements
P0330 A72-29820
Eye movement pattern aonitorinq to investigate
retinal afterimage role in release of pursuit
movements
. >
• P0112 A72-3«886
.Botary pursuit task practice effects on transfer
of motor skill from slower to faster speeds
P0028 A72-36915
Experieental determination of the distribution
rule for the time of failure-free operator
action in the tracking mode /with pursuit/
P0557 A72-U5521
Aircraft interception avoidance problem solved by
differential game theory, discussing human
operator decision aaking for random pursuit
tracking .
' '
•
- . . P0557 .A72-15523
Adaptive human operator model in pursuit tracking
~- problen
P0390 H72-2i»13l»
Effects of training in ocular pursuit tracking on
subsequent performance
fAD-7lt12q6l
B0»86 H72-29094
PIBIDIBES
HT MICOTISIC ACID
•
PIBIDOIIBE
pathogenesis of in-flight illusory acceleration
sensations, discussing amino acid level, protein
metabolism rate and pyridoxin metabolism
P0100 A72-16642
Effect of neurohomologous phospholipids associated
with other substances on experimental
intoxication by asymmetrical dimethylhydrazine.
II - Biochemical aspects of the
.
pyridoxine-phospholipid association
00501 A72-11195
PIHIBIDIBES
HT BITOCHOHDEIA
HT TBTHIDIHE
Photochemical reactions in pyrimidine base of BS4
after 07 irradiation, relating mntagenic and
lethal effect to dimerization
P0056 A72-14608
PIBOGEB
,
.
Pyrogenal injection test for hematopoietic tissue
function in dogs, describing response as
transient lenkopenia followed by pronounced
leukocytosis due to bone narrow granalocyte '
ejection
pOS»2 A72-U3911
PIBOGRiPBAlLOT
0 COBPOSITE BATEBIAIS
PIBOLISIS
Catalysts for oxidation of vapor-gaseous phase
formed.during pyrolysis of human' wastes'
:
'
P0123 H72-11081
PTBOBETBT
'
0 TEHPEBATOSE BEASOBEHEHT
PIBBOLES
BT TBIPTOPBAB
FIBOVATES
Acute and chronic hypercapnia effect on lactate,
pyravate, alpha-ketoglntarate, glntamate and
phosphocreatine contents of rat brain'
pOOSI A72-13677
Glycolytic metabolism effects 'from responses of
blood lactate-pyruvate and redox state to
chronic exposure to 3 percent C02
[AD-73U122]
p031« B72-21059
Oxidative catabolisa of pyruyate to acetyl
coenzyme A in yeast cells
[HASA-TT-F-13909]
p0568 872-33077

,.

Response of ventilation parameters, pulse rate,
ozyqen uptake, and body temperature in man under
acute and severe hypoxia
fDLS-rB-11-651
"°313 »72PULSE EECOBDEBS
0 COIJHTBBS :
POISE RIDTB- , ,
0 POISE DORATIOH
POISED L4SEBS
HT.Q SWITCHED LASEBS
Destructive chanqeB in rabbit brain and eyes under
pulsed, laser bea, irradiation
POISED BAOIATIOI
HT'ELECtBOHAGHETIC POISES
•
.
Spectrum dose conversion method for evaluating
radiation dosaqe
i
f JABBI-12091
P 0305 B72-2
POISES
,'.
•
HT ELECTRIC POISES
UT ELECTROHiGHETIC POISES
HT, GE01UGHETIC POISATIOHS
HI PBESSOBE POISES
Devices for producinq pulse trains for pulse count
UD-7U2973] ,
.
P0535 H72-31128
POHCTUBISG
0 PIERCIBG
POPA
Phase resettinq behavior of circadian rhythm of
pupal eclosion in fruitfly populations
•'
PUPII SIZB
pupil size spontaneous oscillation /Hippus/,
discussing development by repeated liqht step
and accommodation and disappearance due to
mental activity
. p0030 S72.12I(90
Computerized simulation from model of human
pupillary motor -behavioral response to liqht,
accommodation and fusional inputs
P0152 A72-19310
Optic disk drusen and Barcus Gnnn pupillary
phenomenon relation to visual field defects,
discussing need for calibrated perinetry and
binocular field testing
fAD-7378601
' P016" A72-20190
Aqe dependence of chanqes in pupil diameter in the
pO»95 A72-10732
Pupil diameter variations for measuring mental
process involved in interpretinq aircraft
rlE?™"?"
P0569 H72-33089
PUPIIIOHETBT
IB pupilloqraphy for screening narcoleptics and
fatigue prone individuals from driver and pilot
training applicants
.
.
. P0298 &72- 28323
POPIIS
.
•
•
Consensual photopupil responses to liqht flashes
recorded in foil dark adaptation, noting
bleaching and backgrounds effects
p0333 A72-29969
Pupil reflex loss /popillotonia/ diagnosis in
pilots, testing sensitivity to methacholine
chloride
fAD-7mi3681
p03<m A72-31096
HI AIB POBIFICATIOH
Blood self purification enteral mechanism in dogs,
determining leukocyte population chanqes before
and after feeding and intravenous interferon
infections
p0118 A72-18867
Feasibility of chemiluminescence method for
monitoring sterility of reclaimed water using .
tape sample transport system
CHASA-CR-115a57l
p0251 H72-19093
Sanitary and chemical evaluation of »ater
regenerated from atmospheric condensate by
extraction vith amines and alkvl phosphonic ac ids
pO»81 B72-29056
POBIFIEBS
0 PDBIPICATIOS

A-313


Q FACTORS

Q FACTORS
Average radiation Q factor and dose radiation spectrum measurement in phantom irradiation by proton beams [CEBN-71-16] p0027 A72-12069
Linear energy transfer response of polystyrene thin sheet phantom, presenting data on quality factor and radiation dose equivalent determinations in mixed radiation field [CEBN-71-16] p0027 A72-12071
Q SWITCHED LASERS
Mathematical-physical model for laser pulsed radiation-induced power wave transmission through surface and internal biological tissues p0011 A72-18150
QUADRUPOLES
Human torso surface mathematical model to determine equivalent heat dipole and quadrupole locations for ECG measurements p0322 A72-28571
QUALITY
ST ENVIRONMENTAL QUALITY
Quality control An automated instrument for monitoring the quality of recovered water. [ASHE PAPERS 72-EMAV-16] p0061 A72-39166
Graphical method for optimal selection of check points for human monitor in industrial process p0261 A72-19166
QUALITY FACTORS
U Q FACTORS
QUANTITATIVE ANALYSIS
Thin layer chromatography technique for rapid quantification of bacterial cell adenine triphosphate, using microscope ultraviolet photometer p0310 A72-17072
Red blood cell metabolite 1,3-diphosphoglycerate determination method by rapid deproteinization, concentration by precipitation and enzymatic reaction p0367 A72-32688
Quantitative analysis of phonocardiograms by electronic computers [NASA-TP-P-14608] p0563 A72-32113
QUANTITIVES
U COUNTERS
QUANTUM THEORY
Quantum-chemical model of organic ring-shaped molecule with persistent magnetization at microscopic level p0510 A72-42318
QUARIES
U RIVES (EXCAVATIONS)
QUARTS
Possible origin of dysmorphology of life, excluding synthesis under influence of optically active quartz p0059 A72-14758
QUANTURING THEORY
Reliability design for airborne ecological system for turbo jets, discussing toilet flushing and multiple server queueing model p0229 A72-23999
R
RABBITS
High energy proton irradiation late pathological effects on rabbit brains, discussing brain lesions and radiation dosages [CEBN-71-16] p0025 A72-12056
Effect of X-ray stimulation on olfactory system of rabbits and rats [C00-1669-7] p0043 A72-11076
Effect of digestive tract receptor stimulation on ventricular solar reflex reactions of rabbits p0120 A72-18068
Neuron inhibition in subcortical response of rabbit visual system to repetitive flicker stimulus p0134 A72-15004
Physiological effects of photos and acoustic stimuli on evoked potentials in rabbit visual cortex p0134 A72-15045
Evoked potential of hypothalamic region in response to photic stimulation of rabbit retina p0134 A72-15046
Technique using electrodes for measuring arterial oxygen partial pressure in dogs, rabbits, and monkeys p0193 A72-16037
Chest-back acceleration effects on rabbit telecephacl vessels p0250 A72-19081
Chest-back acceleration effects on rabbit mesencephalic and metencephalic blood vessels p0250 A72-19082
Acceleration training effects on compensatory reactions of rabbit retinal vessels p0250 A72-19083
Hypokinesia and hypodynamia effects on rabbit cardiac arteries p0251 A72-19087
Decreaseonic changes in bronchial vessels of rabbits caused by hypokinesia and hypodynamia p0251 A72-19088
Morphological changes caused by prolonged hypokinesia and hypokinesis in portal vessels of rat and rabbit livers p0251 A72-19089
Atrophy of rabbit leg muscles caused by prolonged hypokinesia and hypokinesis p0251 A72-19090
Hypokinesia, hypodynamia and subsequent hypergravitation effects on vascular system of rabbit knee joint capsule p0251 A72-19091
Effect of prolonged restricted motor activity on changes in water-mineral metabolism and fluid distribution in rabbits p0308 A72-24110
Acceleration, vibration, and subsequent irradiation effects on RNA and protein metabolisms in digestive system organs of rabbits p0482 A72-29062
Influence of magnesium narcosis on rabbit body temperature p0561 A72-32097
RACE FACTORS
Age dependence of changes in pupil diameter in the dachshund p0495 A72-40732
RADAR BACKSCATTER
U BACKSCATTERING
RADAR DETECTION
Time-compressed displays for target detection. p0420 A72-35945
RADAR DISPLAYS
U RADARSCOPES
RADAR NORMS
MT CLUTTER
RADAR EQUIPMENT
MT PLAN POSITION INDICATORS
MT RADARSCOPES
Hardware parameters related to human factors in training operators of night observation devices [AD-727657] p0046 A72-11099
Biological effects of UHF electromagnetic radar emissions on human organisms p0432 A72-26053
RADAR IMAGERY
Recent research applicable to the design of electronic displays. p0427 A72-36902
RADAR MAPS
MT RADAR IMAGERY
RADAR NAVIGATION
Pilot and ATC radar controller workload variations relation, discussing distraction stress effects p0219 A72-23132
RADAR OBSERVATION
U RADAR TRACKING
RADAR SCANNING
Applying engineering psychology to circular-scanning radar, and display devices [JPhS-55522] p0262 A72-19172
RADAR TRACKING
Track initiation and maintenance in single operator semi-automatic radar surveillance system [AP-730609] p0195 A72-15120
Radar and visual tracking of migratory birds to determine correlation of flight altitude and wind direction on direction of migration
Radiation Detectors

Ophthalmologic examinations for determining retinal damage caused by helium-neon laser boresights (AD-738629) p0039 A72-27087

Effect of continuous ultraviolet exposure on photokeratitis and ocular damage in humans, rabbits, and primates (RASA-CE-1192) p0471 A72-28063

Theoretical calculations of thermal damage from heat dissipation in homogeneous solid (AD-738589) p0473 A72-28073

Radiation Detectors

Silicon Radiation Detectors

External radiation and internal emitter studies (UCS-472-118) p0199 A72-17039

Sensitivity of Ge(Li) detectors in biological and environmental counting (CUR-73505) p0306 A72-20079

System for detecting natural hard natural burdens of radionuclides using scintillation crystal and lead shield-shield (AD-735649) p0352 A72-22086

Diffraction Patterns

Tissue equivalent plastic counter for radiation dose equivalent measurement in mixed radiation field, discussing data processing (CERN-71-16) p0027 A72-12070

Linear energy transfer response of polystyrene plastic scintillator, presenting data on quality factor and radiation dose equivalent determinations in mixed radiation field (CERN-71-16) p0027 A72-12071

Radiation Dosage

Space crew radiation dosage calculation from Mars (AD-738017) p0039 A72-27087

Radiation induced disease development related to dose, dose rate and radiation quality, discussing different models (CERN-71-16) p0024 A72-12053

High energy proton irradiation late pathologial effects on rabbit brains, discussing brain lesions and radiation doses (CERN-71-16) p0025 A72-12056

Relative biological effectiveness of high energy radiations, noting dependence on radiation quality, systemic dose and dose rate (CERN-71-16) p0025 A72-12056

Effective dose change after repeated radiation exposures as function of time intervals between fractions, evaluating space flight radiation hazards (CERN-71-16) p0025 A72-12059

Polycarbonate micros as visual solid detector in high energy radiation dosimetry (CERN-71-16) p0026 A72-12066

High energy nuclear tissue doses calculation based on averaged characteristics of nuclear interactions (CERN-71-16) p0026 A72-12067

Depth-dose experiments with biologically oriented 14 MeV neutrons in low scatter environment, describing test facility (CERN-71-16) p0027 A72-12068

Average radiation Q factor and dose radiation spectrum measurement in phantom irradiation by proton beams (CERN-71-16) p0027 A72-12069

Linear energy transfer response of polystyrene plastic scintillator, presenting data on quality factor and radiation dose equivalent determinations in mixed radiation field (CERN-71-16) p0027 A72-12071

Ionometer chamber for direct measurement of radiation dose equivalent, describing high voltage switching circuit (CERN-71-16) p0027 A72-12072

Radiation dosages received by cosmonauts in manned Soyuz 3-9 from mission retrieved thermoluminescent glass dosimeters (CERN-71-16) p0027 A72-12075

Cosmic ray exposure thresholds in human tissue from solar minima to maximum at SST flight level (CEBN-71-16) p0027 A72-12079

Radiation exposure during high altitude flights, considering normal radiation levels due to galactic radiation and short term increases due to solar flares (CEBN-71-13234) p0053 A72-13234

Biomedical dosimetry in acute human irradiation from cytopgenic study of peripheral blood and bone marrow (P0056 A72-14606

Blue green algae anastycis midulans photoscovery after Co 60 gamma radiation exposures, using white and red light (P0073 A72-15516

Bacteriophage synergistic inactivation by heat and ionizing radiation from kinetic model describing dose rate and temperature dependence (CEBN-71-13 A72-18185

Relative biological effectiveness of high X-ray doses given to radish seeds, studying irradiation rate effect on germination probability (CEBN-71-122524

Three year varied dose and acute exposure gamma irradiation of dogs, noting radiobiological effects from hematological, cytological and physiological examinations (P0026 A72-29307

Dose response curves for pink somatic mutations in Tradescania after neutron and X-ray irradiation (CEBN-71-121723

Irradiation system for animal and human subjects exposure to controlled microwave radiation in environmental tests (CEBN-71-122573

A new model for estimating space proton dose to body organs (CEBN-71-123584

Neuropathological evaluation of monkeys exposed to body-alone X-radiation (P0024 A72-36439

The use of a scintillation counter to measure diagnostic X-ray tube kilovoltage, radiation exposure rates and contamination, by low energy gamma emitters (CEBN-71-123719

Radiobiological problems caused by supersonic transport With a survey of the first results established by tests performed on board the Concorde prototype (P0430 A72-39713

New cancer therapy treatment techniques using space dosimetric concepts (P0553 A72-65112

Gamma ray detection for mapping spatial negative fission fragments, establishment of maximum permissible values for radiation dose and contamination, by low energy gamma emitters (AD-332-37513

Radiation exposure during high altitude flights, noting dependence on radiation quality, systemic dose and dose rate (CERN-71-16) p0025 A72-12056

Effective dose change after repeated radiation exposures as function of time intervals between fractions, evaluating space flight radiation hazards (CERN-71-16) p0025 A72-12059

High energy nuclear tissue doses calculation based on averaged characteristics of nuclear interactions (CERN-71-16) p0026 A72-12067

Depth-dose experiments with biologically oriented 14 MeV neutrons in low scatter environment, describing test facility (CERN-71-16) p0027 A72-12068

Average radiation Q factor and dose radiation spectrum measurement in phantom irradiation by proton beams (CERN-71-16) p0027 A72-12069
BADIATIOH EFFECTS

using anatomical human model

Particle energies and angular fluence distributions for calculating dose rate conversions in human radiation exposure development of dosimeter to determine energy deposition in small tissue region during exposure to space radiation

Estimating individual bone marrow radiation doses in leukemia patients

Estimation of proton penetration and absorption of heavy nuclei from cosmic rays during space travel

Secondary radiation dosage from heavy galactic cosmic rays

Criteria for determining permissible doses of ionizing radiation for astronauts

Spectrum dose conversion method for evaluating radiation dosage

Long term effects of high and low radiation dosage on human beings and animals

The Monte Carlo codes for calculation of dose distribution in human phantoms irradiated by external photon sources

Interpretation of statistical data concerning relation of radiation exposure and infant mortality

Clariication of dose equivalent expression in protection systems

Acquisition of data concerning possible deleterious effects on health of population due to small exposures to ionizing radiation at low dose rates

Erythrocyte reserve in healthy and chronically irradiated dogs subjected to physical loads

Passive dosimetry for measuring cosmic radiation dosage and its effects during manned space flight

Passive dosimetric interpretation of cosmic radiation dose rate onboard French prototype of Concordae 001 supersonic transport aircraft

Dink scintillator calculation of absorbed dose rate from electron beams in tissue medium

Radiation dosage distribution and effects

Bibliography on influence of ionizing radiation dose rates on cells and organisms

RADIATION EFFECTS

BT RADIATION DAMAGE

Chronic microwave irradiation effects on experimental animal blood forming systems, examining peripheral blood count changes and nucleic and mitotic abnormalities in erythroblastic and lymphoid cells

Mitotic index and aberrant mitose frequency in sice corneal and intestinal epithelial cells exposed to 50-630 MeV protons, estimating relative biological efficiency coefficients

Biological efficiency of secondary radiations from 70 GeV proton interaction with targets, discussing dose dependences and restoration process relative rates

Relative biological effectiveness of high energy radiations, noting dependence on radiation quality, species, dose and dose rate

Radiobiological effects of nonuniform body irradiations, discussing regeneration processes stimulation by partially shielded bone marrow

RADIATION EFFECTS

Nonuniform high energy proton irradiation of dogs, evaluating and predicting biological effects

Primary cosmic ray interaction with tissues, emphasizing biological effects and nuclear reactions induced radioactivity in astronaut body

Carbohydrate metabolism, glycolytic ferment activities and leucine size under ionizing radiation, showing compensatory bone marrow cell formation with leukemia

Biological effects of unfocused laser radiation on DNA and RNA synthesis and cell activities in thymine dependent S. colli strain

Ultrasonically produced cavitation events correlation to amino cells number decrease under 1 MeV irradiation

Sublethal X radiation effects on rat erythropoietic system during altitude hypoxia acclimatization

Space environment weightlessness and radiation effects on leeches biocoxyt, metabolism, reproduction and growth from rocket biological experiments

Illumination effect on proton and gamma irradiated cabbage plant growth, height and foliages, indicating radiation protective effect for certain light intensities

Visual discrimination task-trained monkeys, performance and physiology after pulsed mixed gamma-neutron irradiation, noting blood pressure and respiratory and heart rate changes

Cosmic radiation effects in Concordae prototype cabin, using photographic dosimeters for neutron dose measurement and nuclear emulsions for all charged particle recordings

Pulsed and continuous RF irradiation effects on mitotic activity and chromosomal aberrations in regenerating rat liver tissue

Relative biological effectiveness of high X ray doses given to radish seeds, studying irradiation rate effect on germination probability

Phenomenon monkey retinal image size diameter estimation during exposure to Ar and Ne-Ne laser irradiation, using microphotometer scans

Solar activity effects on biophore processes, discussing radiation-induced polychrome activation mechanisms in water and biological plasma calcium ion concentration changes

Neuroendocrine responses in microwave radiation exposed rats, correlating thyroid and throtrophic activity

Three year varied dose and acute exposure gamma irradiation of dogs, noting radiobiological effects from hematological, cytological and physiological examinations

Red blood cell reserve mobilization in healthy and chronically irradiated dogs after treadmill exercise

Amitetravite /biological protectant/ effect on bone marrow, evaluating and predicting biological effects

Primary cosmic ray interaction with tissues, emphasizing biological effects and nuclear reactions induced radioactivity in astronaut body

Carbohydrate metabolism, glycolytic ferment activities and leucine size under ionizing radiation, showing compensatory bone marrow cell formation with leukemia

Ultrasonically produced cavitation events correlation to amino cells number decrease under 1 MeV irradiation

Sublethal X radiation effects on rat erythropoietic system during altitude hypoxia acclimatization

Space environment weightlessness and radiation effects on leeches biocoxyt, metabolism, reproduction and growth from rocket biological experiments

Illumination effect on proton and gamma irradiated cabbage plant growth, height and foliages, indicating radiation protective effect for certain light intensities

Visual discrimination task-trained monkeys, performance and physiology after pulsed mixed gamma-neutron irradiation, noting blood pressure and respiratory and heart rate changes

Cosmic radiation effects in Concordae prototype cabin, using photographic dosimeters for neutron dose measurement and nuclear emulsions for all charged particle recordings

Pulsed and continuous RF irradiation effects on mitotic activity and chromosomal aberrations in regenerating rat liver tissue

Relative biological effectiveness of high X ray doses given to radish seeds, studying irradiation rate effect on germination probability

Phenomenon monkey retinal image size diameter estimation during exposure to Ar and Ne-Ne laser irradiation, using microphotometer scans

Solar activity effects on biophore processes, discussing radiation-induced polychrome activation mechanisms in water and biological plasma calcium ion concentration changes

Neuroendocrine responses in microwave radiation exposed rats, correlating thyroid and throtrophic activity
Badiobiological problems caused by supersonic flight factors, discussing microwave penetration, therapeutic warming, light scattering in tissues and medical instrument applications

Vestibular labyrinth reactions and nystagmus thresholds in dogs during non-regular angular accelerations and simulated chronic galactic radiation from Co 60 gamma source.

Incorporation of methionine-35 in the protein of the digestive organs of rabbits under the action of radiation and vibration.

Effect of space flight factors on spontaneous and induced autodisarrisms of gamma irradiated and nonirradiated lettuce seeds during flight of Cosmos-368 artificial earth satellite.

Effect of specific flight factors on preirradiated yeast cells during flight of Cosmos-368 artificial earth satellite.

Effects of extraterrestrial radiation on dormant pea seeds during flight of Cosmos-368 artificial earth satellite.

Effects of space flight factors on formation of anomalous metabolites and activity of enzymes in plants.

Human blood cell dose-response relationship to total body irradiation.

Synergistic effect of zero gravity and radiation on human leukocytes and Neumysema crassa

International cooperation in biophysics, cosmic rays, heavy ions, and radiation effects research.

Radiation and acceleration effects on structure of cytoplasm in aerospace environment.

Radiation effects in yeasts, hydrogen bacteria and seeds of lettuce and pea.

Intake of heavy ions on cerebral cortex.

Establishment of maximal permissible values for internal radiation doses based on uptake and retention of radioisotopes by human body organs.

Influence of cosmic rays on cells and action of heavy ions on cerebral cortex.

Effects of preflight and postflight irradiation of biological specimens using yeast cells, hydrogen bacteria, lettuce, and pea seeds on Cosmos satellite-368.

Effects of extraterrestrial radiation on escherichia coli culture during flight of Cosmos-368 artificial earth satellite.

Effect of specific flight factors on preirradiated yeast cells during flight of Cosmos-368 artificial earth satellite.

Effect of specific flight factors on preirradiated yeast cells during flight of Cosmos-368 artificial earth satellite.

Effect of flight conditions and prolonged ground storage on viability and radiosensitivity of hydrogen bacteria cells.

Effects of extraterrestrial radiation on dormant pea seeds during flight of Cosmos-368 artificial earth satellite.

Effects of space flight factors on spontaneous and induced autodisarrisms of gamma irradiated and nonirradiated lettuce seeds.

Effects of extraterrestrial radiation on dorset pea seeds during flight of Cosmos-368 artificial earth satellite.

Effects of space flight factors on formation of anomalous metabolites and activity of enzymes in plants.

Zond 8 space probe experiments to determine effects of flight factors on physiological and biochemical properties of yeast and algae bacteria.

Research projects to determine biological and physiological effects of radius quasis rays.

Temporary human sterility caused by X ray irradiation.

Post-irradiation survival time in mice determined by tests performed on board the Concorde prototype.
Radiation hazard from heavy galactic cosmic rays to astronauts on extended missions

Experimental biopsay method for studying radio frequency hazards in priates

Biological implications of Pa accumulation in man and his environment

Effects of lasers on human skin

Medical atlas of radionuclides used in medicine, biology, industry, and agriculture

Radiochemical analyses of Apollo astronaut wastes

Hair radioactivity as measure of exposure to radiotopes, using both shaved and plucked hair

Subject Index

Radiation hazard from heavy galactic cosmic rays to astronauts on extended missions

Experimental biopsay method for studying radio frequency hazards in priates

Biological implications of Pa accumulation in man and his environment

Effects of lasers on human skin

Medical atlas of radionuclides used in medicine, biology, industry, and agriculture
RADIATION SHIELDING
Radiation hazards in space with respect to galactic radiation shielding, solar flare prediction and conventional terrestrial safety standards.

Radiation shielding model of man for manned space mission applications.

Effectiveness of lead screens in protecting bone marrow, quantity necessary for survival of mice, gamma irradiated with Co-60

RADIATION SICKNESS
Radiation induced disease development related to dose, dose rate and radiation quality, discussing different models.

Relative biological effectiveness of energetic protons for somatic effects induction in mice during whole body irradiation, using near-energy of solar event protons.

Influence of ionizing radiation on the tooth organ.

Quantitative evaluation of effects of radiation sickness as applicable to problems of space radiobiology.

RADIATION SPECTRA

RADIATION THERAPY
New cancer therapy treatment techniques using space dosimetric concepts.

Gamma ray detection for mapping spatial negative ion distribution in tissue.

Direct and indirect cyclotron production of 2-123 for radiation therapy.

Development of method for measuring epidermal thickness for application to radiation dosimetry.

Methods for protecting medical personnel from ionizing radiation during diagnostic and therapeutic procedures.

Optimal choice of scattering foils for electron therapy including computation of energy losses.

RADIATION TOLERANCE
Circadian periodicity of resistance to ionizing radiation in pocket mouse at high and low metabolic rate.

Radioprotective effect of ATP in mice, quinea pigs, and dogs exposed to protracted gamma irradiation.

Effects of plant illumination on tolerance to gamma and proton irradiation.

Development of method for measuring epidermal thickness for application to radiation dosimetry.

Effect of flight conditions and prolonged ground storage on viability and radiosensitivity of hydrogen bacteria cells.

Analysis of clinical radiation data for predicting human tolerances to radiation effects during manned space flights.

Increased radiosensitivity in mice by mobilization of autoantibodies through low irradiation dosimetry.

Refined x-ray laser radiation exposure levels for Air Force personnel working edible and near infrared region.

RADIATION HEAT TRANSFER
Heat transfer through fabrics by convection, conduction, radiation and vaporization related to skin temperature and thermal injury.

RADIATIVE TRANSFER

RADIO COMMUNICATION

RADIO EQUIPMENT

RADIO FREQUENCIES

RADIO FREQUENCY INTERFERENCE

RADIO INTERFERENCE

RADIO SIGNAL ABSORPTION

RADIO SIGNALS

RADIO TELEMETRY

RADIO TRANSISTORS

SUBJECT INDEX

A-351
RADIOACTIVE ISOTOPES

RADIO ACI TETE ELEBERTS

BADIOACTITE SOCLIDES

BADIO WAVES

Hair radioactivity as measure of exposure to

OSAEC 1970 progress report on radioactive

Air sampling process for determining hazards from

Bedical atlas of radionuclides used in medicine,

Beresearch on biological effects of radioisotope

Sensitivity of Ge(Li) detectors in biological and

Determining radiation exposure of astronauts by

Effectiveness of radioisotope scanning of Ga-67

Bibliography of reported biological responses and

clinical manifestations attributed to microwave

and radio frequency radiation

Radioactive Contaminants

The use of a scintillation counter to measure
diagnostic x-ray tube kilovoltage, radiation
exposure rates and contamination by low energy

gasma emitters.

USAEC 1970 progress report on radioactive

atmospheric processes and effects on plant life

[BNL-1521-VOL-2-P2-1]

Radioactive Elements

Radioactive isotopes

MT Plutonium

MT Plutonium isotopes

Measurement of radionuclide content in feces and

urine of Apollo 12 and 13 astronauts

[NASA-CR-126713]

Effects of plutonium on lymphatic tissues

[DOE-H-713]

Determining radiation exposure of astronauts by

analysis of urine salts and raw feces in gamma

ray spectrometers

[BNL-31-3608]

Hair radioactivity as measure of exposure to

radioisotopes, using both shaved and plucked hair

[BNL-717-2403]

Sensitivity of Ge(Li) detectors in biological and

environmental counting

[UCL-73505]

Research on biological effects of radioisotope

irradiation

[IP-44]

Radiochemical technique for determining

radioisotopes present in urine and feces of

Apollo 15 astronauts

[NASA-CR-127563]

Medical atlas of radioisotopes used in medicine,

biology, industry, and agriculture

[ZUR-6606]

Radioactive Materials

Air sampling process for determining hazards from

radioactive particles in toxic aerosol inhalation

[LA-4249-VOL-2]

Effects of atmospheric distribution of plutonium

on ecological systems of desert areas

[UCLA-12-846]

Radioactive Nuclides

Radioactive isotopes

MT Radioactive Elements

Radioactivity

Primary cosmic ray interaction with tissues,

emphasizing biological effects and nuclear

reactions induced radioactivity in astronaut body

[BNL-28047]

Radiobiology

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0547 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]

Biological dosimetry in acute human irradiation

from cytogenetic study of peripheral blood and

bone marrow

[p0542 p72-32695]
RADIOCHEMISTRY

RT RADIOCHEMICAL SEPARATION
Conversion of angiostatin to angiostatin 2 in dog pulmonary circulation, studying peptide synthesis, radioimmunoassay and in vivo and plasma in vitro metabolism p0073 A72-15465

RADIOGRAPHY

RT ANGIOGRAPHY
Aspects of bone necrosis pathology from radiographic studies in dogs with decompression sickness noting articular cartilage erosion and joint dysplasia and exostosis p0110 A72-17876

Hemodynamic assessment of arterial blood flow from radiograph measurements of sorts branching points p0277 A72-26774

Hemodynamic effects of angiographic contrast medium in patients with and without heart disease, discussing myocardial performance during first ten beats p0286 A72-27712

The imaging properties of the positron camera p0423 A72-36424

Determination of the elastic modulus of the left-ventricle myocardium with the aid of X-ray kymography p0458 A72-38890

Effects of coronary arteriography on myocardial blood flow p0544 A72-43933

Necropsy and radiographic observation of spinal fracture and articular facet disarrangement patterns in rhesus monkeys [ARNL-TR-71-177] p0258 A72-19134

Annotated bibliography of infrared radiographic studies up to 1970 [AD-741950] p0559 A72-33088

Design of X-ray detector for television radiograph used in biodynamic analysis [AD-744863] p0573 A72-33122

RADIOLOGY

New cancer therapy treatment techniques using space dosimetric concepts p0553 A72-45112

Radiological observations of spinal injuries to pilots caused by sudden ejection p0259 A72-19148

Radiological spinal examination of combat pilots and limiting angle for scoliosis p0395 A72-25506

RADIONUCLIDES

RT INFRARED DETECTORS
RT INFRARED SCANNERS

RADIONUCLIDES

RT RADIOACTIVE ISOTOPES

RADIONUCLIDE CHANGES produced in the nerve structures of the stellate ganglion by total X-ray irradiation p0507 A72-81925

Pulmonary impedance power spectral analysis for detecting radiation induced gastrointestential disease and performance decrement in man p0508 A72-17632

Analysis of clinical radiation data for predicting human tolerances to radiation effects during manned space flights p0208 A72-17653

RADIOACTIVE AGENTS

RT ABIOTRIBUTIOB OBGS

RADIATION SENSITIVITY

RT RADIATION TOLERANCE

RADIOTHERAPY

RT RADIATION THERAPY

RAPID RT LIFE RAPTS

BEATS

RT THUNDERSTORMS

RADIO DISTRIBUTIONS

RT STATISTICAL DISTRIBUTIONS

RADIO NOISE

Time-compressed displays for target detection p0420 A72-35945

Effect of fringe on masking-level difference when gating from uncorrelated to correlated noise p0489 A72-40346

RADIO PROCESS

Protobiotics formation by random aggregation and reproduction from proteins and nucleic acids

macromolecules p0062 A72-14782

Subjective probability distributions for random device-generated Bernoulli process unknowns, discussing distribution median and quartiles and hypothetical sample impact assessment techniques p0095 A72-15912

RADIOACTIVITY

RT SLIGHT VIBRATION

Harmful influence of random vibrations on human organs, discussing Fokker-Planck analysis and amplitude and frequency variation effects p0115 A72-18720

Dynamic response and functional state of human operator subjected to harmonic and random vibrational excitations, discussing biodynamic nonlinear oscillatory system model construction p0115 A72-18728


Subjective response to random and sinusoidal vibration p0197 A72-16768

Analysis of human tolerance to random and sinusoidal vibrations [BAE-LLS-TRANS-1603] p0383 A72-24074

Nonlinear oscillatory system models for representation of reactions of human operators to harmonic and random vibrational action [NASA-TT-F-14265] p0436 A72-26065

Dynamic characteristics of human body in operator-machine system subjected to random vibrations [BAE-LLS-TRANS-1651] p0478 A72-28109

HANDB KICKELL

RT CATALYSTS

RANGE INDICATORS

RT INDICATING INSTRUMENTS

RANGEFINDING

RT SOUND RANGING

RADIO EYE WAVEFORMS

RT EEG and electrocoagulogram recording of chimpanzee sleep, noting rapid eye movement stages p0001 A72-10074

Rapid eye movement sleep deprivation and hyperbaric oxygenation influence on gamma-aminobutyric acid levels in mice brains, suggesting protective mechanism against nerve cell oxygen intoxication p0166 A72-20191

Day/night workers sleep patterns in terms of intrasleep REM-REM ultradian cycle, noting sleep temporal instability for night workers p0226 A72-23730

Mental performance tests in sleep deprived subjects for indication of recuperative function of slow wave and REM sleep stages p0274 A72-26682

Nocturnal pineal alpha triclinates wakefulness-sleep cycles during dark/light periods expressed in REM/non-REM percentages p0358 A72-29390

Latent desynchronosis caused by disturbances in circadian rhythms, noting rapid eye movement state abnormalities p0327 A72-29314

REM period functional maintenance of coordinated eye movement facilitation and binocular depth perception accuracy following sleep p0418 A72-35462

RANKE MANTH ELEMENTS

RT SCANDIUM

RARE GASES

RT ARGON

RT HELIUM

Inert gas narcosis under hyperbaric conditions relationship to mental performance and auditory and visual evoked responses in man [AD-736736] p0019 A72-11705

Effects of nitrogen and helium upon pulmonary damage after rapid decompression to 2 torr p0409 A72-43544

Inert gas effects on embryonic development p0515 A72-42744
Neurophysiological mechanisms responsible for conditioned reflexes, considering cells, reaction relationship to animal behavior, neuronal stimuli interactions, internal inhibitions and trace process reproduction.

Conditioned reflex mechanisms responsible for regulation of emotions in higher order animal and human neurophysiology.

Conditioned reflex activity, discussing biological and nervous system, electric analog simulation and mathematical and structural modeling.

Human reactions to sonic boom acoustic stimuli, noting startle reflex responses.

Electroencephalogram and myogram responses in phasic stretch reflex under prestrain conditions as index of fasciaorator activity level in normal humans.

Cat and rat cardiac and cardiovascular reflexes response to electric pulse stimulation of sensory motor cerebral cortex.

Concentrated and extended learning effects on formation rate and retention degree of conditioned reflex during mice adaptation to high altitude hypoxia.

Human spinal segment functional state before voluntary movement during water immersion, using H-reflex for spinal cord motoneuron excitability evaluation.

Human leg muscle reflex excitability changes during angular acceleration, suggesting vestibular apparatus as coordination means in quasi-static and dynamic movement control.

Unconditioned /vascular load stimulus/ and conditioned /otococoele stimulus/ cardiac reflexes in hypostatic and alert states.

Water immersion tests to study body fluid balance disturbances during weightlessness, observing diuretic reflex control of blood volume.

Interaction of interoceptors and exteroceptors in the process of urination and defecation reflex act saturation in opossum.

New experimental data on the morpho-physiological analysis of the adaptation phenomena in the somatic reflex arc.

Vasomotor reflex locking level.

Refract and conditional moment observation of central nervous system function restitution in Macaca mulatta monkeys with cortical lesions, studying pathological forced grasping.

Proteinase activity in different regions of the brain during development and inhibition of a conditioned passive-avoidance reflex.

Role of efferent influences of tecto-thalamo-cortical cerebral structures in pre-adjustment alterations of spinal motor neuron excitability.

Vasomotor reflexes and the principle of descending control.

Polysynaptie sympatho-reticular and somatic afferent visceral link between internal organs and cerebra in interoceptive reflex fields.

Blood vessel reactions to natural defense and conditioned reflexes from plethysmography and blood pressure measurements, discussing cortical effects mechanisms.

Breathing rate response to oral instructions in relationship to nervous system, bronchial muscle tonus and gas metabolism rate reflex-type changes.

Higher nervous activity of monkeys two years after the extinction of the dorsolateral frontal cortex.

Role of the reticular formation of the mid-brain in the storage and recreation of a system of conditioned reflexes.

Critique of Pavlov conditioned reflex role in higher nervous activity and association principle role in psychic activity.

A mathematical model of the chemoreflex control of ventilation.

Effects of physical exercise on spinal reflectivity in man.

Electrophysiological analysis of defense reflex and unconditioned reactions and conditioned signal analysis in a model mechanism of functional system /afferent synthesis, decision making, correction, etc/.

Neurophysiological mechanisms of the extinction of the orientating reflex.

Sensomotor mechanism of proprioreceptors in muscles and tendons, considering reflexive control of position and motion.

Vestibular system functional relationship to postural reflex mechanism involving labyrinth and quasar receptors responses.

Functional insufficiency of the neuromuscular system caused by weightlessness and hypokinesis.

Development of a defensive conditioned reflex to a light stimulus after previous visual deprivation.

Age-induced long-term memory changes in animals.

Characteristics of conditioned reflexes to an ecologically adequate stimulus in hens.

Electrophysiological analysis of limbic-reticular interaction during the orientating reflex.

Influence of the nervous system and its mediators on the spontaneous contractile activity of a smooth muscle.

Analysis of vestibulo-ocular counterroll reflex in Rhesus monkeys subjected to high gravity forces.

Refractive

V Vasomotor reflex locking level.

Refractive effects mechanisms

Blood vessel reactions to natural defense and conditioned reflexes from plethysmography and blood pressure measurements, discussing cortical effects mechanisms.

Breathing rate response to oral instructions in relationship to nervous system, bronchial muscle tonus and gas metabolism rate reflex-type changes.

Refractive optics of fish eyes in relation to lens position and retina.

Refrigerating

Living organisms defense and preservation via refrigeration and vacuum combined use in lyophilization technique.

Regeneration (Engineering)

Closed loop life support systems, discussing ammonia ninety day test in space station simulator, Soviet experiments and water and oxygen regeneration.

Skylab regenerative carbon dioxide removal system.
The Space Station Prototype Program - The development of a regenerative life support system for extended-duration missions. p0054 72-05193

Program for ground-based manned tests of regenerative life support systems (NASA-CR-112000) p0084 72-12046

Preliminary plan for testing regenerative life support systems (NASA-CR-113999) p0084 72-12047

"Development of regenerative or partially regenerative life support systems used in NASA protective systems (NASA-CR-114824) p0044 72-25133

REGENERATION (PHYSIOLOGY)

Radiobiological effects of nonuniform body irradiation, discussing regeneration process stimulated by partially occluded bone marrow (CEEB-71-16) p0025 72-12060

Pulsed and continuous RF irradiation affecting mitotic activity and chronosomal aberrations in regenerating rat liver tissue p0158 72-19443

Supercellular regulators of triggering mechanism of regenerative reaction in stem reticuloendothelial bone marrow tissue p0322 72-28636

Vasa nerve regeneration in human after stomach cancer surgery p0325 72-28779

Adaptation of cells to aerospace environments, noting cell renewal, regulation, and limitations p0193 72-16040

REGENERATIVE CYCLE: U REGENERATION (ENGINEERING)

REGENERATIVE FUEL CELLS

Vapor cycle engine for driving Pe 238 fueled heart assist system (PB-205474) p0318 72-21086

REGIONS

WT ANTARCTIC REGIONS
WT ARCTIC REGIONS
WT MURRAY REGION
WT POLAR REGIONS
WT TROPICAL REGIONS

REGRESSION (STATISTICS) U REGRESSION ANALYSIS

Regression analysis for steady state inequality in O2 consumption calculations. p0049 72-34542

Regression analysis technique for determining human sensitivity to noise and annoyance (NASA-CR-19581) p0189 72-16055

Regression analysis of relationship between system design, training variables, and technician maintenance performance on automatic pilots (AD-73591) p0078 72-28111

Regression analysis technique for selecting Minuteman combat crew members (TAD-760841) p0535 72-31126

REGULATION U CONTROL REGULATIONS

U.S. federal regulation on occupational noise exposure control for hearing loss prevention, discussing noise measurement, radiation and periodic tests p0373 72-33324

REGULATORS

NT FLOW REGULATORS
NT GIBBERELLINS
NT PRESSURE REGULATORS

REINFORCED MATERIALS

U COMPOSITE MATERIALS

REINFORCED PLASTICS

Asbestos reinforced plastics safe handling and manipulation enshrined by regulations provided precautions p0265 72-25549

REINFORCEMENT (PSYCHOLOGY)

RTEWARD (PSYCHOLOGY)

Human trace responses generation and storage under light stimulus reinforcement of sound conditioning from galvanic skin reactions observation p0073 72-15581

Characteristics of certain parameters of memory for visual signals in lower monkeys p0073 72-15581

A-359

RELATIVE BIOLOGICAL EFFECTIVENESS (RBE)

Mathematical model for radiation damage cross section linear energy transfer dependence, explaining experimental values of relative biological effectiveness (CEEB-71-16) p0025 72-12052

Relative biological effectiveness of energetic protons for somatic effects induction in human during whole body irradiation, using mean energy of solar event protons (CEEB-71-16) p0025 72-12054

Mitotic index and aberrant mitotic frequency in mice corneal and intestinal epithelial cells exposed to 50-630 MeV protons, estimating relative biological efficiency coefficients (CEEB-71-16) p0025 72-12055

Relative biological effectiveness of high energy radiations, noting dependence on radiation quality, system, dose and dose rate (CEEB-71-16) p0025 72-12058

Effective dose change after repeated radiation exposures as function of time intervals between fractions, evaluating space flight radiation hazards (CEEB-71-16) p0025 72-12059

Relative biological effectiveness of high X ray doses given to radish seeds, studying irradiation rate effect on germination probability p0214 72-22520

Electron abundance equilibrium as factor in biological' effectiveness of proton beam irradiation of animals p0092 72-40450

Relative biological effectiveness of 3-GeV proton beams in producing cataracts in rabbits (CEA-COMP-1762) p0137 72-15072

Relative biological effectiveness of various types of cosmic radiation p0301 72-26043

Relative biological effects of heavy cosmic ray ions on living tissue p0347 72-26049

RELATIVISTIC PARTICLES

Detection of Cerenkov radiation in relativistic beams. (AD-729449) p0117 72-14040

RELATIVITY

Gravitational biology theory problems, discussing possibility of applying relativistic phenomena to living organisms in inertial or inertialless systems p0023 72-12016

RELAXATION (MECHANICS)

STRESS RELAXATION

RELAXATION (PHYSIOLOGY)

Novocain 3,5-dimethyl-4-bromopyrazol injection effect on rabbit and dog heart during direct extracardiac nerve stimulation p0098 72-16358

Force-velocity relations in cat papillary muscles isotonic relaxation, discussing effects of preloads and afterloads, temperature and stimulation frequency p0217 72-22860

RELIABILITY

UT COMPONENT RELIABILITY

UT STRUCTURAL RELIABILITY

Evaluation of equipment used in aircraft crash rescue operations (AD-725564) p0047 72-11106

RELIABILITY ANALYSIS

Reliability of electroencephalography as diagnostic method from specialists interpretation of curve morphological features, discussing normal and pathological record evaluation p0176 72-21000

Stochastic models of human performance effectiveness functions reliability and correctness generated by tracking and vigilance tasks p0299 72-24001

Astronauts physiological and psychological reliability, discussing Apollo flights and prolonged missions to other planets p0339 72-30677

Taxonomic structure for classifying behavioral studies in human performance reliability data
RELIABILITY CONTROL

system [AD-7209107] p0119 N72-14052

RELIABILITY CONTROL

U QUALITY CONTROL

U RELIABILITY ENGINEERING

RELIABILITY ENGINEERING

book on system safety engineering covering systems analysis and engineering, evolution of safety philosophy, product reliability and liability, etc p0056 A72-18573

Reliability design for airborne ecological system for frogmen, discussing control flushing and multiple sensor sequencing model p0229 A72-23999

Operator independence test for human performance reliability modeling based on system detection and fault location of sonar system failure p0229 A72-28002

Human operator role in space systems reliability, suggesting approaches to system design and program planning to exploit human potential [AIAA PAPER 72-228] p0230 A72-28439

Compression distillation unit design and development for integrated water and waste management system onboard spacecraft, describing reliability analysis and performance tests [ASM PAPER 72-29AN-1] p0362 A72-39176

Performance tests of protective clothing to determine effectiveness against air blast during high speed ejection p0259 N72-19147

Reliability of microbial cultivation in chemostat of closed ecological life support system p0483 N72-29070

REHABILITATION

U REHABILITATION

REMOTE CONSOLES

On-line digital computer system for real time interpretation and report generation of electrocardiograms from remote locations over switched telephone network p0152 A72-19311

REMOTE CONTROL

Human or computer control role in teleoperator remote control mechanisms, discussing control modes, sensing and transmission time delay problems p0503 A72-61946

Development of automatic pictorial pattern recognition schemes for use in control of remote loqued devices [AD-7282447] p0807 N72-13085

Principles of construction of complexes for continuous control of human subjects and automatic normalization of body states [AD-730453] p0248 N72-18127

Principles of arranging manual mechanical master-slave manipulators p0572 N72-33107

REMOTE HANDLING

Teleoperator manipulator for payload handling in space shuttle, noting design features and simulations of master-slave remote control system [AIAA PAPER 72-2361] p0326 A72-29075

Review and formulation of problems encountered in theory of manipulators p0571 N72-33101

Operating principles of remotely controlled master-slave manipulators p0571 N72-33103

REMOTE SENSORS

Remote sensing investigation of root wilt disease in coconut plants in Kerala state [India] p0012 A72-11051

Telemetric instrumentation for remote physiological and behavioral observations of free roaming animals p0159 A72-19912

Remote sleep monitoring display console [NASA CR-115573] p0386 A72-26092

Electronic equipment and systems used to track wild animals in order to determine migratory and navigational behavior p0396 N72-25067

Biological resources of Chesapeake Bay and measurement of chemical, physical, and meteorological features to improve resources management p0437 N72-26278

MULTISPECTRAL REMOTE SENSING

Multispectral remote imaging of morphological and physiological changes in trees under drought and salt stress [NASA CR-127640] p0468 A72-28037

Remote multiband photographic vegetation inventories to determine environmental conditions that breed public health hazards p0487 A72-29322

Remote sensing of wildland and agricultural vegetation, using ERTS-A p0488 A72-29408

SUBJECT INDEX

RENS

U RAPID EYE MOVEMENT STATE

RENS

RENAI FUNCTION

Antinatriuretic effect of acute thoracic and abdominal inferior vena cava constriction on arterial pressure, renal hemodynamics and electrolyte excretion p0018 A72-11660

Cardiac output and autonomous nervous system role in antinatriuretic response to acute thoracic superior vena cava constriction p0018 A72-11661

Immobilization hypercalcinria, discussing treatment by diet-induced extracellular volume depletion and hypoaldosteronism leading to intercompartmental fluid and electrolyte shift p0068 A72-16871

Cat mean renal nerve activity modification by hypophalamic stimulation and baroreceptor reflex interactions, discussing mean arterial pressure variation effects p0075 A72-15722

Aortic constriction and release effects on kidney glomerulotubular balance in saline- and water-loaded dogs, studying sodium reabsorption changes p0075 A72-21084

Prolonged water immersion effects on renal function and plasma volume in trained and untrained subjects, noting deleterious effect on orthostatic tolerance and work capacity p0227 A72-23738

Renal clearance studies of left atrial distention effect in dog, indicating antidiuretic hormone inhibition mechanism of diuresis p0287 A72-27828

Interrelationship of hemodynamic alterations of valvular heart disease and renal function - Influences on renal sodium reabsorption. p0452 A72-37872

Renal polycystomas - Incidence among flight personnel p0452 A72-37877

Renin in differential diagnosis of hypertension. p0453 A72-38184

Effects of simulated high altitude on renin-aldoestosterone and its hormone in normal man. p0480 A72-40422

Studies of renal and extrarenal production of erythropoietin in male and female rats p0500 A72-61190

Nitrogen excretion as a measure of protein metabolism in man under different conditions of renal function. p0505 A72-41523

The effect of space flight conditions and prolonged hypoxia on the kidney functions in man. p0508 A72-42068

Capillary circulation as a regulator of sodium reabsorption and excretion. p0585 A72-43995

Increased fluid turnover and the activity of the renin-angiotensin system under various experimental conditions. p0545 A72-43997

RESEARCH

U SPACE RESEARCH

RESEARCHING

U MAINTENANCE

REMOTE GENERATORS

On-line digital computer system for real time interpretation and report generation of electrocardiograms from remote locations over switched telephone network p0152 A72-19311
A-361

REPRODUCTION
Role of nitrogen metabolism in biological productivity and marine food chain in temperate seas
(FCO-J626-22) p0306 N72-20084

REPRODUCTIVE SYSTEMS
OE TESTES
OE UTEROS
Alpha-D-fucosidase, beta- and alpha-D-galactosidases and alpha-D-mannosidase activity changes in human placenta at various embryonic phases
p0029 A72-12294

Natural ionizing radiation effects on multiplication of unicellular organisms and Drosophila melanogaster development
p0431 N72-26050

Bioessay of screwworm breeding ecology (NASA-CR-115708) p0468 N72-28085

REPUBLIC OF VIETNAM
G MILITARY AIRCRAFT
RESEARCH IN VIETNAM
RESEARCH PROJECTS
RESEARCH IN PROJECTS
Medical and biological research conducted on Soviet spacecrafts and satellites (AD-727940) p0044 N72-11081

Flight summary of biomedical sciences experiments in Gemini Program (NASA-TR-M-50870) p0118 N72-16053

Physiological optics and psychophysics of vision research in USSR p0132 N72-15029

Biochemistry, radiobiology, and environmental effects of radiation (OCLA-12-515) p0199 N72-17040

Biotic research projects in USSR (AD-T30085) p0205 N72-17085

Medical science research projects involving cell structure, malaria, hepatitis, hemolytic streptococccus, acute renal failure, and effects of lasers (AD-730140) p0242 N72-18090

Articles on research in space biology and medicine (JPN-56499) p0668 N72-28044

Identification of payload research requirements, equipment, and subsystems for conducting biomedical research projects during space missions - Vol. 2 (NASA-CR-127319) p0475 N72-28088

RESERVOIR
The effect of hypoxia on the coronary blood flow in reserpinized dogs (NASA-CR-112104) P0477 H72-28101

RESIDUAL STRESS
Manufacturing process for making perspiration resistant-stress resistant biopotential electrode (NASA-CASE-MSC-90153-2) p0402 N72-25120

RESIDUES
Phosphate and bone ash composition of beef and human bone under living body conditions (NASA-TP-F-13916) p0568 N72-33079

RESISTANTS
NT FOR EXCHANGE RESINS
NT SYNTHETIC RESINS
RESISTANCE
Manufacturing process for making perspiration resistant-stress resistant biopotential electrode (NASA-CASE-MSC-90153-2) p0402 N72-25120

RESISTANCE COEFFICIENTS
U RESISTANCE
RESISTIVITY
U ELECTRICAL RESISTIVITY
RESISTOR ENGINES
Chemical contaminant influence on design of biowaste resistojet propulsion system for space station use (NASA-CR-111957) p0039 N72-10111

Evaluation of flow control and thermal pumping system for integrated environmental control/life support resistojet control system (NASA-CR-112104) p0477 N72-28101

RESISTOJETS
U RESISTOJET ENGINES
RESISTORS
NT THERMISTORS
RESISTIVE U PROBLEM SOLVING
RESONANCE
NT MAGNETIC RESONANCE
BESPIBATION

BBSOHAIT VIBBATIOH

BESOIAHT FBEQOEHCIES

BESOIABT CAVITIES

BESOIATOBES

BESOIAHT CAVITIES

HT PBOTON HAGNETIC HESOHAHCE

HT HIGH AITITODE BBEATBISG

NT CAVITI BESOKATOBS •

HI BESONAHT VIBBATIOH

HT PBESSOBE BBEATBISG

Gaseous nitrogen production in humans under cardiovascular changes produced by whole body coherent brain model for evolution mechanisms of human breathing metabolic simulation device for pulmonary HC network and multiple breath nitrogen bacterial respiration through oxidative lung ventilation nonuniformity determination by methods for measuring the HF oscillation frequency in ultrasound pulses of equipment for diagnostic ultrasonography.

BESOIAHT VIBBATIOH

The resonance mechanism of the biological action of vibration

RESERATORS

NT CAVITI RESERATORS

RESPIRATION

NT HIGH ALTITUDE BREATHING

NT LIQUID BREATHING

NT PRESSURE BREATHING

Hydrostatic pressure and temperature effects on growth of psychrophilic marine bacteria, emphasizing inhibited amino acid transport and

Ventilatory and metabolic responses of unanesthetized dogs exposed to various carbon dioxide concentrations at 2 and 18 C, discussing oxygen uptake relation to cold

Nervous respiratory disorder in patients with diencephalic and vegetative vascular syndromes, discussing arterial hypoxia development and resulting oxygen insufficiency

Lung ventilation nonuniformity determination by single calm breath method, showing nitrogen concentration in alveolar phases

Bacterial respiration through oxidative phosphorylation origin hypothesis, discussing photosynthesis and sulfate respiration in anoxicogenic atmosphere and thiobacillies and aerobic evolution in oxygen atmosphere

Pulmonary HC network and multiple breath nitrogen washout time constants mathematical relationship for breathing mechanics measurement, discussing lung compliance and resistance

Breathing control during speech, noting carbon dioxide response, hyperventilation and apnea

Single olfactory bulb units under cyclic stimulation, observing activity related to inhalation cycle and odor quality

Single breath method for pulmonary diffusion capacity measurement with respect to total lung capacity and inspiration time

Human breathing metabolic simulation device for evaluating respiratory diagnostic, monitoring, support and resuscitation equipment

Ultrastructural and morphometric studies of beryllium oxide-contaminated environment effect on monkey and dog lung tissue

Gaseous nitrogen production in humans under steady-state conditions, relating expired nitrogen minute volume increase after protein consumption to possible gastrointestinal and metabolic effects

CO hypoxia effect on oxygen transport during exercise, discussing changes in cardiac and respiratory functions and work capacity

Diurnal and beat-to-beat variation factors in vectorcardiograms, noting respiratory movements, electrode location shift, skin-electrode impedence and heart electrical center mobility

SUBJECT INDEX

Arterial chemoceptor deafferentation influence on rat respiratory response to hypoxic and hypercapnic gas mixture breathing

Hypoxic and normoxic gas mixture breathing during intense muscular activity, relating oxygen consumption and carbon dioxide elimination magnitudes and motor performance

Human external respiration characteristics changes during increasing hypercapnia, relating carbon dioxide concentration rate to compensatory mechanisms and endurance

Respiration function testing device using spirographs and gas analyzers

Cheest strapping-induced increased lung recoil pressure effects on maximal expiratory flow relation to lung surface compliance decrease

Physical work capacity comparison during bicycle ergometry and treadmill walking tests, measuring oxygen uptake, ventilatory parameters and excess carbon dioxide production

Plethysmographic and laryngoscopic investigation of giotto opening and airway resistance relation to lung volume during panting and continuous slow expiration

Mathematical model of extracellular pH in brain tissue from blood and cerebrospinal fluid acid-base parameters for respiration central chemosensitive mechanisms study

Respiration control by extracellular pH in medullary tissue, studying chemoceptor response to hydrogen Ion concentration in cerebrospinal fluid

Added elastic load tests for thoracic elantance change effects on human response to carbon dioxide inhalation, using rebreathing technique

Exercise role in ventilatory acclimatization to graded hypoxia in goats from carbon dioxide response curve measurements

Inspiration, expiration and hand muscle control comparison in psychophysical category production method for human voluntary breathing investigation

Six day bed rest effect on external respiratory and subcutaneous tissue oxygen metabolism, noting oxygen consumption decline

High temperature environment effects on rat organ and muscle tissue respiration, discussing temperature homeostasis maintenance

Can mask-caused air flow resistance effects on respiratory and circulatory response to exercise, assessing maximal oxygen uptake

Alveolar carbon dioxide pressure-ventilation response curve measurement by Campbell rebreathing method in consecutive daily trials

Cardiovascular and respiratory changes in dogs exposed to acute overheating, relating ECG changes to adrenergic and hypoxia effects

Ventilatory peripheral chemoafferent response to hypoxia during physical exercise in native highlanders and altitude-acclimated lowlanders

Effects of nitrogen and helium upon pulmonary damage after rapid decompression to 2 torr. [AD-746093]

Magnetic field effects in enzymes, tissue respiration and some metabolism characteristics of an intact organism

Bradycardia diving reflex to apneic face immersion related to physical exercise
Subject Index

Pulmonary gas exchange in Andean natives at high altitude...

A model of fluctuating alveolar gas exchange during the respiratory cycle...

A model of fluctuating alveolar gas exchange during the respiratory cycle...

A mathematical model of the chemoreflex control of pulmonary ventilation...

Determination of oxygen consumption by use of the paramagnetic oxygen analyzer...

A mathematical model of the chemoreflex control of pulmonary ventilation...

Separation of central effects of CO2 and nicotine on ventilation and blood pressure...

The function of external respiration in mental activity...

Mechanisms of adaptation to hypoxic hypoxia...

Determination of the diffusion capability of lungs by the method of delayed respiration...

Comparison of three methods for quantitating respiratory response to hypoxia in man...

Air sampling processes for determining hazards from radioactive or toxic aerosol inhalation...

Analysis of physiological problems created by exposure to high pressures for prolonged periods...

Development of methods for analyzing data and fitting curves derived from replicate nitrogen washout tests on human subjects...

Metabolic, respiratory, and circulatory measurements during exercise and rest, including low concentration study of CO...

Response of ventilation parameters, pulse rate, oxygen uptake, and body temperature in man under acute and severe hypoxia...

Whole body plethysmograph system for use in measuring airway resistance under ambient hyperbaric conditions for normal breathing patterns...

Development of fluoroscopic-electronic system for monitoring concentrations of carbon dioxide in respiratory gases...

Hyperthermia effects on cardiac arrhythmias, arterial pressure, and respiration in dogs and electrocardiographic effectiveness in diagnosing threatening onset...

Aquaculture swimmers, using air and normoxic mixtures of air and helium for breathing...

A mathematical model of the chemoreflex control of pulmonary ventilation...

Determination of oxygen consumption by use of the paramagnetic oxygen analyzer...

A mathematical model of the chemoreflex control of pulmonary ventilation...

Separation of central effects of CO2 and nicotine on ventilation and blood pressure...

The function of external respiration in mental activity...

Mechanisms of adaptation to hypoxic hypoxia...

Determination of the diffusion capability of lungs by the method of delayed respiration...

Comparison of three methods for quantitating respiratory response to hypoxia in man...

Air sampling processes for determining hazards from radioactive or toxic aerosol inhalation...

Analysis of physiological problems created by exposure to high pressures for prolonged periods...

Development of methods for analyzing data and fitting curves derived from replicate nitrogen washout tests on human subjects...

Metabolic, respiratory, and circulatory measurements during exercise and rest, including low concentration study of CO...

Response of ventilation parameters, pulse rate, oxygen uptake, and body temperature in man under acute and severe hypoxia...

Whole body plethysmograph system for use in measuring airway resistance under ambient hyperbaric conditions for normal breathing patterns...

Development of fluoroscopic-electronic system for monitoring concentrations of carbon dioxide in respiratory gases...

Hyperthermia effects on cardiac arrhythmias, arterial pressure, and respiration in dogs and electrocardiographic effectiveness in diagnosing threatening onset...

Aquaculture swimmers, using air and normoxic mixtures of air and helium for breathing...

A mathematical model of the chemoreflex control of pulmonary ventilation...

Determination of oxygen consumption by use of the paramagnetic oxygen analyzer...

A mathematical model of the chemoreflex control of pulmonary ventilation...

Separation of central effects of CO2 and nicotine on ventilation and blood pressure...

The function of external respiration in mental activity...

Mechanisms of adaptation to hypoxic hypoxia...

Determination of the diffusion capability of lungs by the method of delayed respiration...

Comparison of three methods for quantitating respiratory response to hypoxia in man...

Air sampling processes for determining hazards from radioactive or toxic aerosol inhalation...

Analysis of physiological problems created by exposure to high pressures for prolonged periods...

Development of methods for analyzing data and fitting curves derived from replicate nitrogen washout tests on human subjects...

Metabolic, respiratory, and circulatory measurements during exercise and rest, including low concentration study of CO...

Response of ventilation parameters, pulse rate, oxygen uptake, and body temperature in man under acute and severe hypoxia...

Whole body plethysmograph system for use in measuring airway resistance under ambient hyperbaric conditions for normal breathing patterns...

Development of fluoroscopic-electronic system for monitoring concentrations of carbon dioxide in respiratory gases...

Hyperthermia effects on cardiac arrhythmias, arterial pressure, and respiration in dogs and electrocardiographic effectiveness in diagnosing threatening onset...

Aquaculture swimmers, using air and normoxic mixtures of air and helium for breathing...

A mathematical model of the chemoreflex control of pulmonary ventilation...

Determination of oxygen consumption by use of the paramagnetic oxygen analyzer...
RESPIRATORY RATE

Vagal control of ventilation and respiratory muscles during elevated pressures in cats
Endurance exercise effect on respiratory capacity in white, red and intermediate muscles in rats, relating fiber type to oxidative capacity
Bulbar respiratory neuron discharge patterns response to nasal and tracheal receptor stimulation in cats, relating changes in neuronal activity and intratracheal pressure
High pressure gas mixture breathing effects on intercostales externi muscles electrical activity and respiratory cycle time in rats
Digital computer technique for computation of pulmonary mechanics parameters, using phasor method and Fourier series analysis of respiratory flow signals
Mountain sickness relation to ventilation response to hypoxia, noting respiratory insensitivity on peripheral chemoreceptor sensitivity
Cerebrospinal fluid pH change effects on cat respiratory response before and after vagotomy, showing vagal activity relation to central chemical control of respiration
Cardiorespiratory response to breathing dense sulfur fluoride-oxygen mixture under physical exercise conditions
Supraspinal effects on different work regimes of supplementary respiratory muscles, using interference electromyograms cross correlation analysis
Respiratory and vasomotor autonomic centers functional state relation to ventilatory system from labyrinth electrical stimulation and shaking experiments
Cat bulbar respiratory neuron discharge modification by single electric shock stimulation of cerebral cortex
Respiratory effects of hypochloric acidosis and potassium depletion in the dog.
Comparative studies of the respiratory functions of nonnal and mountain aborigines oxygen breathing reaction studies
Suprapontine influences on hypoxic ventilatory control
Effect of a polarizing current on the activity of neurons of the respiratory center
Determination of the diffusional capability of lungs by the method of delayed respiration
Gas exchange mechanism in lung alveoles and capillaries, discussing cell metabolism for oxygen uptake and carbon dioxide formation
Respiration control mechanism ensuring adaptation to power requirements and chemical environment maintenance in tissues, considering brain stem location
Relative position of the rib within the chest and its determination on living subjects with aid of a computer program.
Respiratory perception and behavioral responses of man and animals to gas composition changes

RESPIRATORY RATE

Inspiration time correction factor for palmary diffusing capacity measurement by single breath method

SUBJECT INDEX

Heart and respiration rates response to free fall parachuting, using PA/PF telemetry
Rapid ventilatory response in man at work on set for different standard starting commands, discussing relation to work load and conditioning process
EEG phase asymmetry fluctuations relation to respiratory rhythm in subjects from pneumograms during rest, mental activity, hypnosis and sleep
Respiration rate transmitter with miniature pressure transducer for measuring pneumographs in animals over PA/PF telemetry system
Respiration control during hyperoxia, discussing chemoreceptor significance in minute volume respiration rate reduction mechanism from nasal mountain aborigines oxygen breathing reaction studies
High pressure gas mixture breathing effects on intercostales externi muscles electrical activity and respiratory cycle time in rats
Cotton wick probe-transducer assembly for pneumograph recording of rabbit respiratory rate
Parachutist biomedical responses in aerial tow at 110-175 knots, determining heart and respiratory rates and urinary catecholamines
Breathing rate response to oral instructions in relationship to nervous system, bronchial muscles and gas metabolism rate reflex-type changes
Spinal cord heating and cooling effects on body temperature, respiratory and heart rates and arterial blood pressure, investigating feeding and drinking behaviors
Method and apparatus for analyzing respiratory gas flow rate and inspiration-expiration frequencies in real time
Changes in external respiratory rate of men exposed to increased CO2 concentrations
Coordination of circadian rhythm with homeostatic respiratory rate during inversed work-rest cycle
Simulation and design of breathing metabolic simulator

RESPIRATORY REFLEXES

Cat respiratory center activity phase relation to arterial chemoreceptor afferent discharge oscillations effect on lung ventilation frequency
Respiration in altered gas environment for spontaneous breathing and voluntarily maintained pulmonary ventilation level conditions
Breathing regulation characteristics showing reflex control of respiratory functions in normal environment and brain tissue receptor control under hypoxia
Respiratory function control and physiological adaptation mechanisms evolution during changing earth atmosphere oxygen content, noting hypoxia sensitivity development
Laryngeal motoneuron activity during Berne-Breuer reflexes, noting inspiratory fibers firing inhibition and activation during lung inflation
Native highlander and lowlander chemoreflexes relation to ventilatory response to transient carbon dioxide inhalation at low and high altitudes

A-364
Patterns of spontaneous and reflexly-induced activity in phrenic and intercostal motoneurons.

Reflective heart rhythm changes and arterial tension during hypoxia, noting differences due to animal, controlled respiration and pharmacological effects.

Electromyographic investigation of diaphragm contraction following spinal cord section in cats, noting diaphragm motoneurons excitation by breathing center pulses.

Geneic aspects of the blunted chemoreflex ventilatory response to hypoxia in high altitude adaptation.

Respiration control mechanism ensuring adaptation to power requirements and chemical environment maintenance in tissues, considering brain stem location.

The reflex and mechanical response of the inspiratory muscles to an increased airflow resistance.

First-breath response of medullary inspiratory neurones to the mechanical loading of inspiration.

Effects of motion sickness on autonomic nervous systems role in vestibular-respiratory-vomeronasal reflexes.

Radiotelegraphic cardiorespiratory determinations during submaximal dynamic exercise.

Respiratory adaptation to pure oxygen excess pressure after cockpit depressurization from flight simulator tests with pressure-suited pilots, presenting ECG reactions.

Digital computer simulation of circulatory and respiratory systems interaction model for oxygen and carbon dioxide gas exchange between pulmonary blood and alveolar air.

Weight loss due to respiratory tract evaporative water loss during exercise, from humidity change, ventilatory exchange and oxygen uptake data.

Hyperoxia effect on human airways resistance during high pressure oxygen breathing.

Frequency response studies of human and avian respiratory regulation.


Respiratory chain components correlation to tension production at various oxygen pressures in guinea pig ductus arteriosus, investigating light absorption changes.

Aortic regurgitation variation with respiratory sinus arrhythmias and respiratory cycle in dogs during tachycardia and bradycardia.

Respiration control mechanism ensuring adaptation to power requirements and chemical environment maintenance in tissues, considering brain stem location.

System distortion error characteristics for carrier gas type radioisop tapediometers, considering relation to system time constant.
REII1AL ADIPTATION

1. Localisation and dynamic changes of glycogen in frog retina adapted to darkness or light. J. II. P0547 A72-48377
2. Phase correlation between two sources focused on a diffusing surface - application to the human retina. p0548 A72-48437
3. Visual sensitivity measurement in retinal areas with stepwise change from one monochromatic light to another, discussing eye movements, effects and perception thresholds. p0548 A72-48438
4. Perceptual latency as a function of stimulus onset and offset and retinal location. p0548 A72-48436
5. Functional organization of the peripheral extent in retinal ganglion cells. p0552 A72-44908
6. Optic functions and retinal circulation in humans exposed to centripetal and Coriolis accelerations. p0078 A72-11998
7. Biophysical effects of argon laser on retinas of monkeys. [AD-728333]
8. Detection of Cerenkov radiation in relativistic beams by human eye. [AD-729494]
9. Refractive optics of fish eyes in relation to lens position and retina. p0117 A72-14048
10. Acid phosphatase distribution and functional differences of neurons in frog retina. p0135 A72-15058
11. Polarization measurements and optical model for anisotropic areas in eye tissue. p0136 A72-15059
12. Effect of helium-neon and YAG laser radiation on retinas of rabbits at levels below those required to produce visible lesions. [AD-723852]
13. Acceleration training effects on compensatory reactions of rabbit retinal vesicles. p0250 A72-19083
14. Testing paradigm for training and measuring visual acuity in Rhesus monkeys suffering from retinal burns. [AD-738868]
15. Determination of radiation intensity needed to cause permanent retinal damage in humans. [AD-735802]
17. Effects of accelerated particles and cosmic rays on visual responses of isolated frog retina. p0342 A72-26051
18. Ophthalmologic examinations for determining retinal damage caused by helium-neon laser boresights. [AD-736292]
19. Histopathology of argon, ruby, gallium arsenide, neodimium, and carbon dioxide laser induced retinal lesions. [AD-781380]

RETIHAL IMAGES

1. Selective chromatic adaptation in cone photoreceptors of cynomolgus macaque monkeys, using late receptor potential as response index. p0299 A72-24269
2. Visual latencies measurement as function of stimulus luminance and adaptation state by stereoscopic null method, characterizing relationship by inverse power function. p0312 A72-29957
3. Stabilized retinal image techniques to examine functional relationships between nonstabilized gratings pattern orientation adaptation and stabilized line stimulus fading rates. p0377 A72-33646
4. Electroretinographic evidence for a photopic system in the rat. p0411 A72-34878
5. Linear-nonlinear-linear transition as a function of frequency in the retinal response to light. p0412 A72-34885
6. Effect of selective adaptation on detection of simple and compound parvofascular stimuli. p0426 A72-36607
7. Contour-contingent color aftereffects - Retinal area specificity. p0449 A72-37273
8. Interactions between spatial and kinetic dimensions in movement aftereffect. p0501 A72-81256
9. The photopigment bleaching hypothesis of complementary after-images - a psychophysical test. p0547 A72-44376
10. Effect of high brightness (20,000 to 80,000 lux) on rate of human eye adaptation to darkness. p0578 A72-11999
11. Phased development of human visual color perception. p0113 A72-15038
12. Human retinal adaptation to cortical excitation of sensory centers. p0113 A72-15040
13. Electrophysiological excitability changes in visual system of anesthetized cats in response to flash signals. p0113 A72-15043
14. Evoked potential of hypothalamic region in response to photic stimulation of rabbit retina. p0134 A72-15046
15. Ionizing radiation effects on response potentials of isolated frog retina to visual stimuli. p0134 A72-15049
16. Light flashes seen by Apollo astronauts caused by ionization in retina by cosmic nuclear. [Nasa-CR-125643]
17. Dark adaptation recovery of human eye after exposure to single light pulses. p0533 A72-31113

RETINAL IMAGES

1. Neuroresponses in cat visual system /retina, geniculate body, primate, monkey, and rhesus visual cortex/ to simple visual stimulus patterns. p0005 A72-10466
2. Psychology of visual form perception in relation to neurophysiological principles of lateral interaction and organization, considering retinal images, aftereffects, binocular vision, etc. p0005 A72-10469
3. Electronic analog models of human retina and visual system, discussing optical character recognition, signal processing, photoreceptor stimulation, visual cortex excitation and further model development. p0006 A72-10471
4. Human pattern analysis by stabilized retinal image fragmentation as function of bad frequencies for angle and line stimuli in different orientations. p0009 A72-10721
5. Binocular depth perceptions based on two retinal images spatial frequency content. p0029 A72-12486
6. Conductive velocity groups in cat optic nerve from antidromic responses recorded in peripheral retina and area centralis. p0053 A72-13621
7. Visual persistence and perceptual moment hypotheses for time-dependent visual illusion.
Optical image transfer functions characteristics and modulation in isolated retinas and retinal receptors, noting similarity to optical fiber bundles.

Boring target resolution threshold in retina, discussing visual acuity relation to target angular velocity during ocular pursuit.

Dynamic visual acuity and eye movement data for moving targets, deriving retinal target image position and velocity errors during ocular pursuit.

Human binocular visual system fusional information processing, evaluating compensatory eye movements role in overcoming retinal image disparity.

Red-cone interaction in human acopic vision, presenting test flash threshold as function of conditioning flash interval.

Rhena monkey retinal image diameter estimation during exposure to As and Ne-Ne laser irradiation, using microphotometer scans.

Visual evoked cortical responses in objective refraction related to retinal image clarity for clinical applications.

Gain control of cat retina rapid light adaptation process to attenuate signals reaching retinal ganglion cells from photoreceptors.

Spatial and temporal summation characteristics and relationship in human peripheral retina investigated for stimuli viewed at eccentricity against luminous background.

Linear systems theory for mathematical model of retinal image and ganglion cell excitation, calculating receptor layer luminance distributions for several stimulus patterns.

Eagle eye retinal image quality determination by ophthalmoscopic method, comparing to human visual acuity.

Size scaling rate from retinal image size comparison judgment time during observation of briefly presented concentric rectangles of varying size and orientation.

Stabilized retinal image techniques to examine functional relationships between nonstabilized grating pattern orientation adaptation and stabilized line stimuli fading rates.

Occipital EEG activity during fluctuations of perception under stabilized image and simplified stimulus conditions.

The influence of the modulation transfer function of the dioptric apparatus on the acuity and contrast of the retinal image in Rana esculenta.

Eye movement pattern monitoring to investigate retinal afterimage role in release of pursuit movements.

Peripheral contrast thresholds for moving images.

Manipulation of projected afterimages by means of the physiological theory imposed on the observer.

The neurophysiology of binocular vision.

Differential effects of refractive errors and receptive field organization of central and peripheral ganglion cells.

Each band measurement by psychological compensation technique, causing band disappearance by changes in stimulus pattern luminance and brightness distribution relations.

An electronic model of visual receptive fields.

Discrimination sensitivity and black light density in the mesopic range.

Fixation eye movements and the processing of visual information.

Some structural and functional characteristics of a retinal projection onto the visual cortex of cats.

Apparent movement and change in perceived location of a stimulus produced by a change in accommodative vergence.

The effect of size, retinal locus, and orientation on the visibility of a single afterimage.

Interactions between spatial and kinetic dimensions in movement aftereffect.

Optical directionality of retinal receptors and corresponding points. I - Nasal-temporal asymmetry of retinal spatial values and orientation of receptors; are the corresponding points cones. II - Variation of form of the experimental horoptera, and possibility of reorganization of the retinal correspondence according to the orientation of the organism.

Perception smear suppression during saccadic eye movements in terms of metacochronal determined by post-saccadic accumulated luminance relation to stimuli masking.

Spectral sensitivity functions of retinal color vision receptors.

REVIEW

R fracture of retinal color vision receptors for reducing thermal stress during aircraft operations.

ENHANCEMENT

Modification program to increase operation of self-contained underwater breathing apparatus.

GUIDE

Cardiac murmur level dependence on blood stream Reynolds number, tracing cardiac noise origina to blood turbulence.

REHABILITATION

Objective evaluation of main electroencephalogram parameter for disturbed brain blood circulation.

REHABILITATION

RHEOLOGY

Rheological properties and architecture of arterial walls, using stress relaxation and stress-strain-hysteresis tests on dog aorta.

REHABILITATION

Rheographic investigation of cerebral, pulmonary and peripheral circulation during bed rest in antiorotostatic position.

RHYTHM

Rhythms in circadian rhythms.

Book on hibernation and hypothalamus covering central nervous system regulation mechanisms, biological rhythmicity, migration, thermoregulation, gormor, human implications, etc.

Hybrid computer study of工程机械ological

Biorhythms, discussing regular information.
isolation from biological noise

Hippocampus electric activity and cardiac rhythms
variations responses to various intensity
electric stimulation of central gray matter

Regular sinus rhythm bundle branch block effect on
Hippocampus electric activity and cardiac rhythms
Bibonoclease molecule damage and enzyme activity
DHA-BHA molecular hybridization testing of chronon
Occipital electroencephalographic response to
EEG phase asymmetry fluctuations relation to
BHA content changes in ground squirrel brain
Long term electrocardiograms in analysis of
Participation of supraspinal structures in the
Phase relations between alpha waves in EEG and
Uniform visual field influence on
electroencephalographic alpha rhythm in man,
discussing occular fixation, visual attention and
vigilance change effects
Occipital electroencephalographic response to
slowly repeated periodic light flashes,
discussing alpha wave and rhythmic afteractivity
Phase relations between alpha waves in EEG and
automated rhythmic motoric activity as function of
subject behavioral activity and thalamic
pacemaker zones
Biochronometry - NAS-NASA Conference, Friday
Harbor, Washington, September 1969
Yeast glycolytic pathway oscillations relation to
concentration of dihydroxypropionic nucleotide and
other metabolites, noting analogy to
behavioral and physiological rhythms
Oriental response indication by EEG alpha rhythm
desynchronization in relation to visual
stimulation intensity
Human visual accommodation biorythms and reactions:
under hard physical work and visual stress
Seasonal rhythms of endocrine systems in
hibernating mammals, discussing central and
peripheral biological clocks in relation to
hypothalamus and pancreas/thyroid gland
Participation of supraspinal structures in the
formation and control of a system of arbitrary
cyclic motions of man
Long term electrocardiograms in analysis of
rhythmic heart disturbances of German Air Force
125 N7-21403
Biosilectivity measurement of rhythms in
gastrointestinal system of animals and human
beings
Abstracts, references, and full text documents on
research of biological rhythms
[NASA-CR-114487]
Generalization of harmonic analysis for detection of
long-term biorythmicities from short records
[AD-7412711]
Influence of biological rhythms on daily periodicities
in person subjected to prolonged noise
[NASA-77-F-14568]
[BIOLOGICAL RHYTHMS]
BIOLOGICAL RHYTHMS
Biological effects of unfocused laser radiation on
DNA and RNA synthesis and cell activities in
thymine dependent E. coli strain
Tests and include participation in prebiotic
polymers, discussing ribosome bonds and
nonsense RNA
Ribosomes orkoles and RNA evolution, considering
biogenesis from conserved to protocell and
protein biosynthesis
RNA content changes in ground squirrel brain
during active and hibernation states
DNA-RNA molecular hybridization tests of chronon
theory of circadian timekeeping in protozoa cells
Ribonucleic molecule damage and enzyme activity
under UV irradiation and repeated freezing and
testing
EEG investigation of circadian variations in
qualitative and quantitative RNA content in
human leukocytes, noting changes during sleep
RNA content in the cortex neurons in connection
with the change in its function during the
emergence of an animal from hypothermia
Methods for analyzing basic composition of RNA and
DNA hydrolyzes with emphasis on gas-liquid
chromatography method
[DNA-CR-125593]
Dynamics of DNA, RNA and protein synthesis in
mitochondria and nuclei of heart musculce of rats
during adaptation to high altitude hypoxia
[NASA-77-F-14524]
RICE
Rice preparation processing consists of cooking,
two freezing-thawing cycles, and then freeze
drying
[NASA-CASE-MSC-13540-1]
RICHARDSON-DOUGLAS EQUATION
U TEMPERATURE EFFECTS
RISK
Coronary angiography findings in 263 patients of
different age groups compared with history of
angina pectoris, risk factors and EEG at rest
Benefit-risk analysis in determining effects of
radiation dosage on human beings
[HGE-72-78480]
RNA B-RIBONUCLEIC ACIDS
RIBOSOME
NASA teleoperator-robot development program,
discussing technology and design studies related to
space shuttle and stations, satellites and
planetary vehicles
Approaches to problems involved in the structuring and
modeling of robots
Model of machine hand-eye coordination and program
specifications for topological machine vision
system
[NASA-CR-127566]
ROCKET ENGINES
NUCLEAR ROCKET ENGINES
ROCKET EXHAUST
Space crew radiation dosage calculation from Mars
mission high impulse gas core rocket
engine exhaust plasma fission fragments
[72-11343]
ROCKET PROPULSANTS
LIQUID ROCKET PROPULSANTS
ROCKS
GRANITE
LUNAR ROCKS
RODENTS
GROUND SQUIRRELS
GUINEA PIGS
RABBITS
RATS
PHYSIOLOGICAL POTENTIAL SHIFTS IN MAN
Physiological potential shifts in chinchillas
exposed to noise stresses of 500 Hz and 95 dB
[AD-740227]
Changes in enzyme activity in small intestine of
rodents deprived of drinking water and subjected to
high temperatures and intense solar radiation
[NASA-77-F-14521]
BODS
Human retinal rod rhodopsin bleaching and
regeneration measurements, tracing dark
adaptation curves
[72-31364]
COOKS
CLEAR COOKS
Terminal decontamination of rooms by gaseous
formaldehyde
[NASA-77-F-14564]
BORSCHACK TESTS
Individual functions and intersubject differences of
noise annoyance susceptibility, noting
relationship to borschack test
[72-32987]
Effects of gamma radiation and weightlessness on Parotid fluid 17-hydroxycorticosteroid level

SAFETY ACTIVITIES

- Radiation effects
- Weightlessness effects
- Combined effects

SAMPLE DATA

- Data collection
- Data processing
- Data interpretation

SAMPLES

- Sample preparation
- Sample analysis
- Sample storage

SAFETY ZONE

- Radiation dosage
- Airbag deployment
- Seat belt usage

SALT SACKS

- Stainless steel electrodes
- Capacitive properties
- Saline solutions
- Extensive frequency range

SAFETY SPACE STATION

- Medical investigations
- Life support systems
- Crewmember performance

SATISFY DATA

- Data handling
- Data analysis
- Data presentation

SATISFY DATA SYSTEMS

- Data acquisition
- Data transmission
- Data management

SATISFY DEVICES

- Electronic devices
- Instrumentation
- Equipment performance

SATISFY ANALYSIS

- Radiation analysis
- Weightlessness analysis
- Combined analysis

SAFETY ZONE

- Radiation exposure levels
- Airbag deployment
- Seat belt usage

SAFETY ZONE

- Radiation dosage
- Airbag deployment
- Seat belt usage
SUBJECT INDEX

SEAT BELTS
Crashworthy upper torso restraint systems for general aviation, incorporating strap takeup devices
p0180 A72-21578

Dynamic deceleration anthropomorphic dummy tests of general aviation occupant lap belt/shoulder harness restraint systems
[SAA PAPER 720325] p0266 A72-25588

Impact tests on anthropomorphic dummies for protection effectiveness evaluation of lap belt, Air Force shoulder harness-lap belt and aircraft-lap belt restraints
[AD-741350] p0281 A72-27471

Deceleration attenuation effectiveness of airbag restraint systems compared with seat belt-shoulder harness for aircraft occupants crash protection
p0370 A72-32605

Safety belts and air bags for highway accident prevention
p0256 A72-19126

Airbag and seat belt analysis as restraints in serious injury European car collisions
p0256 A72-19130

Combined shoulder harness and lap belt restraint system for use in aircraft or automobiles
[NASA-CAR-ARC-10519-1] p0534 A72-31117

SEATS
MT BARBARY CHAIR
MT EJECTION SEATS
Energy absorbing seat design for light aircraft, describing development and static and dynamic testing
[SAA PAPER 720322] p0266 A72-25585

Flight and centrifuge tested aircrew tilting supinating seats biomedical and technical adequacy as acceleration protective man machine system
p0456 A72-38707

SECONDARY EMISSION
Biological efficiency of secondary radiations from 70 GeV protons interaction with target, discussing dose dependences and restoration process relative rates
[CEBN-71-16] p0025 A72-12057

SECRETIONS
MT ENDOCRINE SECRETIONS
MT BLOOD
MT INSULIN
MT SWEAT

Hypokinetic activation of hypothalamic-hypophysial neurosecretory system in rats
p0121 A72-14072

SIGNAL PERCEPTION
MT LONG TERM EFFECTS

SEDATIVES
Hypnotic drug use effect on pilot performance and flight safety, using glutethimide, flurazepam and placebo in double blind study
p0164 A72-20188

SEDIMENTS
Lower Carboniferous sediment spores from Bonaparte Gulf Basin of Western Australia and Northern Territory
[BULL-125] p0383 A72-20478

SEEDING (INOCULATION)
MT INOCULATION

SEEDS
Chromosome aberrations and germination speedup in Soyuz 5 carried oat seeds, noting stimulating effect by preflight ethylthiame treatment
p0102 A72-16777

Cytological, genetic and physiological analyses of space flight factors effects on seeds and plants aboard Zond 5 probe
p0366 A72-31828

Chromosome aberrations and germination speedup in Soyuz 5 carried barley seeds, noting stimulating effect by preflight ethylthiame treatment
[AD-72-35280] p0179 A72-35280

Analysis of vegetable seedlings grown in contact with Apollo 14 lunar surface fines
p0420 A72-35925

Influence of temperature shocks on seed formation after irradiation of pollen from Tradescantia paludosa.
p0455 A72-36642
Influence of Cosmos 368 space flight conditions on radiation effects in yeasts, hydrogen bacteria and seeds of lettuce and pea. p0540 A72-43390

Biological effects of gamma rays on germination and growth processes of lettuce seeds during Cosmos-368 artificial satellite flight p0202 A72-17062

Effect of space flight factors on spontaneous and induced autoregions of yeast irradiated and nonirradiated lettuce seeds p0202 A72-17063

Effects of extraterrestrial radiation on dormant pea seeds during flight of Cosmos-368 artificial earth satellite p0203 A72-17064

Physiology of wheat seed germination and seedling growth during orbital flight [EBTP-P-1096] p0302 A72-20056

Biological analyses of wheat seedling endosperms under weightless conditions of Biosatellite 2 [EBTP-11146] p0303 A72-20058

SEIZURES

Rat central nervous system oxygen toxicity seizure susceptibility relation to circadian rhythms p0064 A72-14867

Hydroygen peroxide formation relationship to lipid peroxidation and seizures in brain during high pressure oxygen exposure p0295 A72-28300

SELECTION

NT PERSONNEL SELECTION

NT PILOT SELECTION

Exercise capability in a population of domestic fowl - Effects of selection and training. p0410 A72-34726

SELECTIVITY

Selective attention and short term memory encoding, using tachistoscopic visual display arrangements of capital letters p0018 A72-11509

SELENIUM COMPOUNDS

Effect of selenium on the formation of the electrical potential in the retina p0507 A72-41898

SELF ADAPTIVE CONTROL SYSTEMS

Tables on performance of automatic sleep analysis: system [NASA-CH-115576] p0381 A72-24059

SELF DEPLOYING SPACE STATIONS

U SPACE STATIONS

SELF DIFFUSION

U DIFFUSION

SELF EXCITATION

Automatically controlled delay in self-excited pulsating systems based on artificial muscles p0454 A72-38464

SELF MANEUVERING UNITS

Digital and analog simulation of deep space rendezvous by astronauts using self maneuvering units and considering human reactions and fuel consumption p0087 A72-13084

SELF ORGANIZING SYSTEMS

Problems of complex object modeling based on heuristic self-organization p0556 A72-45509

Use of perceptron to recognize patterns generated by audio preprocessor modeled after cat cochlear system [AD-760125] p0487 A72-29098

SELF OSCILLATION

Contractile and muscle-like fibers and autostabilization systems for polymer engine and spring action studies p0454 A72-38200

SELF REGULATING

U AUTOMATIC CONTROL

SELF REGULATION

Negative "refusal" stimulus cessation relation to emotionally positive zone activation in rat brain during self stimulation experiments p0463 A72-39410

SEMANTICS

Linguistic interactions and logic applied to models of cognition, education, and information retrieval [AD-794009] p0557 A72-32144

SENSITIVITY

SENSICULAR CANALs

Human centrifuge tests for semicircular canal gyroscope stimulation during sensory deprivations, discussing angular acceleration detection thresholds p0064 A72-14865

Mathematical model for semicircular canal dynamic response to angular acceleration, emphasizing role of perilymph over endolymph in cupula displacement p0155 A72-19961

Semicircular canal function correlation to thresholds, aftereffects and power functions in pilot vestibular tests p0291 A72-28259

The vestibular apparatus. I - The physics and physiology of the otoliths and the semicircular canals p0517 A72-42787

Photocyclogeometric study of coordination of voluntary movements of humans subjected to negative angular accelerations in plane of horizontal semicircular canals p0078 A72-12009

SEMICONDUCTOR DEVICES

NT THERMISTORS

NT TRANSISTOR AMPLIFIERS

Semicontuctor devices potential interference and biological exposure hazards in microwave leakage field, considering shielding and filtering methods for reducing susceptibility p0506 A72-14032

Use of low level coutning Ge(Li) detectors in nuclear medicine p0572 A72-33119

Development of Si(Li) and Ge(Li) detectors for clinical diagnosis [1978-2801-48] p0572 A72-33120

SEMICONDUCTOR JUNCTIONS

NT JOSSEPHSON JUNCTIONS

SEMICONDUCTORS (MATERIALS)


SENSES

U TRANSMITTERS

U PERCEPTION

SENSORY ORGANS

NT BARORECEPTORS

NT CHEMORECEPTORS

NT CHORDOID MEMPHASES

NT COCHLEAE

NT CORNEA

NT EAR

NT HARDUMNS

NT SUSTACHIAN TUBES

NT EYE (ANATOMY)

NT FOVEA

NT GRAYVESECTORS

NT LATEX IN

NT MIDDLE EAR

NT OCULOMOTOR HEMES

NT OTOLOG ORGANS

NT PHOTORECEPTORS

NT PROPRIOCEPTORS

NT PUPILS

NT RETINA

NT SEMICIRCULAR CANALS

NT THERMOECEPTORS

NT VESTIBULES

German book - Hearing, voice, balance /Physiology of the senses II/ p0517 A72-42784

SENSES

U SENSORY PERCEPTION

SENSIBILITY

U SENSITIVITY

SENSITIVITY

NT LIGHT ADAPTATION

NT PAIN SENSITIVITY

NT PHOTOSENSITIVITY

NT RADIATION TOLERANCE

Condenser microphones sensitivity and frequency response characteristics measurement at normal and elevated atmospheric pressures in hyperbaric chamber air and Re-air environments p0108 A72-17008

A-373
Mechanical, thermal and chemical pain inducing stimuli

Taste organs neurophysiological structure and functioning, considering stimuli and excitation parameters effects on perception threshold

Relation between a pilot's sensory perception of linear accelerations and the aircraft motion

Time history display effects on auditory and visual perception

Mathematical models for determining nature of electrosensory mechanisms and its sensitivity in fish

Prosthetic device with sensing means for detecting tactile stimuli

Development of spectral sensitivity curves for pain perception anatomical and neurophysiological

Subjective and objective sensory physiology, response bias and sensitivity variations in

Auditory pathway neuron discharge response to complex sound stimuli and frequency discrimination of pattern recognition in cats

Response bias and sensitivity variations in psychophysical test of rate discrimination between standard and attenuated auditory signal intensities

Development of spectral sensitivity curves for optic tecta of turtles and effect of wavelength on reptilian vision

Spatial interference constraints on human visual selective perception

Sensory psychological invariance formation for perceptual functions in human visual system

Statistical evaluation of feedback role in simple movements in terms of index of Prepogramming

Parasitic adjustment to a shifting target alternating with saccades to a stationary reference point

Elaboration of steady changes in the firing rate of cortical neuron populations

The reflex and mechanical response of the inspiratory muscles to an increased airflow resistance

Electroencephalographic activity of biceps muscle during submaximal isometric contraction determined from auditory feedback

Psychological threshold for successiveness, tabulating probabilities for correct guesses of stimulus order

Pyramidal tract neurons reactions to anterograde and afferent stimuli in cats, determining somatosensory cortical neurons responses by intra- and extracellular potential outlets

Physiological effects of localized ventilation, noting human comfort improvement association with reductions in average skin temperature and sweat rate

Human vestibulo-ocular responses to oscillatory rotational stimulation during various sleep and arousal stages, discussing single-Jones reflex system mathematical model

Analgesic electrical stimulation in rat brainstem with other sensory modes unaffected

Single olfactory bulb units under cyclic stimuli order, showing stable quality and intensity response patterns

Visceral afferentation role in vestibular system activity from experiments on rabbit stomach and rectum mechanosensor stimulation effects on vestibular-oculomotor reflexes

Human taste papillae sensitivity to chemical stimuli, showing stable quality and intensity response patterns

Vestibulometric swing to obtain measured doses of receptor stimulation in otolith apparatus and semicircular labyrinth ducts with simultaneous physiological data recording

Sensor systems terminals location in cats collicules anterior through electrical response measurement to light and sound signals and skin stimulation

Human electrophysiological changes during perceptual isolation from EGG, EEG, vertical eye movements and electrodental measurements

Microwave induced cutaneous heat and pain perception thresholds, noting usefulness as possible radiation hazard warning

Subjective and objective sensory physiology, discussing transformation processes in sensory receptors and nerves, psychophysical scaling methods, chemosensors and peripheral adaptation

Pain perception anatomical and neurophysiological mechanism, discussing human response to
Quantization of serum proteins on whole biological micropower command receiver to extend lifetime of implanted biotelemetry system

Service life of respirator cartridges in organic vapor atmospheres

Service life and performance of one man electrochemical CO2 concentrator

Prototype for machine augmentation of human strength and endurance - Hardiman project

Performance tests to determine proficiency of maintenance personnel in servicing power cylinder servo valve on OH-1 helicopter

Set theory

Threshold logic

Set theory in developing mathematical model of entire organism

Set covering algorithms for extracted small matrices, applied to airline crew scheduling

Some transport techniques for liquid human waste and wash water under space flight conditions

Sex

Sex differences of chronic effect of environmental stress on blood pressure and information processing in rats, observing neurotic hypertonic blood pressure irregularity

Echocardiographic investigation of heart rate, sex and normal aging effects on mitral valve leaflet movement in healthy subjects

Sex glands

Sex chemistry

Shared information theory

Shape

Line shape

Meaningful shape coding for aircraft switch knobs

Sharing

Coordination

Shaking

Fragmentation

Shell theory

Elastic this shell theories for explaining dynamic behavior of prestressed blood vessels

Shelters

Health hazards and efficiency reductions of personnel exposed to simulated nuclear shock waves in protective shelters

Response of human subjects to reduced levels of water consumption under simulated civil defense shelter conditions

Design of auxiliary survival shelter as portable life support system in mines

Shielding

Electromagnetic shielding

Radiation shielding

Ships

Aircraft carriers

Submarines

Mathematical model of more effective protection for shipboard personnel against shock-excited deck motions

Pulse activity of neurons in the thermal regulation center of the anterior hypothalamus
Chloroflora algae size distribution curve by
combining device for counting electrical
conductivity pulses with discriminator for gamma
scintillation spectrometry

Human monkey retinal image diameter estimation
during exposure to ar and He-Ne laser
irradiation, using microphotometer scans

Target and surrounding nontarget stimuli size
differences effect on visual search time for
displays with large fields

SIZE PERCEPTION

9 SPACE PERCEPTION

SKELETON

U MUSCULOSKELETAL SYSTEM

SKILL

Y ABILITIES

SKIN (ANATOMY)

ST EPIDERMIS

ST EPITHELION

ST LEATHER

Percutaneous chemical action in cat skin vessels,
showing fiber types for impulse transmission

Human skin thermal radiation properties,
presenting data on reflection, emission,
transmission and complex reflection

Sytym pathetic responses in human skin serves with
accompanying vasomotor reactions induced by
emotional, thermal and respiratory stimuli

Forearm skin and muscle blood flow change
measurements during whole body heating, using
plethysmography, isotopic labeling and blood
sampling techniques

Chamos leather mechanical response, comparing
stress relaxation and frequency response
characteristics to human skin for applications
in anthropometric dummy construction

Lipid peroxidation on the human skin surface
following erythrocyanic UV irradiation

Measurement of specific mechanical impedance of
the skin - Effects of static force, site of
stimulation, area of probe, and presence of a
surround.

Resistance and capacitance vessels of the skin in
permanent and temporary residents at high
altitude.

Temperature sensitivity neurophysiological
mechanism, discussing cold and heat sensitive
receptors localized distribution in human skin
and thermoregulatory function

Elaboration of steady changes in the firing rate
of cortical neuron populations

Biological effects of laser radiation on eyesight,
skin, and other body organs

Biological effects of laser radiation on skin of
rats

Measurement of skin temperature in healthy male
humans subjects to determine areas of maximum
thermostability for various ambient temperatures

Structural and mechanical characteristics of human
connective tissue

Ruby laser simulation for determining effects of
CO2 laser effects on skin tissue

Effects of lasers on human skin

Biodynamic modelling of mechanical properties of
skin and soft tissues

Collagen and collagen content of
skin during carcinogenesis

SKIN RESISTANCE

Dynamic bioelectric impedance level of tissue area
between active electrotyrode electrophores
related to human skeletal muscle fatigue

SKIN TEMPERATURE (BIOLOGY)

Skin and hypothalamic temperature effects on human
thermoregulatory responses, developing control
mechanism for peripheral effects on skin sensors

Heat transfer through fabrics by convection,
conduction, radiation and vaporization related
to skin temperature and thermal impact

Leg cooling effect improving tolerance to positive
headward acceleration in sitting position

Peripheral modifications to exercise induced
central drive for sweating, determining rates as
functions of internal temperature

Regulation of sweat necrosis on skin surfaces
overlying active and nonactive muscle tissue
during skin or core temperature alterations

Skin temperature regulation during upright and
supine exercise, showing nonlinear relationships
between perspiration and skin and core

Temperatures

Thermoregulation in deeply hibernating rodents
during separate chilling and steady hibernation
temperature maintenance of skin and brain

Underwater tests of instrument system for combined
skin temperature and direct heat flow measurement
in thermally stressful environments

Heat, noise and vibration stress combined effects
on skin and rectal temperature, heart rate,
weight loss and biochemical analysis

Skin temperature in war environments and the
control of sweat evaporation

The use of cholesteric liquid crystals in the
study of skin temperature and their applications
in aviation medicine

Skin strain in hot and humid environments

Skin temperature determination under
comfort-controlled liquid-cooled garlic in
exercising subjects

Measurement of skin temperature in healthy male
human subjects to determine areas of maximum
thermostability for various ambient temperatures

Assessment of human skin temperature rise
suppression by edge losses during thermal
irradiation

Bioclimatic models for analyzing heat transfer
between artery near skin surface and cooling
patch on skin surface

SKELETON

MT CRANIUM

MT INTRACRANIAL CAVITIES

SKILL

Space maintainability experiment aboard
submersible during 30 day drift mission, noting
application to Skylab manpower distribution

Menu selection for Skylab astronauts by computer
technique based on mixed integer programming
code, using measure of pleasure lists

SPACE PROGRAM

Subject Index

A-379
SKYLAB PERCEPTION

Skylab recoverable carbon dioxide removal system.
[ASA PAPER 72-EHA-4-1] p0462 AT2-39173
Biomedical data from manned space flights (Gemini/Apollo) and medical program for Skylab
[NASA-TN-X-67504] p0192 AT2-16031
Life support, aerospace medical, and environmental
research facility aspects of space stations and Skylab
Development of unstabilized propulsion devices for
astronaut maneuvering in zero gravity - Skylab program
[NASA-TM-D-67674] p0261 AT2-19169
Modified Apollo portable life support system for
Skylab astronauts
[ASA-CH-115706] p0483 AT2-27117
Design of white blood cell counting system for use
in Skylab ISS
[ASA-CR-115704] p0475 AT2-20086
Vehicle in transition of Skylab T13
Sleep-Monitoring Experiment from prototype to
flight states
SKYLAB PERCEPTION
U SPACE PERCEPTION

SLEEP

EEG and electrooculograms recording of chimpanzee
sleep, noting rapid eye movement stages
p0091 AT2-10074
Nononous auditory stimulation frequency effects
on human orienting reaction habituation and
sleep onset
p030 AT2-12494
Human vestibulo-ocular responses to oscillatory
rotational stimulation during various sleep and
awake stages, discussing Sjogren-Jones reflex
system mathematical model
p0072 AT2-15299
Human male gonadotropin secretion relation to
sleep stages, using electrophysiologic
recordings and radioimmunoassay techniques
p0103 AT2-17178
Circadian rhythm variations for sleep, EEG,
temperature and activity in monkeys, indicating
acrophase, amplitude and level regulation
p0156 AT2-19528
Sleep patterns relation to duty hours of aircrew
operating worldwide east-west routes
p0162 AT2-20178
Isolation stress effect on circadian rhythm
patterns of EEG activity during sleep-wake
and sleep cycles in unrestained chimpanzees
[AD-731949] p0163 AT2-20181
Acoustic tests of jet aircraft noise and sonic
boom effects on sleep patterns and human
performance, using EEG analysis
[ASA PAPER 711] p0178 AT2-21487
Physiology of sleep phases and dreams, discussing
data on highly organized and interacting
neurohumoral mechanisms exhibiting alternating
forms of brain bioelectric activity
p0181 AT2-21838
Electrophysiological, neurophysiological,
metabolic, vegetative, psychological, chemical
and pathological aspects of sleep, noting
disturbance and wakefulness mechanisms for
various clinical disorders
p0213 AT2-22223
Neurophysiological mechanisms of sleep, studying
sleep and wakefulness state evoked potentials
relation to cortex and subcortical activity levels
p0213 AT2-22224
Day/night workers sleep patterns in terms of
intrinsc sleep REM/NREM ultradian cycle, noting
sleep temporal instability for night workers
p0226 AT2-23730
EEG measurement of sleep behavior patterns,
discussing sleep stages, temporal patterns,
circadian rhythm, intrasleep process instability
and age factor
p0274 AT2-26679
Sleep, lack of sleep and circadian rhythm effects
on psychometric test performance
p0275 AT2-26684
Short sleep period and oxygen breathing effects on
arousal level of air traffic controller during
detection task performance
p0275 AT2-26689

SUBJECT INDEX

Sleep-wakefulness cycle variations effect on
reaction time and spontaneous tempo during time
-isolation experiment, showing tendency toward
circadian rhythms
p0275 AT2-26686
Jet aircraft noise effect on sleeping EEG and
subsequent wakefulness performance, showing presence
of carry-over effects
p0261 AT2-27478
Deep brain structure biopotential correlations
during man sleep development, using
electroencephalograms
p0322 AT2-28639
Night cerebrospinal fluid trituration
wakefulness-sleep cycles during dark/light
periods expressed in REM/non-REM percentages
p0326 AT2-29300
Slow neural recovery processes during sleep,
characterizing cerebral neurons synchronized
and desynchronized sleep phases for mammals
p0376 AT2-33557
Cerebral blood flow and metabolic changes during
wakefulness, sleep, coma and epileptic seizures
in terms of homeostatic mechanisms
p0376 AT2-33588
Biorhythm and computer analysis techniques for
sleep states and wakefulness studies during
aerospace flight
p0376 AT2-33600
Sleep factors and limitations during prolonged
space flights, characterizing weightlessness,
hypoxia, neurons tension, cabin confinement,
rhythms, environment and noise effects
p0376 AT2-33561
REM period functional maintenance of coordinated
eye movement facilitation and binocular depth
perception accuracy following sleep
p0418 AT2-35462
EEG investigation of circadian variations in
quantitative and qualitative RNA content in
human leukocytes, noting changes during sleep
p0426 AT2-36629
Dynamics of the electrical activity of various
regions of the neocortex during the
sleep-wakefulness cycle
p0518 AT2-42955
Carbon monoxide exposure effects on human sleep
patterns and psychomotor performance involving
time estimation, mental arithmetic, tracking,
and vigilance under moderate or high workloads
[AD-727506] p0035 AT2-10084
Dynamics of corticoergas and subcorticoergas of
cats during sleep, awakening, and wakefulness
[NASA-TT-P-18606] p0081 AT2-12022
Modified pattern recognition of EEG for use on
digital computer to determine sleep
[AD-726210] p0082 AT2-12035
Electroencephalographic recording of sleep periods
during manned space flight
[IEPT-6001] p0119 AT2-14060
Hormone secretion in normal and stimulated human
subjects during sleep
[NASA-CR-115362] p0136 AT2-15065
Spectral analysis and integration of
electroencephalographic during sleep and wakefulness
[NASA-TT-P-14472] p0265 AT2-18100
Characteristics of heart rate information during
sleep, and extracting sleep information from
heart rate data
[AD-734283] p0314 AT2-21061
Effects of nocturnal jet aircraft noise on
physiological arousal patterns in sleeping humans
[NASA-CR-2036] p0357 AT2-23073
Tables on performance of automatic sleep analysis
system
[NASA-CR-115576] p0381 AT2-24059
Effects of subsonic jet flierover noise and
simulated sonic booms on sleep of women
[NASA-CR-115576] p0381 AT2-24059
Using computer-analysis to evaluate changes in
waking EEG of normal subjects during oral
administration of Dalmane, and fabrication of
EEG sleep-monitoring and analysis equipment
[NASA-CR-115551] p0385 AT2-24088
Remote sleep monitoring display console
[NASA-CR-115573] p0386 AT2-24092
Adaptation of cardiac contractions to changes in
sleep-wakefulness rhythm
p0386 AT2-24092
### SUBJECT INDEX

<table>
<thead>
<tr>
<th>p0388</th>
<th>N72-24112</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep patterns of human adaptation to Antarctic life</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0434</th>
<th>N72-26067</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developments in transition of Skylab mission</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0485</th>
<th>N72-29085</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep-Monitoring Experiment from prototype to flight status</td>
<td></td>
</tr>
</tbody>
</table>

| Variables responsible for post-wakening visual performance decrease as a function of anxiety |     |

<table>
<thead>
<tr>
<th>p0524</th>
<th>N72-30082</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of circadian variation in sleep-wake cycle on optical and acoustic stimuli reaction times</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0560</th>
<th>N72-32093</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement of psychological stress caused by sonic boom during sleep as a function of age</td>
<td></td>
</tr>
</tbody>
</table>

### SOCIAL ISOLATION

<table>
<thead>
<tr>
<th>p0376</th>
<th>N72-3359</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemical analysis of cat brain regions for gamma-aminobutyric, aspartic and glutamic acids, glycogen and phosphatidylethanolamine concentrations during paradoxical sleep deprivation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0376</th>
<th>N72-3359</th>
</tr>
</thead>
<tbody>
<tr>
<td>An objective test for evaluating the functional state of the oculomotor system during somnolence states</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0352</th>
<th>N72-37876</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sonic boom effects on sleep - A field experiment on military and civilian populations</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0547</th>
<th>N72-84370</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of sleep inhibiting drugs on human operator performance</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0169</th>
<th>N72-16004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects of partial sleep deprivation on basic biological rhythms used for determining performance of signal detection tasks</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0254</th>
<th>N72-19107</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects of sleep deprivation and work-rest cycles on human performance and automatic and central nervous system</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0532</th>
<th>N72-31104</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of schedule control and sleep deprivation on human eye movement behavior</td>
<td></td>
</tr>
</tbody>
</table>

### SLEEP DEPRIVATION

<table>
<thead>
<tr>
<th>p0566</th>
<th>N72-32121</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time zone shift and p-chlorophenylalanine desynchronizing effects on sleep alteration and circadian rhythms in monkeys</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0050</th>
<th>A72-13071</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebral neurons population electric stimulation effect on deep sleep duration in Parkinson's disease patients</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0073</th>
<th>A72-15585</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transcendental flight psychological effects on aircrews, discuss anxiety, stress, circadian rhythm disruption and sleep loss effects on performance deterioration</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0108</th>
<th>A72-17816</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid eye movement sleep deprivation and hyperbaric oxygenation influence on gamma-aminobutyric acid levels in mice brain, suggesting protective mechanisms against nerve cell oxygen exhaustion</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0164</th>
<th>A72-20191</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep disturbance due to sonic booms, discussing laboratory findings and experimental techniques standardization</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0222</th>
<th>A72-23319</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diurnal rhythm and loss of sleep effects on human efficiency - Conference, Strasbourg, July 1970</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0274</th>
<th>A72-26676</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep deprivation effects relation to work duration, time of day, circadian rhythm, memory function, task performance, environmental factors, drug use and age</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0274</th>
<th>A72-26678</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep loss effect on reaction and movement times during information processing in step tracking task</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0274</th>
<th>A72-26680</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental performance tests in sleep deprived subjects for indication of recuperative function of slow wave and REM sleep stages</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0274</th>
<th>A72-26682</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative partial sleep deprivation effects on human performance in auditory vigilance, running addition and running digit span tests, observing circadian rhythms</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0275</th>
<th>A72-26683</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep, lack of sleep and circadian rhythm effects on psychoaesthetic test performance</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0275</th>
<th>A72-26684</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep interruption, sleep deprivation and continuous darkness effects on circadian rhythms in human performance</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0275</th>
<th>A72-26685</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep loss and work-rest cycle effects on combat efficiency, considering psychomotor activity, vigilance and decision making capacity</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0275</th>
<th>A72-26688</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-rest scheduling and sleep loss effect on operator performance in watchkeeping and active multiple visual tasks</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0275</th>
<th>A72-26689</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative sleep deficit, preceding sleep or wakefulness period duration and body temperature effects on reaction time in multiple choice visual task</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0276</th>
<th>A72-26690</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep deprivation effect on circadian rhythms in human performance, psychological fatigue ratings, catecholamine excretion and urine flow</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0276</th>
<th>A72-26692</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep deprivation effects on diurnal urine potassium excretion, showing individual circadian rhythm variations</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>p0328</th>
<th>A72-29320</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolation stress effect on excretory products in unrestrained chimpanzees, suggesting Ca to P</td>
<td></td>
</tr>
</tbody>
</table>
Solar activity effects on bismuth chloride hydrolysis tests from statistical results following solar flares

Radiation hazards in space with respect to galactic radiation shielding, solar flare prediction and conventional terrestrial safety standards

SOLAR FLUX
Survival data for Bacillus subtilis spores and microorganisms in simulated space UV solar flux [720-29565] p0523 722-30071

SOLAR HEAT FLOW
U HEAT FLOW
U SOLAR FLUX
U SOLAR POSITION
SOLAR ABSORPTION (RADIATION)
U SOLAR WIND
SOLAR PROTEINS
A new model for estimating space proton dose to body organs. p0417 722-35354


SOLAR RADIATION
MT SOLAR COGENT RAYS
MT SOLAR PROTONS
MT SOLAR WIND
MT SUNLIGHT
Solar and cosmic radiation monitoring for Soyuz 9 flight p0075 722-11995.

Changes in enzyme activity in small intestine of rodents deprived of drinking water and subjected to high temperatures and intense solar radiation [NASA-TF-146521] p0251 722-30058

SOLAR RADIATION OBSERVATION
U SOLAR RADIATION
SOLAR WIND
Survival of bacterial isolates exposed to simulated-Jovian trapped radiation belt electrons and solar wind protons p0570 722-28057

SOLID PROPULSANTS
The effects of various cure cycles upon the viability of Bacillus subtilis var. niger spores within solid propellant. p0423 722-36437

SOLID STATE DEVICES
MT RUBY LASERS
MT SEMICONDUCTOR DEVICES
MT THERMOPROPS
MT TRANSISTOR AMPLIFIERS
SOLID STATE LASERS
MT RUBY LASERS
MT SODIUM LASERS
SOLID SOUPACKS
A re-evaluation of material effects on microbial release from solids. p0542 722-43924

SOLIDS
Theoretical calculations of thermal damage from heat dissipation in homogeneous solid [NASA-TS-15689] p0473 722-28073

SOBREACTIVITY

SOLUTIONS
MT AQUEOUS SOLUTIONS
MT GAS MIXTURES
MT NUCLEAR SOLUTIONS

SOILWELL EXTRATION
Determination of copper, iron, cobalt, nickel, and magnesium in biological samples of vegetable origin p0542 722-43924

SOILS
Theoretical calculations of thermal damage from heat dissipation in homogeneous solid [NASA-TS-15689] p0473 722-28073

SOUND DETECTORS

SOUND DECOY

SOUND DECOY

SOUND DECOY

SOUND DECOY
SOUND INTENSITY

MARK VII EAR PERFORMANCE CALCULATION PROCEDURE FOR PERCEIVED LOUDNESS OR NOISINESS LEVELS RELATION TO SOUND PRESSURE, USING EXPERIMENTAL FREQUENCY WEIGHTING CONTOURS

MONURAL PERCEPTUAL LOUDNESS ADAPTATION MEASUREMENT BY DELAYED AND SINGLE SIMULTANEOUS BALANCE METHODS, DISCUSSION INTENSITY, FREQUENCY AND DURATION EFFECTS

AUDITORY ADAPTATION TESTS CONFIRMSATION OF SMALL LOUDNESS MODEL PREDICTION OF LOWER ADAPTATION FOR TEST TONE THAN ADAPTING TONE INTENSITY

AUDITORY INDUCTION OF FAINTER BY LOUDER SOUNDS AS PERCEPTUAL PHENOMENON CANCELLING MASKING EFFECTS

RESPONSE RAMP AND SENSITIVITY VARIATIONS IN PSYCHOPHYSICAL TEST OF RATS DISCRIMINATION BETWEEN STANDARD AND ATTENUATED AUDITORY SIGNAL INTENSITIES

DETERMINATION OF THE FUNCTIONAL STATE OF THE AUDITORY ANALYZER THROUGH THE ACTION OF SHORT-TERM ACUSTIC STIMULI OF INCREASING INTENSITY

REACTION TIME TO THE SECOND OF TWO SHORTLY SPACED AUDITORY SIGNALS BOTH VARYING IN INTENSITY

MEASUREMENT OF AUDITORY VERTEBRATE RESPONSE TO LOADS

DIRECTIONAL HEARING PERCEPTION THRESHOLD IN NORMAL AND AUDITORY-DEFECTIVE PATIENTS, STUDYING FRONTAL AND MEDIAN PLANES FOR RISING AND FALLING NOISE FREQUENCIES

SUSAN CEREBRAL HEMODYNAMIC CHANGES DURING ACUTE AND ORIENTING REACTIONS TO AUDITORY STIMULI

SOUND MEASUREMENT

U ACOUSTIC MEASUREMENTS

SOUND PERCEPTION

U AUDITORY PERCEPTION

SOUND PRESSURE

MARK VII EAR PERFORMANCE CALCULATION PROCEDURE FOR PERCEIVED LOUDNESS OR NOISINESS LEVELS RELATION TO SOUND PRESSURE, USING EXPERIMENTAL FREQUENCY WEIGHTING CONTOURS

SOUND PROPAGATION

U VOICE

SOUND RANGING

SIGNAL RANGING AND RECEIPTION PROCESSING MECHANISMS AS FUNCTION OF DISTANCE TO TARGET

NEUROPHYSIOLOGICAL ANALYSIS OF ECHOLOCATION AND SIGNAL PROCESSING IN BATS

ECHOLOCATION MECHANISMS IN MARINE MAMMALS

CHARACTERISTICS OF DOLPHIN HYDROLOCATOR SYSTEM

EFFECTS OF SONAR HEADSET ECCHO RANGING ON HEARING EFFECTS IN SONAR TECHNICIANS

EFFECTS OF TARGET RECOGNITION AND ECHO LOCATION MECHANISM IN VESPERTILIONID BATS

EFFECTS OF INCREASED GRAVITY ON BATH ECHOLOCATING MECHANISM

SOUND TRANSODDERS

K. THROTTLE AND HOT-WIRE ANEMOMETER PRINCIPLES FOR PHONOCARDIOGRAPHIC TRANSDUCER DESIGN, USING THEORY OF HYDRAULIC AMPLIFICATION WITH HIGH SNR

SOUND TRANSMISSION

CAT AND RABBIT MIDDLE EAR MUSCLES CONTRACTION BY ELECTRIC STIMULATION OF MOTOR NERVES, NOTING SOUND TRANSMISSION REDUCTION

PSYCHOLOGICAL TESTS FOR EVALUATION OF ANIMATED VISUAL DISPLAYS FOR AUDIO SIGNAL RECOGNITION

SUBJECT INDEX

[AD-728056] P0129 N72-10123

SOUND WAVES

NO AERODYNAMIC NOISE

NO AIRCRAFT NOISE

NO JET AIRCRAFT NOISE

NO NOISE (SOUND)

NO SONIC BOOMS

SOUTH VIETNAM

U VIETNAM

SOUTHERN HEMISPHERE

NO ANTARCTIC REGIONS

SOVIET UNION

U U.S.S.R.

SOUND SPACECRAFT

SOYUZ 5 FLIGHT CROW PHYSIOLOGICAL DATA, DISCUSSING MENTAL AND PHYSICAL PERFORMANCE AND ADAPTATION AND READING TO SPACE-TO-EARTH ENVIRONMENTS

RADIATION DOSES RECEIVED BY COSMONAUTS IN MANNED SOYUZ 3-9 FROM MISSION RETRIEVED THERMOLUMINESCENT GLASS DOSIMETERS (CERN-71-16)

SOYUZ 5 SATELLITE VEHICLE SPACE FLIGHT FACTORS EFFECT ON CHLOROPLAST CELLS, INVESTIGATING SURVIVAL RATES AND MUTABILITY

SOLAR AND COSMIC RADIATION MONITORING FOR SOYUZ 9 FLIGHT

MEDICAL RESEARCH PERFORMED WITH CREWS OF SOYUZ SPACECRAFT [NASA-F-10026]

APPLICATION OF CYCLOPLASMETRIC METHOD FOR ANALYZING THE WALKING CHARACTERISTICS OF CREW MEMBERS FOLLOWING FLIGHT OF SOYUZ 9 SPACECRAFT

PRINCIPLES FOR OPERATING SOYUZ LIFE SUPPORT SYSTEMS

SPACE BIOLOGY

U ECOLOGY

U AEROSPACE ENVIRONMENT

SPACE ENVIRONMENT SIMULATION

U WEIGHTLESSNESS SIMULATION

ALITRENETIC /BIOLOGICAL PROTECTANT EFFECT ON NATURAL IMMUNITY STATE OF DOGS EXPOSED TO CHRONIC GAMMA IRRADIATION SIMULATING SPACE FLIGHT ENVIRONMENT

PREVENTION OF WEIGHTLESSNESS EFFECTS ON BLOOD HYDROSTATIC PRESSURE, MUSCULOSKELETAL SYSTEM AND SENSORIMOTOR PERFORMANCE, DISCUSSING SPACE FLIGHT SIMULATION AND ENVIRONMENT SIMULATION TESTS

AMITRANETIC /BIOLOGICAL PROTECTANT EFFECT ON HUMAN METABOLIC PRODUCTS IN CONFINING CONDITIONS, NOTING RELATION BETWEEN SUBJECT SUSCEPTIBILITY AND NUMBER OF HEAD MOTIONS

SURVIVAL OF COMMON TERRESTRIAL MICROORGANISMS UNDER SIMULATED JOVIAN CONDITIONS

ANALYSIS OF REGENERATION PROCESSES IN 12-MONTH EXPERIMENT WITH GROUND COMPLEX SIMULATION OF SPACE ENVIRONMENT LIFE SUPPORT SYSTEM [AD-727264]

AEROSPACE MEDICAL AND EXOBIOLOGICAL FACTORS OF MANNED SPACE FLIGHT [AD-56768]

EFFECTS OF DIET AND AEROPLANE ALTITUDE ON SURVIVAL RATES AND MUTABILITY

PROTON PENETRATION CALCULATIONS FOR TISSUES OF B provisioning SIMULATION OF SPACECRAFT ENVIRONMENT BOMBARDED BY SOLAR FLARES AND RADIATION BELT PROTONS

SYNCHRONOUS ORBIT SIMULATION FOR DETERMINING LONG-TERM EFFECTS OF ELECTRON IRRADIATION ON SPACECREWS USING MINIATURE PICS

MORPHOLOGICAL EFFECTS OF SPACE FLIGHT ENVIRONMENT ON VASCULAR, MUSCULAR, AND NERVOUS BIOLOGICAL RESPONSES
Results of studies on microorganisms with direct
bodifying influence of various flight factors on
radiation hazards from heavy galactic cosmic rays

Effects of space flight on cell morphology and
biochemical properties of yeast and algal bacteria
during and after space flight

Effective dose change after repeated radiation
exposures as function of time intervals between
fractions, evaluating space flight radiation
hazards

Biological effects caused by heavy ions in cosmic
rays during space flight

Effective extraterrestrial radiation on dormant
pea seeds during flight of Cosmos-360 artificial
earth satellite

Effects of space flight factors on formation of
anomalous metabolites and activity of enzymes in
plants

Radiation hazard from heavy galactic cosmic rays
to astronauts on extended missions

Effects of space flight on flour beetle, Tribolium
confusum [EETT-P-1039]

Physiology of wheat seed germination and seedling
growth during orbital flight [EETT-P-1096]

Genetic effects of space flight and gamma
radiation on Neurospora crassa [EETT-P-1037]

Human reactions to long term space flight
[NASA-CR-125824]

Space plant growth as means of providing life
support during prolonged missions

Plant cultivation in closed ecological system in
space flight

Artificial gravitational environment for
maintaining physiological processes and
astronaut workability during prolonged space
flight

Plethysmograph for measuring human body impedance
changes during space flight

Effect of space flight on changes in blood
composition and body functions

Space flight feeding

Apollo 14 food system, describing new items,
improvements in chemically reconstituted, packaging
and preparation with emphasis on rehydratable
foods

Biochemical and physiological effects of Apollo
flight diet, noting no significant variations in
serum electrolytes, endocrine values, body
fluids and hematologic parameters

Food selection for SRTAB astronauts by computer
strategy based on mixed integer programming
code, using measure of pleasure lists

Synthetic carbohydrates toxicity effects on rat
liver lysosomes application to astronaut
potential food sources

Dihydroxyacetone /DBA/ as nutrient in growing fats
and preparation with emphasis on rehydratable
diets

Biochemical and physiological evaluation of
nourishment of subjects feeding on dehydrated
products in test chamber with regenerative life
support system, discussing metabolic data and
hormone function

Spacecraft food synthesis, using carbon dioxide
as nutrient in growing fats

Dietary antigenic supplements for astronaut
immunology during prolonged space flight
conditions

Space flight stress

Soviet book on astronaut activity psychological
medical investigations during Salyut space station
flight, discussing weightlessness effects and
efficiency evaluation of preventive measures for
crewmembers high performance in space flight

Book on on em machine system experiments covering
ATC, air defense, logistics organizations, space
flight, battlefield operation, police
dispatching, communications, etc

Development of algae, near cells, and amphibia
equis applied to space flight

Biological effects caused by heavy ions in cosmic
rays during space flight

Effects of extraterrestrial radiation on dormant
pea seeds during flight of Cosmos-360 artificial
earth satellite

Effects of space flight factors on formation of
anomalous metabolites and activity of enzymes in
plants

Effects of space flight on cell morphology and
photosynthetic activity of chlorella culture
during Cosmos-360 artificial earth satellite
flight

Food 8 space probe experiments to determine
effects of flight factors on physiological and
biochemical properties of yeast and algal bacteria

Application of cyclogrammetric method for
analyzing the walking characteristics of crew
members following flight of Soyuz 9 spacecraft

Physiological effects of brief space flights on
human subjects as measured by reflex
excitability of neurovascular system and
contractability of muscles

Radiation hazard from heavy galactic cosmic rays
to astronauts on extended missions

Modifying influence of various flight factors on
radioecological effects of ionizing radiation on
organisms in space flight

Effects of space flight on flour beetle, Tribolium
confusum [EETT-P-1039]

Effects of space flight on growth of tomato plants
and vegetables to be used in Apollo food
system

Selection rationale sheets for concepts in space
station/base food system

Supporting technical data for concepts considered
in space station/base food system

Selection rationale sheets for concepts in space
station/base food system

Annotated bibliographic data retrieval system on
space food and nutrition

Development and evaluation of freeze dried
vegetables to be used in Apollo food system

Portable device for dispensing potable water to
crew members aboard spacecraft

Effects of space flight on changes in blood
composition and body functions

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support system, discussing metabolic data and
hormone function

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to astronauts on extended missions

Modifying influence of various flight factors on
radioecological effects of ionizing radiation on
organisms in space flight

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confusum [EETT-P-1039]

Effect of space flight on changes in blood
composition and body functions

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composition and body functions

Space flight feeding

Apollo 14 food system, describing new items,
improvements in chemically reconstituted, packaging
and preparation with emphasis on rehydratable
foods

Biochemical and physiological effects of Apollo
flight diet, noting no significant variations in
serum electrolytes, endocrine values, body
fluids and hematologic parameters

Food selection for SRTAB astronauts by computer
strategy based on mixed integer programming
code, using measure of pleasure lists

Synthetic carbohydrates toxicity effects on rat
liver lysosomes application to astronaut
potential food sources

Dihydroxyacetone /DBA/ as nutrient in growing fats
and preparation with emphasis on rehydratable
diets

Biochemical and physiological evaluation of
nourishment of subjects feeding on dehydrated
products in test chamber with regenerative life
support system, discussing metabolic data and
hormone function

Spacecraft food synthesis, using carbon dioxide
as nutrient in growing fats

Dietary antigenic supplements for astronaut
immunology during prolonged space flight
conditions

Space flight stress

Soviet book on astronaut activity psychological
medical investigations during Salyut space station
flight, discussing weightlessness effects and
efficiency evaluation of preventive measures for
crewmembers high performance in space flight

Book on on em machine system experiments covering
ATC, air defense, logistics organizations, space
flight, battlefield operation, police
dispatching, communications, etc

Development of algae, near cells, and amphibia
equis applied to space flight

Biological effects caused by heavy ions in cosmic
rays during space flight

Effects of extraterrestrial radiation on dormant
pea seeds during flight of Cosmos-360 artificial
earth satellite

Effects of space flight factors on formation of
anomalous metabolites and activity of enzymes in
plants

Effects of space flight on cell morphology and
photosynthetic activity of chlorella culture
during Cosmos-360 artificial earth satellite
flight

Food 8 space probe experiments to determine
effects of flight factors on physiological and
biochemical properties of yeast and algal bacteria

Application of cyclogrammetric method for
analyzing the walking characteristics of crew
members following flight of Soyuz 9 spacecraft

Physiological effects of brief space flights on
human subjects as measured by reflex
excitability of neurovascular system and
contractability of muscles

Radiation hazard from heavy galactic cosmic rays
to astronauts on extended missions

Modifying influence of various flight factors on
radioecological effects of ionizing radiation on
organisms in space flight

Effects of space flight on flour beetle, Tribolium
confusum [EETT-P-1039]
SPACE FLIGHT TRAINING

features covering space flight living conditions, space and time perception psychophysiological mechanisms changes and weightlessness effects

Optimum duration of human circadian cycle with respect to energy cost during work hours, relating normal cycle change to prolonged space mission stresses

Space flight effects on chlorella cell survival and mutability in Zond automatic stations

Chromosome aberrations and germination speedup in Soyuz 5 carried oat seeds, noting stimulating effect by preflight ethylenimine treatment

Medicobiological investigations of prolonged weightlessness effects on astronaut physiological systems based on Soyuz flight program

Space flight ecology and physiology, discussing atmospheric temperatures and radiation, biological effects of acceleration, deceleration and weightlessness and physiological stresses

Russian book on pathophysiological principles of air and space pharmacology covering stress and fatigue reduction and pilots and astronauts performance improvement

Red cell mass plasma volume decrease in Apollo mission crews, indicating erythropoiesis inhibition

Russian book on functional morphology under extremal space flight conditions covering overloads, hypoxia and hyperoxia effects on organism and cellular structure and metabolism

Technology R and D program to qualify man for long term weightlessness, assessing space flight stress effects on physiology and psychology

Social and emotional crises with respect to isolation, confinement and group dynamics of astronaut crews during long duration space flight

Long term space flight weightlessness and hypodynamic effects on orthostatic and vestibular tolerances, infection susceptibility and drug activity

Sleep factors and limitations during prolonged space flights, considering weightlessness, hypokinesis, nervous tension, cabin confinement, rhythm, environment and noise effects

Space flight effects on chlorella cell survival and mutability in Zond automatic stations

Soyuz 5 satellite vehicle space flight factors effect on chlorella cells, investigating survival rates and mutability

Chromosome aberrations and germination speedup in Soyuz 5 carried barley seeds, noting stimulating effect by preflight ethylenimine treatment

Problems of artificial gravitation in terms of experimental physiology

Psychological principles of active rest during long space flights

Psychic adaptation of man to a long-duration stay in space

The prediction of the condition of man during a space flight

The effect of space flight conditions and prolonged hypokinesis on the kidney function in man

Motor activity capability of an astronaut in flight

Effects of the space flight environment on man's immune system. I - Serum proteins and immunoglobulins.

SUBJECT INDEX

effects of weightlessness on astronauts - A summary p0519 A72-42093

Effects of an 18-day flight on the human body p0539 A72-43385

Studies on weightlessness in a priate in the Biosatellite 3 experiment p0540 A72-43386

Human organism and space flight stress-endurance limits and manned space mission rescue capabilities requirements, considering cabin decompression, anoxia, radiation, onboard illness, etc p0555 A72-45218

Body fluid analyses on Gemini spacecrews to determine metabolic costs of manned space flight [JPT-R-8005] p0119 W72-14059

Physiological and physical effects of space flight on visual perception of astronauts p0135 W72-15051

Pathogenesis of weightlessness syndrome during prolonged space flight [NASA-77-F-14049] p0189 W72-16008

Morphological effects of space flight environment on vascular, muscular, and nervous biological systems [JFS-55041] p0249 W72-19074

Space flight stress effects on human vascular systems anatomy p0249 W72-19075

Effects of space flight conditions on biological systems p0308 W72-20066

Effects of flight stress on pilots time perception in simulated and real space flight p0309 W72-22013

SPACE FLIGHT TRAINING

Prevention of weightlessness effects on blood hydostatic pressure, musculoskeletal system and sensorimotor performance, discussing space flight training and space environment simulation tests p0325 A72-20787

Selection, training, and performance of cosmonauts during actual and simulated space flight - 1968 [JFS-56030] p0386 W72-26096

Training of cosmonauts for prolonged space flight [JFS-56741] p0436 W72-28081

SPACE LABORATORIES

MT HANDED ORBITAL LABORATORIES

capability of space shuttle 'mote' node for performing biomedical and medical research experiments [NASA-CR-125666] p0241 W72-18078

SPACE MAINTENANCE

Space maintenance experiment aboard submersible during 30 day drift mission, noting application to Skylab manpower distribution [AIAA PAPER 72-232] p0231 A72-23442

SPACE MISSIONS

An integrated medical system for long-term space missions p0501 A72-43105

Engineering process of obtaining bacteria free water from human waste during extended space missions [AD-727040] p0037 W72-10096

Medical and biological research conducted on Soviet spacecrafts and satellites [AD-727946] p0044 W72-11081


Circadian rhythm related to space missions noting endogenous rhythm p0193 A72-16042

DSSR space programs on selection and training of cosmonauts, psychological and physiological effects of space flight, and space mission planning [JFS-55001] p0261 W72-17056

Estimation of proton penetration and absorption of heavy nuclei from cosmic rays during space missions [NASA-78-D-6606] p0260 W72-18042

Identification of payloads and subsystems required to conduct life sciences research projects during space missions - Vol. I
Identification of payload research requirements, equipment, and subsystems for conducting biomedical research projects during space missions - Vol. 2

Detailed design information on equipment, subsystem, and payload required for conducting biomedical research during space mission - appendix 1

Psychophysical perceived orientation experiments on Poggendorff illusion: transversal interrupted by parallel lines

Hypermucivity effects on bats spatial orientation, noting resistance to head-pelvis and pelvis-head accelerations

Position constancy and motion perception tests of head movement feedback calibration of perceived direction of optical motions

Perspective effects on direction of rotation judgments, using figures with rectangular and trapezoidal contours

Stereoscopic depth movement perception sensitivity compared to monocular movement

Biocinlar depth perception based on two retinal images spatial frequency content

Soviet book on astronaut activity psychological features covering space flight living conditions, space and time perception psychophysical mechanisms changes and weightlessness effects

Successive visual motion illusion during perception of rotating kymograph drum by human eye

Oculosaccade accommodation and convergence as distance perception cues, showing size perception change relation to glasses adaptation

Perceived common rotary motion of ambiguous stimuli as criterion of perceptual grouping

Oculosaccadere-based distance perception, discussing glasses adaptation-caused accommodation and convergence changes in stereoscopic depth perception

Visual space geometry and perception experiments, demonstrating size-distance relations for various visual cues

Counteradaptation and cue discrepancy as perceptual adaptation basis, considering changes in registered and apparent distance of luminous object moving in dark

Adjustment to subjective horizontal, vertical and 45 deg tilt in dark as function of age in 3-20 year old subjects

A-387
Effect of abnormal binocular parallax cue on spatial sensitivity of visual system and accuracy of monocular motion parallax absolute perception of real motion by human eye.

Goggle device for measuring visually perceptive time variation in human processing of movement.

Influence of adaptation level in perception of convergence effects in visual distance perception.

Threshold values for spatial vision and distance estimation with head movements in the rabbit, evoked by rotatory and translatory motion.

On a long-term temporal aspect of stereoscopic depth sensation.

On the basis of subjective adaptation of visual and horizontal gratings after monocular motion parallax training.

Optical directionality of retinal receptors and corresponding points. I - Nasal-temporal asymmetry of retinal spatial values and orientation and orientation of receptors: Are the corresponding points comes. II - Variation of form of the experimental horoptera, and possibility of reorganization of the retinal correspondence according to the orientation of the eyes.

Tests to determine human ability to estimate proportional distances and distance ratios with aid of reference length.

Threshold values for spatial vision and distance perception of flight crew.

Convergence effects in visual distance perception of pilot during aircraft landing.

Influence of adaptation level in perception of various aspects of visual space.

Time variation in human processing of movement directions and Stroop color words.

Effects of abnormal binocular parallax cue on space perception judgment.

Mathematically models of distance perception by operators of man machine systems in motion, based on visible brightness of landmarks.

Perception of real motion by human eye.

Accuracy of monocular motion parallax absolute distance estimation before and after training.

Spacial sensitivity of visual system.

SPACE PROBES
MT JUPITER PROBES
MT MARIS PROBES
MT VIKING MARIS PROGRAM
SPACE PROGRAMS
MT APOLLO PROJECT
MT TITANIX PROJECT
MT U.S.S.R. SPACE PROGRAM

Development of planetary quarantine in the United States.
Development of bactericidal agent for space shuttle portable water system [NASA-CR-115595]

Closed loop life support systems, discussing manned ninety day test in space station simulator, Soviet experiments and water and oxygen regeneration [P0234 A72-24973]

Space stations by orbital space stations

Artificial gravity effects on space station crew's performance, discussing unusual mechanical and perceptual phenomena [P0107 A72-17715]

Closed loop life support systems, discussing manned ninety day test in space station simulator, Soviet experiments and water and oxygen regeneration [P0234 A72-24973]

Space station prototype environmental/thermal control and life system - a current overview [P0459 A72-39143]

Thermal control concept evaluation for a ten-year life modular space station [P0459 A72-39137]

Design criteria for the modular space station environmental control and life support system selection [P0459 A72-39147]

Space station atmospheric revitalization system design, covering temperature, humidity, carbon dioxide, contaminant and oxygen generation and composition control and vehicle configuration [P0466 A72-39153]

Environmental control and life support subsystem conceptual design studies for shuttle launched 6-12 man crew modular space station [P0468 A72-39155]

Modular environmental control/life support system design for low cost shuttle launched space station, evaluating humidity, carbon dioxide, water and waste management [P0461 A72-39160]

Water and waste management subsystem design for a space station prototype [P0462 A72-39169]

Chemical contaminant influence on design of bioactive resins inlet propulsion system for space station use [P0039 A72-10111]

Design of candidate concepts for space station/base food system [P0085 A72-12052]

Assessment of concepts to meet mission requirements for space station/base food system [P0085 A72-12053]

Detail engineering data sheets for concepts of space station/base food system [P0085 A72-12054]

Water and waste management subsystem design for a space station prototype [P0462 A72-39169]

Space station atmospheric revitalization system design, covering temperature, humidity, carbon dioxide, contaminant and oxygen generation and composition control and vehicle configuration [P0466 A72-39153]

Environmental control and life support subsystem conceptual design studies for shuttle launched 6-12 man crew modular space station [P0468 A72-39155]

Modular environmental control/life support system design for low cost shuttle launched space station, evaluating humidity, carbon dioxide, water and waste management [P0461 A72-39160]

Water and waste management subsystem design for a space station prototype [P0462 A72-39169]

Chemical contaminant influence on design of bioactive resins inlet propulsion system for space station use [P0039 A72-10111]

Design of candidate concepts for space station/base food system [P0085 A72-12052]

Assessment of concepts to meet mission requirements for space station/base food system [P0085 A72-12053]

Detail engineering data sheets for concepts of space station/base food system [P0085 A72-12054]
Spacecraft functional properties degradation due to surface contamination with outgassing vapors, discussing contaminant materials transport and sorption characteristics.

Microflora accumulation prevention methods during spacecraft flight, noting bacterial filters for air purification and wiping with disinfectants for surface contamination reduction.

Bibliography of codes, standards, procedures, specifications, and reports relating to contamination control.

Efficiency of biodetection grinders and detection and types of bacteria found in spacecraft components.

Development of a 150,000 watt-hour variable conductance heat pipe for space vehicle thermal control.

Motor activity capability of an astronaut in flight.

Russian book - Space ergonomics.

Microbiological examination of space hardware, discussing viable organisms neutralization buried inside solid materials, sampling procedures and culture media.

Spacecraft flight hardware sterilization, considering dry heat and chemical destruction.

Nonsterile space flight hardware effects on planetary quarantine, evaluating contamination sources, design and mission parameters, cleanliness conditions and bioload.

Efficiency of biodetection grinders and detection and types of bacteria found in spacecraft components.

Russian book - Space ergonomics.

Multi-cycle plasma arc evaluation of oxidation inhibitive carbon fiber material forhabitable leading edges.

Development of procedures for evaluating suitability of materials for spacecraft structures based on outgassing of objectionable odors.

Evaluation of contact toxicity and toxicity of thermal degradation products of nonflammable materials used in spacecraft structures.

Planetary quarantine microbiological and engineering problems, discussing cost, international policies, contamination and sterilization.

Forecasting technique for accumulated particulate contamination on spacecraft assemblies, discussing cleanliness optimization and test procedures.

Temperature effects on microorganisms survival in deep space vacuums, using molecular sink test.

Spacecraft critical surfaces protection from molecular and particulate contamination sources including gloves, tissues, and covering or packaging materials.

Survival of common terrestrial microorganisms under simulated Jovian conditions.

Spacecraft atmosphere trace contaminant sensor system using mass spectrometric analysis of contaminants concentrated on sorbents in a monitor inlet system.

Development of planetary quarantine in the United States.

A re-evaluation of material effects on microbial release from solids.

Effects of aeolian erosion on microbial release from solids.
Modular environmental control/life support system design for low cost shuttle launch spacecraft
- Design, evaluating baseline, carbon dioxide, water and waste management.

Spatial characterization of water and waste management.

Spacecraft wet oxidation waste processing system.

Dry incineration of wastes for aerospace waste management systems.

Toxicological evaluation of some synthetic materials designed for airtight space environment.

Some transport techniques for liquid human waste and wash water under space flight conditions.

Influence of COSmos 368 space flight conditions on radiation effects in yeasts, hydrogen bacteria, and seeds of lettuce and pea.

The problem of decontaminating and preserving drinking water in spacecraft water supply systems.

Ergometer for use as a quantitative exercise device in spacecraft environments.

Effects of spacecraft environmental conditions on humans, and space biomedical problems.

Developments in spacecraft water hydrobiology research and application to closed ecological systems for support of space crews.

A stochastic bioburden model for spacecraft sterilization.

Application of planetary quarantine methodology and spacecraft sterilization technology to improved health care delivery.

Spacecraft sterilization and space studies.

Temperature effects on destruction of Bacillus subtilis as function of relative humidity in spacecraft sterilization.

Ecology and thermal activation of microorganisms in and on interplanetary spacecraft components.

Chemical liquids, chemical gases, and mechanical methods for microbial decontamination of spacecraft.

Use of gas and liquid filters to sterilize spacecraft.

Requirements for effective planetary quarantine and spacecraft sterilization.

Indexing procedures and thesaurus of indexing terms for QPS.

Stereolization procedures and experimental designs for planetary quarantine programs.

Use of plasma cleaning and X-ray spectroscopy to remove and monitor organic contamination on Viking spacecraft surfaces.

Progress report for development of planetary quarantine measures for planetary spacecrafts.

Formaldehyde gas for sterilizing potting compounds and spacecraft materials and surfaces.

Spaceflight hardware sterilization, considering dry heat and chemical destruction.

Space flight hardware sterilization, considering dry heat and chemical destruction.

Dry heat resistance of Bacillus spores on spacecraft metal surfaces for different curing pressures, atmospheres, and materials.

The effects of various cure cycles on the viability of Bacillus subtilis var. niger spores within solid propellant.

A stochastic bioburden model for spacecraft sterilization.

Application of planetary quarantine methodology and spacecraft sterilization technology to improved health care delivery.

Spacecraft sterilization and space studies.

Temperature effects on destruction of Bacillus subtilis as function of relative humidity in spacecraft sterilization.

Ecology and thermal activation of microorganisms in and on interplanetary spacecraft components.

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Use of gas and liquid filters to sterilize spacecraft.

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Dry heat resistance of Bacillus spores on spacecraft metal surfaces for different curing pressures, atmospheres, and materials.

The effects of various cure cycles on the viability of Bacillus subtilis var. niger spores within solid propellant.

A stochastic bioburden model for spacecraft sterilization.

Application of planetary quarantine methodology and spacecraft sterilization technology to improved health care delivery.

Spacecraft sterilization and space studies.

Temperature effects on destruction of Bacillus subtilis as function of relative humidity in spacecraft sterilization.

Ecology and thermal activation of microorganisms in and on interplanetary spacecraft components.

Chemical liquids, chemical gases, and mechanical methods for microbial decontamination of spacecraft.

Use of gas and liquid filters to sterilize spacecraft.

Requirements for effective planetary quarantine and spacecraft sterilization.

Indexing procedures and thesaurus of indexing terms for QPS.

Stereolization procedures and experimental designs for planetary quarantine programs.

Use of plasma cleaning and X-ray spectroscopy to remove and monitor organic contamination on Viking spacecraft surfaces.

Progress report for development of planetary quarantine measures for planetary spacecrafts.

Formaldehyde gas for sterilizing potting compounds and spacecraft materials and surfaces.

Spaceflight hardware sterilization, considering dry heat and chemical destruction.
Spatial interference constraints on human visual selective perception
[AD-730924] p0199 H72-17042

Spatial distribution
Spatial characteristics of equal energy visual stimuli in metacorrelation design for targets and masks of constant separation and varying width, deriving weighting functions
p0205 H72-27680

Voluntary saccade length dependence on visual field masker stimuli number, locus and distance from target
p0341 H72-30966

Surface electrode distance, area and pressure effects on electromyogram recording of large skeletal muscle electrical activity during defined muscular tensions
p0368 H72-32090

Spatial filtering
Frequency-specific color aftereffects as result of alternain exposure of subject to inspection gratings of different spatial frequencies
p0322 H72-28615

Visual information space-time dependent filtering by retinal and geniculate body neural nets
p0510 H72-42299

Spatial isofraction
U Spatial distribution
Spatial orientation of attitude (inclination)

Specifications
AT Aircraft specifications
ET equipment specifications
Spectra
BT absorption spectra
BT emission spectra
BT Fraunhofer lines
BT noise spectra
BT power spectra
BT radiation spectra
Spectral absorption
U absorption spectra
Spectral analysis
U spectrum analysis
Spectral bands
BT absorption spectra
BT Fraunhofer lines
Spectral line width
Spectral line width measurement accuracy based on digital autocorrelation of photon countings fluctuations, noting light field and photoelectric process limiting effects
p0371 H72-32949

Spectral noise
U white noise
Spectral reflectance
Airborne spectrometer for determining spectral contrast ratios between fish schools and adjoining water
[AD-733685] p0247 H72-18119

Spectrometers
BT mass spectrometers
Airborne spectrometer for determining spectral contrast ratios between fish schools and adjoining water
[AD-733685] p0247 H72-18119

Spectroscopy
U spectrometers

Spectrophotometry
Data acquisition and data analysis of microspectrophotometric data in presence of noise
[AD-772096] p0049 H72-10116

Spectroscopy
Using lithium as chemical tracer in urine for providing means for indirect determination of total urine volume by atomic absorption spectroscopy
[NASA-CR-115262] p0081 H72-12025

Spectroscopes
U spectrometers
Spectroscopic analysis
Hemoglobin determination in whole blood with Specol-5015 spectrophotometer, comparing accuracy to cyanmethemoglobin measurement
[AD-733685] p0361 H72-30787

The presence of P700 in chloroplasts fragments prepared by short time incubation with Triton X-100
p0547 H72-44325
Synthesis and characteristics of iron dithiocarbamates based on infrared and Mössbauer spectroscopy, conductivity measurements, elecetrical analyses, and ESR methods (N70-3059-13) p0034 N72-10078
Spectroscopic, kinetic, and thermodynamic analysis of biological energy conversion mechanism in flavin molecular complexes (AD-735272) p046A N72-29079

SPECTROSCOPY
WT MASS SPECTROSCOPY
WT SPECTROPHOTOMETRY
VT SPECTROSCOPIC ANALYSIS
VT I X GAS SPECTROSCOPY
Use of plasma cleaning and Auger spectroscopy to remove and monitor organic contamination on Viking spacecraft surfaces p0563 N72-32117

SPETRUM ANALYSIS
Photopic spectral curves of relative luminous efficiency and sequential deficiencies of color vision, using optical bench, interference filters and Bachstein flicker photometer p0056 N72-13935
Spectral response and vision thresholds of human eye for light detection and color sensation p0177 N72-21332
Varied applications of spectral analysis and cybernetics, including general mechanics, elasticity and oscillations theories, and aerodynamics p0082 N72-12041
Spectral equation for plotting functional responses of human color vision receptors p0133 N72-15035
Spectral analysis and integration of electroencephalogram during sleep and wakefulness (NASA TT-F-14172) p0265 N72-19110
Airborne spectrometer for determining spectral contrast ratios between fish schools and adjoining water (AD-733685) p0247 N72-18119
Spectrum dose conversion method for evaluating radiation dose (JAMA-1209) p0305 N72-20076

SPEECH
VT SYLLABLES
VT WORDS (LANGUAGE)
Breathing control during speech, noting carbon dioxide response, hyperventilation and atopy p0170 N72-15218
Night rest prevalence in hearing process caused by dichotic speech audition p0073 N72-15584
German book - Hearing, voice, balance /Physiology of the senses I/ p0517 N72-42784
Human vocal apparatus anatomical and neural structure, considering linguistic sounds composition p0518 N72-42789
Features of a speech signal during cumulative action of Coriolis accelerations (AD-734773) p0547 N72-42789
Listening levels preferred by flying personnel (JAMI-735083) p0307 N72-20088
Ambient noise measurement and speech reception levels associated with F-111 flight preparation area, flight noise attenuation features of ear protection devices (AD-748282) p0569 N72-33085

SPEECH DISCRIMINATION
U SPEECH DISCRIMINATION
Speech discrimination human touch deficiency in artificial pattern recognizers regarding handwriting, speech and pattern recognition involving noise interference p0005 N72-17206
Earings: effect on passenger speech reception and intelligibility in rotary wing aircraft, noting protection against noise annoyance, fatigue and deafening p0015 N72-17209
Noise rating methods for speech communication effectiveness evaluation, presenting charts and tables for intelligibility limits with various communication techniques and equipment p0161 N72-20167

SPEECH TRANSMISSION
Design criteria for transportation system noise regulation, considering ambient noise, hearing damage, speech interference and subjective reactions p0162 N72-20173
Human cortical auditory evoked response to speech and sound effects, relating EEG interhemispheric wave amplitude asymmetry to stimulus meaningfulness p0173 N72-20984
Air traffic control messages syllabic and word prominence patterns, discussing impact on continuous speech recognition by machine p0228 N72-23518

Language and speech capacity of the right hemisphere p0453 N72-38150
Development of algorithm for speech recognition to establish direct communication between man and machine (AD-725013) p0046 N72-11100
Use of perception to recognize patterns generated by audio preprocessor modeled after cat cochlear system (AD-740125) p0467 N72-29098

SPEED
U VELOCITY
SPEED INDICATORS
VT HOT-FILM ANEMOMETERS
VT HOT-WIRE ANEMOMETERS

SPIKE POTENTIALS
Multichannel IC spike height discriminator for separating electrical activity of neural units recorded with microelectrode p0071 N72-15223
Retinal ganglion cell spikes timing in mammalian retina, using electoretinography and computer analysis p0107 N72-17721
Neuronal spike activity changes in rabbit visual and sensorimotor neocortex and hippocampus during EEG activation p0323 N72-28643
Cat hypothalamus regions neurons background activity characterized by single nonrhythmic spikes with large interspike intervals, noting frequency of discharge bursts p0550 N72-44588

SPIRAL CORD
VT SPINE
Spinal reflexes through electric stimulation of gastrocnemius and soleus human leg muscles, attributing increased tendon reflex amplitudes to gamma motor neuron hyperactivation p0180 N72-21577
Seat cushion evaluation for behavior during helicopter crash or aircraft ejection and spinal injury probability p0059 N72-14704
Also cats spinal cord capillaries ultrastructure upon hypothermia, noting endothelial cells sinking to lower levels from microscopic observation p0280 N72-27304
High threshold afferents role in dorsal surface potential formation in cat spinal cord p0329 N72-29327
Supraspinal effects on different work regimes of supplemental respiratory muscles, using interference electromyograms cross correlation analysis p0329 N72-29328

Human spinal segment functional state before voluntary movement during water immersion, using H-reflex for spinal cord motor neuron excitability evaluation p0334 N72-30255
Nuclein acid contents in cholinergic and adrenergic spinal cord neurons and in their glial satellite-cells during hypoxic hypoxia and a post-hypoxic period p0451 N72-37742

Russian book - Mechanism of descending control of spinal cord activities p0492 N72-40577

SUBJECT INDEX
p0015 A72-10464
p0018 N72-38150
p0059 N72-14704
p0059 N72-14704
p0334 N72-30098
p0334 N72-30255
p0451 N72-37742
p0492 N72-40577

a-393
A possible anatomical basis for descending control of impulse transmission through the dorsal horn.  

Neuronal fiber and synaptic axonal contact structure of cat spinal gray matter in corticospinal, rubrospinal and reticospinal terminal zones by Golgi method.  

Morphological changes in spinal cord neurons of animals due to the decreased intensity of supraspinal stimulation.  

The ultrastructure of the lateral basilar region of the spinal cord.  

Neuronal organization of descending systems of the spinal cord.  

Propriospinal ducts of the lateral funiculus and their possible role in transmission of pyramidal stimuli.  

Sympathetic suprasegmental control mechanisms of spinal cord motor neurons.  

Study of the conductivity of the motor neuron membrane during supraspinal stimulation.  

Intracellular study of rubrospinal neurons and of their synaptic activation during the stimulation of the sensorimotor cortical region.  

Influence of a preceding afferent stimulation on the pyramidal activation of spinal motor neurons.  

System analysis approach to the study of spinal mechanisms.  

Role of pyramidal and extrapyramidal components of cortically-induced afferent stimuli in the mechanism of cortical motor activity coordination.  

Possible role of supraspinal formations in the fixation of trace alterations at the segmental apparatus level of the spinal cord.  

Cerebrum sections and related afferent processes as activator of autonomic neuron mechanisms control of motor activity, discussing segmentary spinal cord changes.  

Role of efferent influences of temporo-hippocampal cerebral structures in pre-adjustment alterations of spinal motor neuron excitability.  

Vasomotor reflexes and the principle of descending control.  

Hypothalamic control of the electrical activity of the spinal cord.  

Supraspinal effects in the activity of preganglionic sympathetic neurons delivering axons to the cervical sympathetic nerve.  

Cortico-visceral studies of spinal cord reticular formation stimulation and destruction effects on electroencephalograms, cardiac activity and interoceptive glycemic reflexes.  

Effects of physical exercise on spinal reflectivity in man.  

Electrophysiological investigation of diaphragm cross contraction following spinal cord section in cats, noting diaphragm motoneurons excitation by breathing center pulses.  

Spinal cord heating and cooling effects on body temperature, respiratory and heart rates and arterial blood pressure, investigating feeding and drinking behaviors.  

Classification of neurons in the lumbosacral section of the spinal cord according to their discharge during evoked locomotion.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

Effect of disease bone atrophy on spinal impact tolerance in Rhesus monkeys.  

Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

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Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

Effect of disease bone atrophy on spinal impact tolerance in Rhesus monkeys.  

Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

Effect of disease bone atrophy on spinal impact tolerance in Rhesus monkeys.  

Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

Effect of disease bone atrophy on spinal impact tolerance in Rhesus monkeys.  

Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

Effect of disease bone atrophy on spinal impact tolerance in Rhesus monkeys.  

Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

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Effect of disease bone atrophy on spinal impact tolerance in Rhesus monkeys.  

Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

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Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

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Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

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Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

Effect of disease bone atrophy on spinal impact tolerance in Rhesus monkeys.  

Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

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Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

Effect of disease bone atrophy on spinal impact tolerance in Rhesus monkeys.  

Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

Effect of disease bone atrophy on spinal impact tolerance in Rhesus monkeys.  

Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.  

Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord.  

Influence of vestibular stimulation on segmentary reflexes in spinal cord.  

Response of anesthetized Rhesus monkey vertebral column and internal organs to pressure waves generated during seated spinal impacts.  

Mechanical and physiological response of human cervical vertebral column to severe impacts applied to torso.  

Effect of disease bone atrophy on spinal impact tolerance in Rhesus monkeys.  

Mathematical models for impact studies including spinal and head injuries.  

Mathematical models for determining effect of dynamic loading on spinal fluid and spinal porosity.
processes of medical information

Some effects of cognitive similarity on proactive and retroactive interference in short-term memory.

Bodkin disease post-surgery recurrence hazard rate in flying personnel, developing statistical base for decision regarding return to military duty.

Methods of measuring visual fatigue of workers engaged in tasks involving visual checks.

Statistical study of physiological and psychological factors in grounding of Italian Air Force flight crews.

Multiple discriminant analysis method for determining index of item validity using military personnel.

Biostatistical procedures for analyzing ecological and environmental problems.

Statistics on number of US civil aviation personnel based on certificates issued to pilots and nonpilots.

Application of statistical analysis techniques for determining orientation and navigation characteristics of animals.

Factors contributing to attrition from active airman status, particularly biological and medical characteristics.

Student naval aviator selection by multiple correlation technique using noncognitive college and flight background questionnaire to reduce attrition rate.

Interpretation of statistical data concerning relation of radiation exposure and infant mortality.

Ejection injuries from U.S. Heavy aircraft.

Body measurements and statistical analysis in designing control cabins.

Methods of measuring visual fatigue of workers engaged in tasks involving visual checks.

Student naval aviator selection by multiple correlation technique using noncognitive college and flight background questionnaire to reduce attrition rate.
Subject index

Sterilization effects
- Decontamination
- Degradation

Steroids
- Chlamydia pneumoniae infection of partial parachute failure, with close reference to atrial endocardial and myocardial lacerations
- Pseudohypoparathyroidism
- Corticosteroids
- Cortisone
- Penumblin
- Tobacco tissue cultures with Apollo 12 lunar material, determining endogenous steroids and fatty acids concentrations by gas chromatography and mass spectrometry

Correlation between stress and urinary levels of 17-Ketogenic steroids and sodium-potassium ratio during 90 day manned test.

Stimulant
- Caffeine
- Central nervous system stimulants
- Noradrenaline
- Norepinephrine
- Work capacity evaluation from fatigue, biological rhythm, tissue respiration and oxygen consumption studies, discussing pharmacological stimulation effects

Stimulant and tranquilizer effects on human acceleration tolerance

Stimulated emission devices
- Argon lasers
- Carbon dioxide lasers
- Chemical lasers
- Gas lasers
- Helium-neon lasers
- Lasers
- Pulsed lasers
- Q-switched lasers
- Ruby lasers

Stimulation
- Auditory stimuli
- Sensory stimulation

Biological systems activity in controlling extremal problems of nervous and muscular systems, noting external stimulation minimization

Patterns of spontaneous and reflexly-induced activity in phrenic and intercostal motoneurons

Stimuli
- Maximum aerobic power response and oxygen consumption to training stimulus intensity, duration and frequency, using bicycle ergometer exercise
- Pain perception anatomical and neurophysiological mechanism, discussing human response to mechanical, thermal and chemical pain inducing stimuli

Effect of nonspecific stimuli on inhibition of petobological processes
- Sensory interaction between vision size perception and vestibular stimulation as test for vestibular hypothesis of moon illusion

Influence of discriminative training and stimulus control on key pecking behavior in pigeons

Stochastic processes
- Random processes

Stochastic signal method for measuring dynamic viscoelastic properties of isometric frog sartorius muscle at rest and contraction, using white noise vibrations

Stochastic model for eye movements during fixation on stationary target

Stochastic models of human performance effectiveness functions reliability and correctability from error data generated by tracking and vigilance tasks

A stochastic bioburden model for spacecraft sterilization.

Empirical support for a stochastic model of evolution

Stochastic model of neuron firings based on two recurrent time sequences of stimuli

Stokes flow
- Quasi-steady creeping flow in small airways of spherical, oblate and prolate ellipsoid and circular cylinder lung models, obtaining Stokes equations solutions

Story keywords
- Carbonaceous meteorites

Stopping power
- The influence of molecular binding on the stopping power of alpha particles in hydrocarbons

Straps
- Negative g strap for restraint, and performance during aircraft acrobatics, vibration, and crash impact

Strategy
- Operator, task level and workload effects on operative strategy, showing controller methods modification in ATC center
- Landing sequence strategy variations for individual ATC operators, indicating dependence on flight progress data variation, existing maneuvering conditions and controller personality traits
- Tracker recovery strategy during temporary target obscuration in pursuit tracking task, analyzing control stick movements

Stratified flow
- Blood flow stratification effect on alveolar gas exchange in liquid filled lungs in dogs from 133 concentration measurements

Strength of materials
- Mechanical properties

Streptococcus
- Pharyngeal streptococcal flora transfer between human subjects isolated for 15 days

Stress (biology)
- Sex differences of chronic effect of environmental stress on blood pressure and information processing in rats, observing neurotic hypertonic blood pressure irregularity
- Lipid composition of growing and starving cells of Arthrobacter crystallopoietes

Multispectral remote imagery of morphological and physiological changes in trees under drought and salt stress

Stress (physiology)
- By acceleration stresses (physiology)
- By centripetalizing stress

Shock-induced fighting effect on pituitary adrenocorticotropic hormone ACTH and adrenocortical steroids plasma concentration in rats, relating psychological stress to physiological function

Adrenocortical steroids during acute exposure to environmental stresses, noting effects of injected cortisol removal, uptake and release
Electroencephalographic activity of biceps muscle during submaximal isometric contraction determined from auditory feedback

Physiological effects of high altitude flight and development of life support systems for civil aircraft environmental control

Physiological straining and conditioning ergometer system

Lactate-pyruvate and redox state responses of blood and tissue in chronic hypercapnia

Multimode research including neurophysiological tasks at limit of operator capability, telemetry, and patterns of diurnal urinary rhythms in men with spinal cord injury

Hypothermia in cats during physical restraint and accompanying decrease in heat production and increase in heat loss

Analysis of spatial disorientation reports by flying personnel during 19 year period

Behavior of gluteal region of human body subjected to varying loads in sitting position

Methodology and analysis of visual evoked cortical response as measure of stress in hyperbaric atmospheres of naval environment emphasizing slow flash rates

History, organization, and accomplishments of Project Tektite with emphasis on psychological reactions of aquanauts during lengthy underwater isolation

Effects of high temperature on pilot performance as determined in flight simulator during simulated instrument flight

Development of data support system with models for predicting factors affecting human performance

Analysis of effects of external and internal environments on information retrieval process in human subjects and application for determining human reliability

Biomedical problems of space flight based on experiments in stress physiology and stress psychology

Effect of flight stress on blood clotting in fighter pilots

STRESS (PSYCHOLOGY)

Vibration space analysis for human voice characteristics change during unstressed speech under experimental psychological stresses and actual emergency situations

Phenamine and amphetamine effects on subthreshold sound perception and adrenoactive excitability of unstable subjects under emotional stress

Shock-induced fighting effect on pituitary adrenocorticotropic hormone ACTH and adrenocortical steroids plasma concentration in rats, relating psychological stress to physiological function

Time shortage as stress factor affecting mental activity of operator in man-flying vehicle system, discussing control signal handling efficiency

Aeromedical diagnostics for aircraft pilot hearing losses testing, considering cockpit environment and stress-produced ailments in central nervous system

Emotional aspects of pilot performance under high stress in emergency situations, discussing psychophysiological training methods

Human immediate memory adaptation to speed stress, discussing response time and performance accuracy relationship to stimuli complexity and input speed

Evoked cortical potentials changes from emotional visual word stimuli stress under amyl anticholinesterase drug influence

ATC operator stress factor evaluation from information theory analysis of radio telecommunication information content

Ergonomic simulators for testing individual mental working capacity, using stress-strain and fatigue relation

Increase in skeletal muscle performance during emotional stress in man

The function of external respiration in mental activity

Nervous mechanisms of the acoustic stress reaction

Nervous-emotional stress as a problem of modern work psychology

Measurement of pilot stress in simulated aircraft control tasks

Computer program for correlating human reactions to psychological stress

Values of blood serum lipids in young men in relation to acute stress situation and regular sports activity

Interrelationships of anterior pituitary hormones in stress situations

Biomedical problems of space flight based on experiments in stress physiology and stress psychology

STRESS MEASUREMENT

STRESS CONCENTRATION

Use three dimensional photoelastic model

Photoelastic analysis of cardiovascular-sagitude stress pattern produced by flow through gelatin-agar walled channels for analysis of mechanical stresses on blood vessel walls

STRESS DISTRIBUTION

STRESS RELATIONSHIP

Ergological properties and architecture of arterial walls, using stress relaxation and stress-strain hysteresis tests on dog aorta
STRESS-STRAIN DISTRIBUTION
iliac and femoral strips p0003 A72-10184
Distensibility and stress relaxation characteristics of caputaneous and resistance vessels of isolated rabbit ear as function of vascular tone p0068 A72-15124

STRESS-STRAIN DISTRIBUTION U STRESS CONCENTRATION
STRESSES
ST COMBINED STRESS
ST RESIDUAL STRESS
ST THERMAL STRESSES
ST VIBRATIONAL STRESS
Human endurance of impact overloads and mechanical stresses in human body [NASA-TT-P-14571] p0561 A72-32102

STROBOSCOPES
Visual persistence and perceptual moment hypotheses for time-dependent visual illusion from viewing moving stroboscopically illuminated object p0097 A72-16150

STRUCTURAL ANALYSIS
Geometric properties of human ribs and thin walled ellipse model for rib cross section [AD-740450] p0525 A72-30093
Structural and analytical representation of reversible follow-up systems p0571 A72-33104

STRUCTURAL DESIGN
Structural design and electrical drive mechanism of helicopter hoist for rescue operations p0334 A72-30097
Biodynamics of sports injuries, applied to sports equipment design p0256 A72-19128
Design of insulated lightweight shoes [AD-785316] p0263 A72-19183
Design improvements and applications of transducers for noninvasive methods of patient monitoring p0356 A72-23067
Simulation and design of breathing metabolic simulator p0845 A72-27129

STRUCTURAL FAILURE
Boeing 707 rapid decompression at 25,000 feet, noting rivet hole fatigue damage p0200 A72-11715
Summary of 1971 Stockholm workshop on sonic boom effects, discussing humans, animals and structure exposure and interdisciplinary aspects p0222 A72-23324
Structural and mechanical characteristics of human connective tissue p0258 A72-19140

STRUCTURAL FAILURE U FATIGUE (MATERIALS)
STRUCTURAL MEMBERS
ST BEARING STRUCTURES
ST STRUCTURAL RELIABILITY
Structural crashworthiness performance of conventional automobiles and performance of structural devices designed for protection p0258 A72-19142

STRUCTURAL VIBRATION
Aircraft design for acceptable vibration level, discussing flight vibration and runway response p0152 A72-19269

STUDENTS
Determination of state and trait anxiety in student drop outs from Naval flight training program [AD-772618] p0046 A72-11097
SUBCIRCUITS
U CIRCUITS
SUBGRAVITY
U REDUCED GRAVITY
SUBLAYERS
U SUBLAYERS
SUBSTRATES
Personal protection measures, environmental control, and noise reduction to avoid hearing loss among submarine crew personnel [AD-762217] p0062 A72-12034
Methodology and analysis of visual evoked cortical response as measure of stress in hyperbaric atmospheres of naval environment emphasizing slow flash rates [AD-737209] p0002 A72-25115
Measurement of physiological effects on metabolism of personnel resulting from long periods of time in submarine environment [AD-738809] p0773 A72-28074
Effects of confined submarine environments on crew performance and biological processes during prolonged submergence [AD-760796] p0655 A72-31129

SUBMERGED BODIES
ST DIVING (UNDERWATER)
SUBMERGING
Prolonged water immersion effects on renal function and plasma volume in trained and untrained subjects, noting deleterious effect on orthostatic tolerance and work capacity p0227 A72-23738
Space maintainability experiment aboard submersible during 30 day drift mission, noting application to Skylab manpower distribution [NASA PAPER 72-2321] p0231 A72-24402
Multibar immersion effects on blood plasma protein and electrolyte concentration in trained and untrained subjects p0262 A72-27480
Human spinal segment functional state before voluntary movement during water immersion, using H-reflex for spinal cord tonotronic excitability evaluation p0334 A72-30525
Hemodynamic changes in man during immersion with the head above water p0409 A72-34543
Regional lung function in man during immersion with the head above water p0485 A72-38701
Pulmonary air-trapping induced by water immersion p0512 A72-39797
Comparison of the vectors of the ventricular depolarization and repolarization of man during immersion in a standing position p0552 A72-44924

SUBSETS (MATHEMATICS) U SET THEORY
SUBSTANCES
U MATERIALS
SUBSTANCES
Substrate utilization and glycolysis in the heart p0347 A72-18097
Relationship between respiration and structure of mitochondria in Euglena gracilis (z) grown in carbon source substrate [NASA-TT-P-14017] p0081 A72-12024

SUBTROPICAL REGIONS U TROPICAL REGIONS
SUBZERO TEMPERATURE
Peripheral thermo-regulation in arctic canines, showing subzero bath-lavaged foot temperature maintenance above tissue freezing point p0704 A72-22209
Subzero cooling method for increasing functional capacity of human cardiovascular system p0380 A72-24107
Inflatable, thermally insulative emergency survival suit for subzero weather p0845 A72-27132
PCF cold sterilization of nutrient media [NASA-TT-P-14412] p0468 A72-28042

SUGAR
Influence of hyperventilation on left ventricular stiffness p0810 A72-34727
Survival rate of Bacillus subtillis var. niger spores in sucrose solution, various temperatures, and humidity conditions [NASA-CR-123326] p0043 A72-11075

SUN AVIATION AIRCRAFT
ST CONCORDE AIRCRAFT
SUGARS
ST GLUCOSE
ST SUGAR
Kinetic and mechanisms of homogeneously catalyzed autocatalytic condensation and application to synthesis of sugar for space flight feeding and food manufacture [NASA-CR-126397] p0359 A72-23086

SUTS
ST PRESSURE SUITS
SYNCHRONIZATION

Visual cortex neuronal background activity in unanesthetized rats under stimulation and depression of lateral geniculate body and mesencephalic reticular formation, considering synaptic organization

Synaptic patterns in the superficial layers of the superior colliculus of the monkey, Macaca mulatta.

Neuronal fiber and synaptic axonal contact structure of cat spinal gray matter in corticospinal, rubrospinal and reticulospinal terminal zones by Golgi method

The ultrastructure of the lateral basilar region of the spinal cord.

Neuronal organization of descending systems of the spinal cord.

Synaptic suprasegmental control mechanisms of spinal cord motor neurons.

Study of the conductivity of the motor neuron membrane during supraspinal stimulation

Intracellular study of rubrospinal neurons and of their synaptic activation during the stimulation of the sensorotor cortical region

Synaptic potentials of sensor and motor neurons of trigeminal nuclei during corticofugal stimulation

Pyramidal control of the activity of interneurons related to various types of peripheral afferents

Possible role of supraspinal formations in the fixation of trace alterations at the segmental apparatus level of the spinal cord

Polysynaptic sympatho-reticular and somatic afferent visceral links between internal organs and cerebrum in interoceptive reflex fields

Synaptic events during specific and nonspecific inhibition of visual cortex neurons

SYNCHRONIZATION

Synchronization in the work of motor neurons during arbitrary motor activity of various types.

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

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SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION

SYNCHRONIZATION
Design criteria for the modular space station environmental control and life support system selection. [NASP Paper 72-TMAX-25] p0460 A72-39152

Significant factors in environmental and thermal control/life support system design for space shuttle orbiter [NASP Paper 72-TMAX-27] p0460 A72-39156

Space shuttle waste collection system development, discussing human-interface requirements, zero gravity effects and operational considerations. [NASP Paper 72-TMAX-13] p0461 A72-39164

Water and waste management subsystem design for a space station prototype. [NASP Paper 72-TMAX-6] p0462 A72-39169

Design of vibration absorbers minimizing human discomfort. p0501 A72-41231

Anthropotechnics/human engineering/approach to man machine system optimization, discussing task allocation and adaptations of machine dynamics, displays and controls to human operator. p0501 A72-41403

Display-device layout based on human operator manual control information requirements, discussing manageable categories, motion compatibility, indicators relation and integration. p0502 A72-41404

Human engineering requirements in aircraft system development. p0504 A72-41423

Invariant transformation of the control laws in aeronautical systems. p0556 A72-65510

Theoretical-experimental method for parametric synthesis of direct-type control systems. p0557 A72-65522

Design of candidate concepts for space station/base food system. [NASA-CR-115231] p0085 A72-12052

Detail engineering data sheets for concepts of space station/base food system. [NASA-CR-115228] p0085 A72-12054

Supporting technical data for concepts considered in space station/base food system. [NASA-CR-115230] p0085 A72-12055

Development and evaluation of C-130 accelerometer training program based on systems approach. [AD-727055] p0087 A72-12064

Selection rationale sheets for concepts in space station/base food system. [NASA-CR-115232] p0087 A72-12070


Proportional relationship between reaction time and information processing in humans as factor of system design. [AD-7282171] p0087 A72-13093

Data management techniques and designs for integrating OPE with IMRAS for manned space flight. [NASA-CR-11996] p0127 A72-14115

Development of seasequential tracking concepts and control of complex systems. [AD-731933] p0131 A72-14135


Human resources data included in engineering trade studies. [AD-732201] p0206 A72-17089


Design characteristics of underwater fire control systems for training Navy personnel in maintenance and calibration. [AD-733936] p0262 A72-19174

Feasibility and efficiency of portable recompression chamber for treating decompression sickness. [AD-733904] p0263 A72-19178

BIOMD - interactive computer graphics system for modeling continuous biological systems. [R-747-MB] p0304 A72-20067

Application of systems engineering concept to US Coast Guard aviator training program. [AD-735051] p0317 A72-21080

Design, technical history, and use of Naval training devices. p0360 A72-23093

Spot size scanning system for analyzing thermal infrared military targets. [PHL-1971-34] p0386 A72-24091

Fabrication and operational procedures for processing lunar samples in sterile nitrogen atmosphere. [NASA-TM-D-6656] p0400 A72-25099

Development of regenerable or partially regenerable life support system use in EVA protective systems. [NASA-CR-116382] p0408 A72-25133

University generated designs for spacecraft electric power supplies. p0405 A72-25144

Automated constant cuff pressure system to remotely document cardiovascular and haemodynamic blood pressure in man. [AD-730832] p0437 A72-26089

Biologic system for control of muscular activity. [HEC-TR-1551] p0439 A72-27083

Design of gas mixture breathing system for underwater diver equipment. p0442 A72-27108


Teleoperator technology and performance evaluation of general purpose anthropomorphic manipulator with controllers and displays. [NASA-CR-123471] p0475 A72-28090

Human factor considerations in developing automated air traffic control systems. p0477 A72-28105

Regression analysis of relationship between system design, training variables, and technician maintenance performance on automatic pilots. [AD-739051] p0470 A72-28111

Development of life support subsystems for advanced extravehicular protective systems. [NASA-CR-116321] p0529 A72-30114

Decision tree format for including human resources data in systems engineering design. [AD-741768] p0530 A72-30120

Combined shoulder harness and lap belt restraint system for use in aircraft or automobiles. [NASA-CASE-ABE-10519-11] p0534 A72-31177

Design principles of hyperfiltration shower wastewater reclamation system operating at elevated temperature. [NASA-CR-112172] p0534 A72-31116


Modification program to improve operation of self-contained underwater breathing apparatus. [AD-742235] p0574 A72-33133

SYSTEMS MANAGEMENT

Principles for operating Soyuz life support systems. p0486 A72-29089

SYSTOL

Extrastylotic potentialization of ventricular contraction effect on dog mitral valve function, using roentgen videodensitometry. p0012 A72-11036

Camino and human ventricular myocardiomicroelectrophysiologic studies of postextrastylotic T wave change relation to cellular repolarization and contractile potentialization magnitude. p0017 A72-11474

Beta-adrenergic and vagal blockade altered autonomous control effects on left ventricular function in conscious dogs, noting heart rate, stroke volume and end-diastolic and end-systolic diameters. p0017 A72-12090

Single linear measure of systolic pressure gradient for calculation of aortic valve area in stenosis severity assessment. p0266 A72-27734

Determination of systolic time intervals using the apex cardiogram and its first derivative. p0457 A72-38087
Factors limiting the increase in stroke volume obtainable by positive inotropism – Investigations regarding the sufficient heart in the case of continued postextrasystolic potentiation

SYSTOLIC PRESSURE

LP subaudible chest wall vibration recordings, discussing external, epicardial surface and intraventricular pressure precordial displacement tracings

Automated constant cuff-pressure system to measure average systolic and diasstolic blood pressure in man.

Automatic system for measuring and monitoring systolic and diasstolic blood pressure in humans

Automated cuff pressure constant system to remotely determine average systolic and diasstolic blood pressure in man

T-37 AIRCRAFT

Performance reference scale for maneuvers in T-37.

Development and application of training films for instruction pilots in landing T-37 aircraft

T-38 AIRCRAFT

Operational evaluation of methods for training pilot personnel on T-38 aircraft

TABLES (DATA)

Tables and bibliographies on preserving biological materials

Subjects, using TV camera

TACHISTOSCOPE

Selective attention and short term memory encoding, using tachistoscopic visual display arrangements of capital letters

Perception of tachistoscopic binary patterns, selective attention and short term memory

TACHYCARDIA

Paroxysmal supraventricular tachycardia initiated by sinus beats in patient, observing A-V nodal conduction delay by ECG and electrophysiological methods

Bainbridge reflex mechanism, showing sinus

Role of coronary vascular bed hemorrhagic response to severe exercise in dogs

Aortic reurgitodulation with respiratory sinus arrhythmia and respiratory cycle in dogs during tachycardia and bradycardia

TACTILE DISCRIMINATION

Neural substrates of sensory tactile vision substitution for information sedation in blind subjects, using TV camera

Intervening discrete elements effects on filled duration illusion in auditory, tactual and visual presentation

Natural visual capture result of vision and touch conflict in bilateral comparisons of object length

Visual and haptic perception in angle reproduction matching task, noting performance differences relation to nature of form discrimination and task

Visual-tactual sensory conflict experimental examination, discussing vision as dominant modality

Meaningful shape coding for aircraft switch knobs


German book – Somatosensory, smell and taste

Tactile information transmission for orientation and motor control, discussing somatic sensitivity peripheral mechanisms

TACTILE SENSATION

U TOUCH

TAKOFF RUNS

Pilot survival probabilities under various conditions of high performance aircraft takeoff and landing accidents, suggesting emergency action guidelines for pilot training

TAKOFF SYSTEMS

U AIRCRAFT LAUNCHING DEVICES

TAKING

MT SYLLABLES

WT WORDS (LANGUAGE)

TAP COUPLING

U DATA PROCESSING

TAPE RECORDERS

Arterial pressure data recording technique using magnetic tape recorder and automatic conversion to digital form

One-channel portable tape recording system for long term ECG recording of flying personnel

Analogue computer program for analysis of extended electrocardiographic monitoring

TARGET REDUCTION

U DATA REDUCTION

TARGET ACQUISITION

Stochastic model for eye movements during fixation of stationary target

Circadian rhythms of visual accommodation responses and physiological correlations during target tracking, recording monocular focus state by IR optometer

Target acquisition by systems with unlagged acceleration control or rate control with exponential time lag, discussing number of approach and control stick movements

Visual acuity measurement by dynamic and static tests as function of target velocity and exposure time

Hypoxia and peripheral visual stimuli position effects on response time during monitoring of centrally located stimulus light

Visual optical system evaluation from viewpoint of human operator target detection under field conditions in terms of resolution, transfer functions, aberration and eye movements

Intermittent movement control theory for prediction of visual correction applied to target aiming during illumination loss

Visually directed pointing as a function of target velocity and exposure time

Effect of apparent scene illumination on in-flight visual detection of ground targets during aerial reconnaissance

Track initiation and maintenance in single operator semi-automatic radar surveillance system

Effects of G and target position on static helmet sighting using human centrifuge

Pilot performance in target acquisition tasks compared in experiments involving transition from direct to TV mediated viewing and for color vs monochrome TV displays
TARGET DBOE ByłBčBAFT
TABGET BECOGBITIOB
TASK COHPLBZITI
Onmanned systems flight testing by test bed vehicle conversion to man operated mode, discussing T-33A jet trainer conversion to drone operation

TARGET RECOGNITION
White background noise intensity effects on human visual target detection performance considering display difficulty levels, target location, detection time and error

Effect of target-background luminance contrast on binocular depth discrimination at photopic levels of illumination
The relative importance of contrast and motion in visual detection
Determining the detectability range of camouflaged targets
The tracking of targets located outside of Panum's area
Time-compressed displays for target detection
Psychological tests for evaluation of animated visual displays for acoustic signal recognition
Tests to determine human ability to estimate proportional distances and distance ratios with aid of reference length
Spot size scanning system for analyzing thermal infrared military targets
Evolution of target recognition and echo location mechanisms in Vespertilionid bats

TASK COMPLEXITY
Problem solving research, discussing trouble shooting, logic, light pattern, search, fire control, code transformation, perceptual maze and computer administered tasks
Skill acquisition in performance of three phase code transformation task
Time sharing three phase code transformation multitask effects on sustained performance
Twelve hour light-dark-dark cycle phase effects on monkey feeding behavior and serial task performance

BOOK ON SUSTAINED ATTENTION /VIGILANCE/, discussing effects of signal frequency, magnitude and distribution, task complexity, noise, age, intelligence, etc
Operator mental processes during ATC task performance, discussing work load effect, mental representation and operator algorithm definition
Operator, task level and workload effects on operative strategy, showing controllers methods modification in ATC center

Timing analyses of ATC approach controller tasks, developing flow diagram for task component sequencing and quantifying

ATC task analysis by subjective rating of work load, discussing information processing measures, scoring method and observer rating procedure
Acceptable load standards in ATC tasks, defining amounts of conscious brain control as mental load measure

Human performance prediction dependence on task and equipment variables effects, using experimental data for performance classification
Evaluation of task classification system for generalizing research findings on human performance from data base [AD-736192] p0351 A72-22082
Preliminary estimates for establishing constructive and predictive validity of scales for human tasks [AD-736194] p0360 A72-23094

TEA LASERS
U CARBON DIOXIDE LASERS

TEACHING
U EDUCATION

TEACHING MACHINES
Instructor station design for automated flight training systems, considering human factors and informational requirements p0152 A72-19277
Training value of training materials and devices [AD-733962] p0311 A72-20118

TEAM
Team size and decision rule in the performance of simulated monitoring teams. p0499 A72-41016

TECHNOLOGICAL FORECASTING
Forecasting of future pilot-aircraft interface requirements p0087 A72-13010

TECHNOLOGIES
MT BIOTECHNOLOGY
MT MILITARY TECHNOLOGY
Teaching and training innovations and technological improvements for augmenting human cognition [AD-726755] p0047 A72-10124

TECHNOLOGY ASSESSMENT
Cryobiology phenomena and applications, considering mode of action of various substances for freezing injury protection p0457 A72-38828
Development of deep sea diving technology p0491 A72-27100

TECHNOLOGY TRANSFER
Utilization of aerospace technology in medical field (NASA-CR-124618) p0078 A72-12011
Biomedical technology transfer of NASA cardiovascular monitoring (NASA-CR-124817) p0087 A72-13056
Transfer of food processing and preservation technologies from NASA to industry (NASA-CR-124815) p0087 A72-13071
Aerospace technology transfer and utilization in biomedical systems (NASA-CR-126404) p0356 A72-23065
Aerospace technology application and transfer programs to biomedical areas p0356 A72-23066
Aerospace technology transfer and utilization in medical research and health care p0356 A72-23069
Aerospace technology transfer to biomedical research programs, including transfer innovations and potential applications (NASA-CR-126772) p0400 A72-25101

TECHNOLOGY UTILIZATION
Aerospace waste and water management technologies for community and household applications p0314 A72-18617
Collaboration of World Health Organization and various international astronomical organizations for space technology applications to man-environment relationships and medical and communication sciences p0165 A72-20300
Electromagnetic velocity and flow measurements techniques application to cardiovascular patients, discussing utilization problems p0227 A72-23275
Russian book on man and computer covering interaction systems technological capabilities, mathematical aspects and applications p0361 A72-31272
Cryobiology phenomena and applications, considering mode of action of various substances for freezing injury protection p0457 A72-38828
Potential applications of NASA-developed technology to problems of the environment. [ASME PAPER 72-EMAT-23] p0460 A72-39154

SUBJECT INDEX

APPLICATIONS AND UTILIZATION OF AEROSPACE TECHNOLOGY
Application of planetary quarantine methodology and spacecraft sterilization technology to improved health care delivery p0554 A72-45148
Utilization of aerospace medical techniques to public health, particularly hypokinesis [NASA-77-F-14048] p0080 A72-12014
Aerospace technology applied to medical research, monitoring various biological functions [NASA-CR-125616] p0245 A72-18106
Aerospace technology transfer and utilization in biomedical systems [NASA-CR-126404] p0356 A72-23065
Aerospace technology application and transfer programs to biomedical areas p0356 A72-23066
Aerospace technology transfer and utilization in medical research and health care p0356 A72-23069
Accomplishments and activities of biomedical teams concerned with application and utilization of NASA technology [NASA-CR-127792] p0088 A72-29081

TEETH
Influence of ionizing radiation on the tooth organ p0508 A72-41987

TELEPHON TRADEMARKS
Telediffusion membrane for in vivo blood and intravascular tissue gas tension measurements by mass spectroscopy without chemically bonded heparin surface p0173 A72-20901

TELEVISION PROJECT
Physiological and psychological tests to determine effects of isolation during long periods in underwater shelters during Tektite project [NASA-CR-123496] p0137 A72-15069
History, organization, and accomplishments of Project Tektite with emphasis on psychological reactions of astronauts during lengthy underwater isolation [NASA-CR-127689] p0468 A72-28041

TELECOMMUNICATIONS
U REMOTE HANDLING
TELECOMMUNICATION
MT AIRCRAFT COMMUNICATION
MT BIOTELEMETRY
MT TELEMETRY
MT MAGNETIC TELEMETRY
MT OPTICAL TELEMETRY
MT RADIO TELEMETRY
MT TELEPHONE
MT VOICE COMMUNICATION

TELEPHONES
U TELEPHONE
MT BIOTELEMETRY
MT RADIO TELEMETRY
Multiphase research including neurophysiological tasks at limit of operator capability, telemetry, and patterns of diurnal urinary rhythms in man with spinal cord injury [AD-735179] p0352 A72-22087
Automated constant cuff pressure system to remotely determine average systolic and diastolic blood pressure in man [AD-738832] p0437 A72-26089

TELEMETRY AUTO REDUCTION SYSTEM
U DATA REDUCTION
U TELEMETRY

TELEPHONES
U TELEMETRY

TELEKOPPERS TELEOPERATORS
Telemeter manipulator for payload handling in space shuttle, noting design features and simulations of master-slave remote control system [AIAA PAPER 72-238] p0326 A72-29075
NASA teleoperator-robot development program, discussing technology and design studies related to space shuttle and stations, satellites, and planetary vehicles p0367 A72-32315
Human or computer control role in teleoperator remote control mechanisms, discussing control modes, sensing and transmission time delay problems p0503 A72-41416
Computerized supervisory control for interpretation of subgoal statements from human operator to permit teleoperator interaction with environment without long time delay p0503 A72-11417

Teleteltron technology and performance evaluation of general purpose anthropomorphic manipulator with controllers and displays p0475 N72-28090

TELEVISION EQUIPMENT
Pilot performance in target acquisition tasks compared in experiments involving transition from direct to TV mediated viewing and for color vs monochrome TV displays (NASA-CR-127263) p0356 N72-22105

TELEVISION RECEPTION
Dynamic characteristics and requirements in human visual perception of moving television images (AD-727178) p0037 N72-10097

TELEVISION SYSTEMS
TV microscopic system for on-line measurement of cell osmotic microvessels diameter relative to heart action p0272 A72-26621

Alphanumeric characters for small TV type raster displays, describing legibility experiment for character height optimization p0331 A72-29821

Design of X-ray detector for television radiographs used in biological analysis (AD-744865) p0573 N72-33122

TELEPACE PZDEMS U ELECTRIC FIELDS
TEMPERATURE
WT ARIDISIZED TEMPERATURE
WT ATMOSPHERIC TEMPERATURE
WT BODY TEMPERATURE
WT HIGH TEMPERATURE
WT SATELLITE TEMPERATURE
WT SKIN TEMPERATURE (BIOLOGY)
WT SUBZEREO TEMPERATURE
WT SURFACE TEMPERATURE

Temperature control
Nerve structures localized cooling device using vacuum insulated closed circuit controlled cryogenic probe with cooling range of plus/minus 20 C p0072 A72-15252

Human body thermoregulatory processes under varying environmental conditions and metabolic rates, discussing role of blood circulation, sweating, nervous stimuli, hormones, etc p0268 A72-26073

Space station prototype environmental/thermal control and life support system - A current overview. (ASME PAPER 72-ENAV-35) p0459 A72-39143

Thermal control design for research applications module/SHUTTLE compatible payload carriers, using Proton 7-water system (ASME PAPER 72-ENAV-31) p0459 A72-39146

Thermal control concept evaluation for a ten-year life modular space station. (ASME PAPER 72-ENAV-30) p0459 A72-39147

Development of a laboratory prototype spraying flash evaporator. (ASME PAPER 72-ENAV-281) p0459 A72-39149

Thermal control system incorporation into lunar roving vehicle /LRV/ for electronic component protection during transunar transportation and lunar surface operation. (ASME PAPER 72-ENAV-27) p0460 A72-39150

Significant factors in environmental and thermal control/life support system design for space shuttle orbiter. (ASME PAPER 72-ENAV-21) p0460 A72-39150

Space shuttle environmental temperature control/life support system program changes, discussing air cooled electronic equipment, cryogenic stores, crew size and mission duration (ASME PAPER 72-ENAV-18) p0461 A72-39159

The development of a 150,000 watt-inch variable conductance heat pipe for space vehicle thermal control. (ASME PAPER 72-ENAV-14) p0461 A72-39163

Computer simulation of the space shuttle orbiter environmental thermal control system. (ASME PAPER 72-ENAV-12) p0461 A72-39165

Integration of an automated onboard data management system with a manned spacecraft environmental thermal control and life support system. (ASME PAPER 72-ENAV-63) p0862 A72-39171

R and D on environmental and thermal control/life support system application to lunar base mission, discussing reliability and food regeneration p0554 A72-45164

Selected articles on mathematical or simulation models of human thermoregulation. (NASA-CR-115268) p0087 N72-13057

Automatic control device for regulating inlet water temperature of liquid cooled space suit (NASA-CASE-NAS-13917-1) p0142 N72-15096

Automatic temperature control for liquid cooled space suit (NASA-CASE-ARC-10599-1) p0404 N72-25129

Automatic controller of liquid cooled space suit using human sweat rate as an input signal p0444 N72-27125

TEMPERATURE DISTRIBUTION
Steady state and transient temperature distributions in human thigh covered with cooling pad (NASA-CR-127523) p0439 N72-27084

TEMPERATURE EFFECTS
Hydrostatic pressure and temperature effects on growth of psychrophilic marine bacteria, emphasizing inhibited amino acid transport and respiration p0006 A72-10322

Contrast reversal or distance paradox in temperature perception aftereffect p0008 A72-10716

Bacteriophage synergistic inactivation by heat and ionizing radiation from kinetic model describing dose rate and temperature dependencies p0113 A72-11085

Kinetics of heat inactivation of psychrophilic kinase in soluble fraction from Psychromonas facilis p0165 A72-20237

Temperature effects on microorganisms survival in deep space vacuum, using molecular sink test p0215 A72-22641

Temperature effects on blood electroluminescence, relating luminescence peaks to protein and lipid molecular structure changes p0225 A72-23694

Thermotolerant triose phosphate isomerase in psychrophilic Clostridium at moderate temperatures p0233 A72-24750

Living organisms defense and preservation via refrigeration and vacuum combined use in lyophilization technique p0279 A72-27293

Thermoregulation in deeply hibernating rodents during separate chilling and steady hibernation temperature maintenance of skin and brain p0287 A72-27827

Environmental temperature effect on motion sickness sweating, discussing nausea and discomforting symptomatology prediction p0296 A72-28302

Ear body temperature measurement relation to radiant heating of scalp and upper face p0299 A72-28333

Temperature and extracellular Ca level effects on mammalian ventricular myocardium force-frequency relationships, determining contractile tension, velocity and phase duration p0338 A72-30045

Heat chamber treadmill work-induced thermal stress effects on reaction time to visually and peripherally presented visual stimuli p0365 A72-31154

High temperature and altitude combined effects on performance of tracking, monitoring and mental arithmetic complex task p0345 A72-31155

Visible and invisible nonionizing radiation produced human injuries, considering visual and retinal effects and induced thermal stresses p0408 A72-34300

Thermoregulation during positive and negative work at different environmental temperatures p0425 A72-36559
Influence of temperature shocks on seed formation after irradiation of pollen from Tradescantia paludosa.

Influence of cooling of the mesonotor region of the cerebral cortex on the neurons of the mesencephalic reticular formation

Hematological modifications due to acute exposure to heat

Influence of high temperature on the onset of motion sickness

Effect of activity and temperature on metabolism and water loss in snakes.

Spinal cord heating and cooling effects on body temperature, respiratory and heart rates and arterial blood pressure, investigating feeding and drinking behaviors.

Temperature-sensitive neurons in the brain stem - Their responses to brain temperature at different ambient temperatures.

Survival rate of Bacillus subtilis var. nigrospora in suspended solution, various temperatures, and humidity conditions

Temperature effects on destruction of Bacillus subtilis as function of relative humidity in spacecraft sterilization

Measurement of human subject heart rate during dives with scuba equipment to determine effects of temperature

Mechanism by which inert gases influence metabolism

Effect of noise and temperature on human performance of simple manual dexterity task

TEMPERATURE MEASUREMENT

Electrical thermometer mounted on breathing mask for electropneumographs, measuring temperature change in respiration air flow

Reciprocal temperature changes in dogs during constant thermodilution for corony sinus blood flow measurement

Various work-rest cycles and environmental temperature effects on body temperature, determining external auditory canal and core temperature relationship

Ear site body temperature measurement relative to radiant heating of scalp and upper face

Underwater tests of instrument system for combined skin temperature and direct heat flow measurement in therally stressful environments

Thermal relationship between tympanic membrane and hypothalamus in conscious cat and monkey

Clinical IR thermography with Thermovision camera for body temperature discontinuity detection, discussing image resolution

Measurement of skin temperature in healthy male human subjects to determine areas of maximum thermotability for various ambient temperatures

Assessment of human skin temperature rise suppression by edge lossess during thermal irradiation

TEMPERATURE MEASURING INSTRUMENTS

NT THERMOMETERS

THERMAL RESISTANCE

Naturally heat resistant organisms in soils
(NASA-CR-128232) p0217 A72-22877

Planetary quarantine laboratory experiments on
thermal resistance of airborne spores and
microbiological examination of space hardware
(NASA-CR-126213) p0351 A72-22079

THERMAL STABILITY

Blood serum proteins thermal stability in patients
with vegetative vascular and neuroendocrine
syndromes, discussing ATP effects
p0217 A72-22877

THERMAL STRESSES

Reversal flow personal ventilation system for
reducing thermal stress during aircraft operations
(FPSC/AMRO-250) p0353 A72-22097

THERMOBIOLOGIC REACTORS

U NUCLEAR REACTOR ENGINES

THERMOBIOLOGISTS

Pneumatic thermistor transducer to measure steep
ejection time interval between cardiac volume
pulse upstroke start and maximum rise rate
occurrence
p0273 A72-26633

Nose installed thermistor device for in-flight
monitoring of pilot respiration and pulse rate
p0280 A72-27417

THERMO-PHOTOVOLTAIC GENERATORS

THERMOELECTRIC GENERATORS

THERMOCHEMICAL PROPERTIES

HT HEAT OF VAPORIZATION

THERMOCOUPLES

Assessment of regional myocardial temperature
changes effect on blood flow measurements by
heated cross-thermocouples in dogs
p0235 A72-25071

THERMODYNAMIC PROPERTIES

HT ETHEROSITY

HT ENERGY

HT FREE ENERGY

HT HEAT OF VAPORIZATION

HT THERMAL STABILITY

HT VOLATILITY

Thermodynamic properties and mathematical modeling
of complex biological systems, considering
energy and mass exchange in photosynthesizing
organisms for exobiological life support
p0459 A72-38960

THERMODYNAMICS

HT CONDUCTION PHYSICS

Thermodynamics of human body metabolism,
discussing energy conversion calorimeteric
measures, body size, food intake, age, sex,
endocrine and nervous effects
p0268 A72-25072

Thermodynamic analysis of heat of evaporation of
sweat, considering ambient temperature and
humidity effects, body heat storage and presence
of solutes
p0270 A72-26610

Biological structures study, proposing generalized
thermodynamics for dissipative structures role
in living beings functions
p0373 A72-33519

Spectroscopic, kinetic, and thermodynamic analysis
of biological energy conversion mechanisms in
flavin molecular complexes
p0486 A72-29079

THERMOELECTRIC GENERATORS

Thermoelectric and ventilating system designs for
use in protective military clothing
p0391 A72-24139

THERMOCHROMS

U RECORDING INSTRUMENTS

THERMOMETERS

U RECORDING INSTRUMENTS

THERMOMETERS

U THERMODYNAMICS

THERMOMETERS

Electrical thermometer mounted on breathing mask
for electromyographic, measuring respiratory
change in air flow
p0311 A72-12518

Digital thermometer with interchangeable
temperature sensors
p0310 A72-21087

THERMOMETERS

U THERMAL MEASUREMENTS

SUBJECT INDEX

THERMOPLASTICS

Lactate dehydrogenase from an extremely
thermophilic bacillus
p0594 A72-44540

THERMOPLASTIC PLANTS

U SLOTH GREEN ALGAE

THERMOPLASTIC PHYSICAL PROPERTIES

HT ETHEROSITY

HT THERMAL STABILITY

HT VOLATILITY

THERMOPHYSICS

U THERMODYNAMICS

THERMORECEPTORS

Thermoregulatory hypothalamic and body sites for
behavioral temperature regulation in squirrel
monkey
p0050 A72-13072

Temperature sensitivity neurophysiological
mechanism, discussing cold and heat sensitive
receptors localized distribution in human skin
and thermoregulatory function
p0516 A72-42779

THERMOREGULATION

Book on hibernation and hypothalamus covering
central nervous system regulating mechanisms,
biochemical rhythmicity, migration,
thermoregulatory, torpor, human implications, etc
p0033 A72-10169

Ventilatory and metabolic responses of
unanesthetized dogs exposed to various carbon
dioxide concentrations at 2 and 18 C, discussing
oxygen uptake relation to cold
p0223 A72-11954

Human short term thermoregulation
feedback-feedforward control mechanisms, using
hypothalamic temperature as set point
p0223 A72-12036

Skin and hypothalamic temperature effects on human
thermoregulatory responses, developing control
mechanism for peripheral effects on skin sensors
p0224 A72-12081

Heat exposure effect on Sidman avoidance
performance in rats, discussing organism
thermoregulatory capacity disruption and shock
and body temperature regulation
p0341 A72-12525

Central cooling and warming effects of
preoptic/anterior hypothalamic region on
thermoregulatory activity of neuroendocrine,
cardiovascular and neuromuscular systems
p0500 A72-13070

Thermoregulatory hypothalamic and body sites for
behavioral temperature regulation in squirrel
monkey
p0050 A72-13072

Biological tissue heat transport dimensionless
parameters for steady state and transient
analysis of homeotherm thermoregulation
p0064 A72-14684

Heat acclimatization, work habituation and
exercise effects on body thermoregulation,
measuring tympanic temperature, sweat rate and
oxygen intake
p0064 A72-14684

Regulation of sweat secretion on skin surfaces
overlying active and nonactive muscle tissue
during skin or core temperature alterations
p069 A72-15216

Active Na-K transport and passive permeability
temperature adaptation in ground squirrel
erythrocytes
p073 A72-15546

Analytical model for living biological tissue
transient heat transfer, taking into account
conduction, storage, generation, convection and
blood flow effects
p0995 A72-15687

German monograph on analog model of
thermoregulation in human body at rest and at
work, describing heat transfer
p0996 A72-16047

Metabolic control of temperature compensation in
circadian rhythm of Drosophila melanogaster
p157 A72-19538

Thermal stability variations in blood serum
protein after electrical stimulation of rabbit
hypothalamic structures
p0158 A72-19649
THREE DIMENSIONAL MOTION

aorta (AD-739809) p0155 A72-19447
Relative position of the rib within the chest and its determination on living subjects with the aid of a computer program. p0552 A72-41957
Fluid mechanical model for thorax response to air blast and impact shock (AD-740438) p0528 A72-30008
Geometric properties of human ribs and this walled ellipse model for rib cross section (AD-740450) p0525 A72-30093
Clinical and experimental data on treating malfunctions of human thoracic and lumbar back regions (AD-740451) p0526 A72-30094

THREE DIMENSIONAL MOTION

Human body kinematics numerical analysis, obtaining space-time resolution by photogrammetric restitution and electronic data processing of photographic recordings p0646 A72-39086
The measurement of three-dimensional body movements by the use of photogrammetry p0109 A72-17867

THRESHOLD DETECTORS (DOSIMETERS)

Nuclear emulsion and solid track threshold dosimetry for ion spectrum division of heavy relativistic particles in primary cosmic rays (CH-17-71-16) p0426 A72-12166

THRESHOLD LOGIC

Adaptive neural nets of threshold logic units as models of perception and memory in biological systems p0223 A72-23580

THRESHOLD SHIFT

U THRESHOLDS

Determining effective flashing light intensity as function of duration and area at threshold and suprathreshold luminances with different background luminances (AD-728587) p0129 A72-14128
Functional organization of visual cortex in monkeys, discussing monocular and binocular responses, trigger and stimulus abstraction p0005 A72-10467
Psychophysical threshold for succession, tabulating probabilities for correct guesses of stimuli order p0008 A72-10713
Threshold stimulus for visual motion discrimination as function of velocity and luminance p0009 A72-10722
Computer simulation of evoked cortical audio potentials in animals and humans, noting clinical application for hearing threshold measurements p0116 A72-11230
Directional bearing perception threshold in normal and auditory-defective patients, studying front and median planes for rising and falling noise frequencies p0120 A72-11740
Retinal annulus onset and offset thresholds, discussing neuronal delays characteristics p0230 A72-12848
Human centrifuge tests for semicircular canal gyroscopic stimulation during sensory deprivation, discussing angular acceleration detection thresholds p0266 A72-14865
Phenomenal and animistic effects on subthreshold sound perception and adrnocerebral excitability of unstable subjects under emotional stress p0073 A72-15586
Retinal cell adaptation as result of membrane response range saturation, considering dark adaptation and increment threshold p0106 A72-17604
Pilot and nonpilot vestibular sensitivity to rotation, determining oculogyral illusion and rotation perception thresholds p0109 A72-17867
HUMAN dark adaptometric visual threshold recovery and electrotetrograms in response to double light flashes, using Fourier analysis of oscillatory potentials p0149 A72-19028
Flicker and flash threshold experiments, discussing flicker cut-off frequency and flash duration relations and visual sensitivity p0149 A72-19028
Moving target resolution threshold in retina, discussing visual acuity relation to target angular velocity during ocular pursuit p0149 A72-19029
Dark adaptation with logarithmically time decreasing background luminance, noting threshold, time lag variation with rate of background change p0158 A72-19827
Achromatic and chromatic thresholds during dark adaptation against varying background luminances, noting trend change at transition from cone to rod function p0158 A72-19828
Spectral response and vision thresholds of human eye for light detection and color sensation p0177 A72-21332
Rod-cone interaction in human scotopic vision, presenting test flash threshold as function of conditioning flash interval p0177 A72-21460
Cat retina ganglion cell threshold and latent responses to separate stimulation of receptive field central and periphery p0177 A72-21474
Light variation threshold amounts for flicker and flickering pattern detection as function of variation frequency p0215 A72-22615
Average evoked potentials correlates of two flash perceptual discrimination in cats, discussing parallel changes as function of interflash intervals and peripheral level p0263 A72-25178
Olfactory receptor models sensitivity, discussing threshold dependence on adsorbed odoriferous agent amount and exposure time p0269 A72-26453
Geomagnetic field perturbation biological effects, studying geomagnetic storms field energy levels and magnetic flux variables relation to human sensitivity thresholds p0269 A72-26210
Semicircular canal function correlation to thresholds, aftereffects and power functions in pilot vestibular tests p0291 A72-28259
High threshold afferents role in dorsal surface potential formation in cat spinal cord p0329 A72-29327
Illumination intensity effects on circadian periodicity and behavioral thresholds in Rhana monkeys, demonstrating exception to off rate p0331 A72-29844
Microwave induced cutaneous heat and pain perception thresholds, noting usefulness as possible radiation hazard warning p0363 A72-31506
Lateral inhibition in auditory perception proved by psychophysical study of nervous activity stimuli patterns, noting erroneous measurement of pure tone masked threshold p0378 A72-33970
Peripheral contrast, thresholds for moving images p0418 A72-35688
An analytical description of the line element in the zone-focusing model of colour vision, II p0426 A72-35698
Optokinetic thresholds in the normal monkey p0426 A72-35610
Novelty, recency and frequency effects on visual recognition and pseudo-perception p0427 A72-35909
Visual Field Analyzer presentation of single and multiple stimuli for differential threshold levels investigation, discussing eccentricity, spatial orientation and supraliminal stimuli effects p0451 A72-37831
Calculating the perceived level of light and sound p0454 A72-38567
Threshold excitation, temporal summation, and impulse response function in the retina of the cat - Temporal receptive fields of retinal ganglion cells.

Spatial interaction with different-diameter stimuli in the basis of threshold, luminance, or total luminous flux.

Russian book - Neurophysiological background on tactile perception.

Threshold discrimination model for focal viewing by human observers using naked eye.

Discrimination sensitivity and black light density in the mesopic range.

The detectability of a brief gap in a pulse of light as a function of its temporal location within the pulse.

Threshold mechanisms for achromatic and chromatic vision.

olfactory perception neurophysiological mechanism, discussing receptor cells sensory thresholds and time, temperature, and humidity effects.

Taste organs neurophysiological structure and functioning, considering stimuli and exposure parameters effects on perception thresholds.

Roving spot detection threshold measurement for varying exposures, noting product of stimulus duration and velocity for comparison with block law.

Motion thresholds for foveal and peripheral retina with/without correction for peripheral refractive error.

Information aspects in visual perimetry, obtaining memory required for control computer in automated perimetry.

Line length detectors in the human visual system - Evidence from selective adaptation.

Visual sensitivity measurement in retinal areas with stepwise change from one monochromatic light to another, discussing eye movements effects and perception thresholds.

Effects on threshold luminous intensity and display visibility in aircraft cockpits.

Threshold values for spatial vision and distance perception of light crew.

Flash perception period measurements for determining human visual thresholds.

Visual displays of radar, and other weapon system devices providing signals varying in brightness discrimination thresholds.

Comparison of serial audiograms measured by three threshold procedures.

Physiological potential shifts in chinchillas exposed to noise stressers of 500 Hz and 95 DB.

Auditory loss and recuperation of guinea pigs using sonic booms H-wave.

Glucose via auditory loss and recuperation after rectangular shock wave exposure.

Monovalent K and Na' and bivalent Ca and Mg plasma ion ratio effect on thrombocyte electrokinetic potential.

Interactions between gas bubbles and components of the blood - Implications in decompression sickness.

THROMBOPLASTIN
Blood coagulation behavior in rats under fall induced intense trauma, attributing phenomenon to increase in extrinsic thromboplastin from damaged tissue.

THUNDERSTORMS
Gas dynamics and chemistry of lightning-produced shock waves /thunder/ is postulated primalard reducing atmosphere, noting amino acid production.

THYROID
Prebiotic thymidine phosphorylation at 65 C by area-phosphate mixtures in simulated desert conditions.

THYROID GLAND
Thyroid glands iodine concentrations, blood proteins and morphological changes in rats with acute hypoxic hypoxia and pulmonary edema.

Lipid metabolism abnormalities relation to hypothyroidism leading to atherosclerosis, noting thyroid parathyroid atrophy from autoimmune thyroiditis.

Propranolol as adrenergic beta receptor inhibiting agent for hyperthyroidism symptom amelioration.

Bed rent and centrefixing effects on human plasma thyroid hormone level, discussing total protein, albumin and thyroid binding globulin concentrations.

Neuroendocrine responses in microwave radiation exposed rats, correlating thyroid and thyrotropic activity.

Epithelial follicle and mast cell role in peroxidase activity of thyroid gland during experimental burn development.

Dog thyroid gland structural changes under repeated radial acceleration, noting atrophic process and autonomous reactions role.

Enzyme activity and ascorbic acid concentration as index of rat thyroid gland tissue functional activity during hyperthermia.

Thyroid influence on myocardial changes induced by simulated high altitude.

Protein synthesis in the cell-free system of the human thyroid gland.

Thyroglobulin content and variations in the human thyroid gland tissue functional index of rat thyroid gland tissue during hyperthermia.

Role of the thyrotropic region of the hypothalamus in the adaptation activity of the organism.

Changes in blood serum proteins under the effect of hyperoxia in intact rats with thyroid gland dysfunction.

Changes in the pituitary-thyroid and in the thyrotropic-gonad systems under conditions of functional loading and of physiological immobilization.

Existence of hypocalcemic factor in human thyroid.

THYROTROPHIN
Mitotic duration and autolitic activity diurnal rhythm in cephalopod epithelium of rats given thyroxine.

Inhibitive effect of immobilization on urinary catecholamine excretion and blood plasma thyroxine level in rats.

THYROIDITIS
Anatomy, pathology, otolgy, diagnosis and therapy of posterior Tibial nerve compression lesion, discussing tarsal tunnel syndrome.
TILT ATTITUDE (INCLINATION)
TILTING U ATTITUDE (INCLINATION)
TILT MET CHRONAXY
TILT REACTION TIME
TILT TIME CONSTANT
TILT PERCEPTUAL TIME CONSTANT
System distortion error characteristics for
TILT Models of neurons reacting to input signal
TILT Temporal relation of the second heart sound to
toxic flow in various conditions.
TILT Oxygen uptake kinetics for various intensities of
TILT constant-load work.
TILT Altitude limit as function of acceleration time
TILT length for investigation of enhanced resistance
to acute hypoxia in rats.
TILT Operator visual perception capacity under time
deficit conditions in spacecraft.
TILT Time history display effects on auditory and
tTILT visual perception
TILT SYSTEM DISCRIMINATION
TILT Soviet book on astronaut activity psychological
TILT features covering space flight living
TILT conditions, space and time perception
TILT psychophysiological mechanism changes and
TILT weightlessness effects.
TILT Non-monotonicity of temporal recognition of brief
tTILT duration.
TILT Psychometric test for auditory stimulus duration
difference estimation, noting Weber fraction for
temporal gaps under condition.
TILT TILT LAG
TILT Temporal relation of the second heart sound to
TILT toxic flow in various conditions.
TILT Time history display effects on auditory and
TILT visual perception
TILT SUBJECT INDEX
TILT Evolutionary clock - Nonconstancy of rate in
different species.
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toxic flow in various conditions.
TILT Oxygen uptake kinetics for various intensities of
TILT constant-load work.
TILT Altitude limit as function of acceleration time
TILT length for investigation of enhanced resistance
to acute hypoxia in rats.
TILT Operator visual perception capacity under time
deficit conditions in spacecraft.
TILT Time history display effects on auditory and
TILT visual perception
TILT SYSTEM DISCRIMINATION
TILT Soviet book on astronaut activity psychological
TILT features covering space flight living
TILT conditions, space and time perception
TILT psychophysiological mechanism changes and
TILT weightlessness effects.
TILT Non-monotonicity of temporal recognition of brief
tTILT duration.
TILT Psychometric test for auditory stimulus duration
difference estimation, noting Weber fraction for
temporal gaps under condition.
TILT TILT LAG
TILT Temporal relation of the second heart sound to
TILT toxic flow in various conditions.
TILT Time history display effects on auditory and
TILT visual perception
TILT SUBJECT INDEX
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TIRE SIGNALS

TIRE RESPONSE

TIRE SIGNS

TISSUES (BIOLOGY)

TIRE RESPONSE

TIRE SIGNALS

TISSUES (BIOLOGY)
TITANIUM

Calcium metabolism conditions in calcified tissues of rats during a lasting hypodynamia and
thyrocalcitonin administration

Cortico-visceral studies of spinal cord reticular formation stimulation and destruction effects on
electrocerebrogramus, cardiac activity and
interceptive glyceric reflexes

Local necrosis, parasympathetic innervation and
vascularization of rabbit liver tissue under
pulsed and continuous laser beams

Control of the circulating blood mass in the case of a functional detachment of various amounts of
pulmonary tissue

Lyosomal enzymes of eye tissues during the action of
hydrocortisone

Mechanism of adaptation to hypoxic hypoxia

The state of water in muscle tissue as determined
by protons nuclear magnetic resonance.

Hypokinetik effect on synthesis of tissue proteins
in rats

Polarization measurements and optical model for
anisotropic areas in eye tissue

Ophthalmoscopical photograph of eye structure using
polarized light and diagnostic applications

Monte Carlo calculations of neutron and proton
dosage and transport depths in tissue phantoms

Proton penetration calculations for tissues of
astronauts in simulated spacecraft environment
bombarded by solar flares and radiation belt
protons

Development of microdosimeter to determine energy
deposition in small tissue region during
exposure to space radiation

Increased density and reticular fiber formation in
rat spleen as compensatory reaction to
acceleration training

Relative biological effects of heavy cosmic ray
ions on living tissue

Disk scintillation calculation of absorbed dose
rates from electron beams in tissue phantom

Biodynamic modelling of mechanical properties of
skin and soft tissues

Dosimetric techniques for calculating microwave
energy absorption in animal tissues

Tissue equivalent human phantoms used to measure
radiation dose rate of prototypic platingon
circulatory support heat sources

TITANIUM

Ti leafing from granitic rocks by Penicilium,
simplicissum, discussing extraterrestrial life
detection

TOBACCO

Tobacco tissue cultures with Apollo 12 lunar
material, determining endogenous steroids and
Tryptic acids concentrations by gas chromatography
and mass spectrometry

Apollo 12 material effect on tobacco tissue
cultures, noting pigment increase

Smoking effects on passenger health in transport
aircraft

In vivo beasosy due to hyperoxia - Role of #202
accumulation

TOLERANCES (RHETORIC)

BT IMPACT TOLERANCES

TOLERANCES (PHYSIOLOGY)

BT ACCELERATION TOLERANCE

BT ALTITUDE TOLERANCE

BT COLD TOLERANCE

BT HEAT TOLERANCE

BT HUMAN TOLERANCES

BT RADIATION TOLERANCE

Acceleration force simulation for altered weight
effect on animal tolerance to restraint,
discussing body mass loss, reduced lymphocyte
count and disorientation

Chinsilla and guinea pig tolerances to hyperoxia
and hypoxia in pressure chamber tests,
suggesting relation to red blood cell size and
number

Organism response to extreme overload factors,
discussing centrifuging and vibration stresses
effects on mean swining time and
post-irradiation survival time in mice

Increased tolerance of leukemic mice to arabinosyl
cytosine with schedule adjusted to circadian
system

Altitude limit as function of acclimatization time
length for investigation of enhanced resistance
to acute hyperoxia in rats

Pathology in animals exposed to high
concentrations of carbon monoxide for six months

Biological effects of daily low concentration
monooxygenhydrogen exposure on dogs, monkeys,
rats, and mice

Tolerance and death in albino mice due to various
toxic oxygen levels

Biochemicals in motor skeletal structure and
determination of tolerances to external forces

TORSO

U PITCH

TOUBEBITY

P INTRAVASCULAR PRESSURE

U PRESSURE MEASUREMENTS

TORSO

U MUSCULAR TORSO

TOOTH DISEASES

Functional diagnostics of teeth condition as pilot
health factor in stomatological aviation
medicine, discussing caries, paradentosis and
daerodentalia

Process for preparing calcium phosphate salts for
tooth repair

TOPOGRAPHY

Analyses of effects of topography on housing
ability of pigeons as determined by ground
release and helicopter tracking

TOREX

Restraining tors or increased mobility and reduced
physiological effects while wearing pressurized
suit

TOUCH

BT TACTILE DISCRIMINATION

Effectiveness of tactile warning system under
varying gravity loads and flight conditions

Prosthetic device with sensitive means for detecting
tactile stimuli

Measuring method for cutaneous perception using
instrument with elongated tubular housing

Parschating and aerial towing physiological and
force data F # telemetry for biomedical response
assessment leading to human engineered equipment
improvement and aiden retrieval system

development

TOWED TARGETS

U TOWED BODIES

A-418
TOXIC DISEASES

Toxicological evaluation of some synthetic contaminants of cabin and hazard to pilots, discussing concentrations, avoidance, control and analysis

p0165 AT72-20267

Toxic hazards associated with handling and exposure to oxygen difluoride

(Ad-727525) p0035 AT72-10082

Analysis of toxicity of various organic chemicals and development of safety measures for human subjects

[Hasa-CH-12635] p0087 AT72-11060

Toxic effect of carbon dioxide breathing on human body

p0121 AT72-14070

Suit for personnel handling liquid rocket propellants for protection from chlorine trifluoride and elemental fluorine

[Ad-731556] p0310 AT72-20115

Biological implications of Fe accumulation in man and his environment

(p-Dc-13040) p0337 AT72-21075

Analysis of behavior of aerosols in high pressure helium-oxygen environment and removal of harmful aerosols from environment

(Ad-735960) p0357 AT72-21075

Cholinesterase assay using paroxysmal blood of an aerial applicant personnel

[Hasa-Am-72-12] p0438 AT72-27080

Toxic effects of volatile components from synthetic materials used in closed ecological systems

p0481 AT72-29055

Toxicology and flammability hazards of insecticide vapor in aircraft cabin environment

[Yes-70-601-120A] p0521 AT72-30061


TOXICITY

HT CARBON MONOXIDE POISONING

Potassium cyanide effect on phospholipid exchange in rat liver lysosomes and development of safety measures for human subjects

[Hasa-Am-72-3812] p0310 AT72-16357

Abdominal injected barbaryl noninfectious and toxic effect on mice subjected to hypokinesia and isolation

p0101 AT72-16650

Synthetic carbohydrates toxicity effects on rat liver lysosomes application to astronaut potential food sources

p0335 AT72-30381

Pathology in animals exposed to high concentrations of carbon monoxide for six months

(Ad-727505) p0036 AT72-10081

Toxic hazards associated with handling and exposure to oxygen difluoride

(Ad-727525) p0035 AT72-10082

Toxicity of carbon monoxide in confined environment under high pressure

(Ad-727508) p0035 AT72-10085

Biological effects of short term and continuous exposure of humans to low concentrations of CO

(Ad-727507) p0035 AT72-10087

Effects of low CO concentrations on learned behavior patterns in human subjects

(fAd-727510) p0036 AT72-10088

Effects of carbon monoxide on coronary hemodynamics and left ventricular function in conscious dog

(fAd-727511) p0036 AT72-10089

Automated analysis of time lapse photographic data of unrestricted laboratory animals during spacecraft cabin toxicology experiments

(Ad-727516) p0036 AT72-10090

Air sampling process for determining hazards from radioactive or toxic aerosol inhalation


TRACK CONTAMINANTS

Spacecraft atmosphere trace contaminant sensor system using mass spectrometric analysis of contaminants concentrated on sorbents in monitor inlet system


Using lithium as chemical tracer; is urine for providing means for indirect determination of total urine volume by atomic absorption spectrophotometry

[Hasa-CH-115262] p0081 AT72-12025


SUBJECT INDEX

TOXICITY

Effects of inhalation of Freon 113 on laboratory animals

[Hasa-TM-17-64611] p0087 AT72-13050

Analysis of toxicity of various organic chemicals and development of safety measures for human subjects

[Hasa-Ch-12635] p0087 AT72-13060

Hypotension determination in dogs during bromotrifluoromethane exposure

(Ad-731548) p0202 AT72-18088

Comparison of effect produced on animals by titanium boride, zirconium boride and chromium boride with amorphous boron and metallic compounds of these borides

[Hasa-Tt-7-14255] p0350 AT72-22078

Toxicological evaluation of synthetic carbohydrates in liver lysosomes of white rats

p0281 AT72-24102

Effects on animals of continuous exposure to dichloromethane vapors

[Hasa-CH-127658] p0469 AT72-20051

Acute toxicity of HCl vapor and HCl aerosol tested on rats and mice

p0259 AT72-33084

TOXICITY AND SAFETY HAZARD

Russian book on powdered metals toxicity covering industrial dust, physiological effects, safety standards, electron configurations and crystalline structure

p0261 AT72-26067

Intoxicating liquor and the general aviation pilot in 1971.

p0558 AT72-05662

Acute toxicity of brief exposures to HCl, NO2, and HCN singly and in combination with CO which constitute some products produced in aircraft fires

[Hasa-Am-71-44] p0087 AT72-13061

Evaluation of contact toxicity and toxicity of thermal degradation products of nonflammable materials used in spacecraft structures

p0196 AT72-16435

TOXICOLOGY

Toxicological control and chemical analysis of outgassing products from nonmetals in high temperature oxygen atmosphere, investigating use within 18 crew compartment

p009 AT72-10771

Insecticide dichlorvos vapor toxicity in aircraft cabin atmosphere at 8000 ft, studying plasma cholinesterase activity, erythrocytes, dark adaptation and bronchiolar resistance

p0142 AT72-31082

A note on the biological activity of the noble gas compound xenon trioxide

p0312 AT72-36444

Biological effects of daily low concentration monomethylhydrazine exposure on dogs, monkeys, rats, and mice

[Ad-727526] p0035 AT72-10063

Permeation tubing as calibrated sources of gas in toxicological studies

[Ad-727516] p0036 AT72-10091

Guides for short term human exposure to air pollution

[Ps-195904] p0036 AT72-10092

Toxicological data and human response to short term exposure to nitrogen oxides

[Ps-195903] p0037 AT72-10093

Toxicological characteristics of artificial atmosphere of closed ecological systems in spacecraft and submarines

[Ps-195904] p0085 AT72-12058

Effects of toxic methyl isobutyl ketone vapor on physiological processes in dogs, monkeys, and rats during 90 day continuous exposure

[Hasa-Ch-126784] p0040 AT72-25102

TRACK CONTAMINANTS

Spacecraft atmosphere trace contaminant sensor system using mass spectrometric analysis of contaminants concentrated on sorbents in monitor inlet system


Using lithium as chemical tracer; is urine for providing means for indirect determination of total urine volume by atomic absorption spectrophotometry

[Hasa-Ch-115262] p0081 AT72-12025
Spacecraft trace contaminant control system with presorbers and post sorbers for catalytic oxidizer [NASA CR-2027] p0435 A72-26079

Extraction of microelements in human food rations and excreta p0678 A72-12004

Ideal tracer theory for transfer of chemical species through various membranes [NBL-50293] p0158 A72-17038

Potential health hazards due to ingestion of garden vegetables contaminated by arsenic, cadmium, lead, and zinc p0719 A72-19390

Simulated sonic boom effect on tracking performance and autonomic response, noting heart rates, skin conductance and startle reflex p0109 A72-17868

Pilot glide slope and localizer tracking performance during successive in-flight simulated ILS approaches p0291 A72-28260

Manual tracking control with continuously variable selective control gain in response to system state, noting intuitive optimization p0504 A72-41025

Influence of stick efficiency on tracking error applying two slightly different control elements, p0504 A72-41029

Development of semiautomatic tracking concepts and control of complex systems [AD-730193] p0312 A72-14135

Pilot tracking and scanning performance and strategy alteration for two tracking situations [AD-730156] p0319 A72-15083

Static and dynamic tests of human tracking efficiency after alcohol ingestion [AD-729679] p0314 A72-15111

Six display formats used by three instrument-rated pilots to regulate against random disturbances for precision tracking [AD-731580] p0248 A72-18125

Human performance on tracking tasks under divided attention demands [AD-735762] p0359 A72-23098

Application of statistical analysis techniques for determining orientation and navigation characteristics of animals p0396 A72-25066

Human operator errors in performing audio-video and audio-only tracking tasks p0435 A72-26078

Reliability of complex tracking task performed concurrently with other tasks or tracking alone condition [YAA-M-72-21] p0642 A72-27105

Effects of hypoxic stress on tracking performance by human operators [AD-740668] p0604 A72-29078

Effect of preview on pilot describing functions in simple tracking task [TATIA-74-176] p0534 A72-31120

Effect of isoniazid on psychomotor performance of aviator instructors [AD-720821] p0564 A72-32120

Human resources data included in engineering trade studies [AD-732011] p0206 A72-17089

Dynamics of secondary vacuole movement within cytoplasm of Tradescantia virginiana hair cells p0367 A72-32350

Influence of temperature shocks on seed formation after irradiation of pollen from Tradescantia paludosa p0455 A72-38642

Traffic control

Traffic control

TRADEUNTS

A-420
Echocardioqraphic determination of left ventricular function by a medical monitoring system for enclosed men, noting angular and dental effects of decompression sickness.

Precordial monitoring for pulmonary embolism by a Doppler ultrasound transducer monitoring of flow velocity measurement by Doppler ultrasound flowmeter for instantaneous observation of atmospheric composition and pressure, surface temperature and features and UV radiation.

Echocardioqraphy in the diagnosis of congenital mitral stenosis and in evaluation of the results of mitral valveotomy.

Unilateral auditory cortex electrical responses to ultrasonic stimuli, determining maximum power density spectrum and functionality of mammalian cells cultured in vitro.

Lipid peroxidation on the human skin surface following UV-ultraviolet exposure on photokeratitis and ocular damage in humans, rabbits, and primates.

Echocardioqraphy in the diagnosis of congenital mitral stenosis and in evaluation of the results of mitral valveotomy.

Decompression-caused gas bubbles in rat thigh and the influence of atherosclerotic risk factors.

Light-sensitive mutants photorecovery capacity following irradiation.

Survival data for Bacillus subtilis spores and microorganisms in simulated space portal xenon flux and vacuum.

Calcification program to improve operation of self-contained underwater breathing apparatus.

Heart rate, sex, and normal aging effects on atrial vein leaflet movement in healthy subjects.

Ultrasound Doppler method for monitoring biomechanical processes of cardiac activity in enclosed men.

Olfactory stimuli and ultrasonic signal methods for individual recognition between mother and infant brown bats.

Blue green algae cyanostig midulans UV light-sensitive mutants photosensory capacity following irradiation.

Observations of atmospheric composition and pressure, surface temperature and features and UV radiation.

Effect of continuous ultraviolet exposure on photokeratitis and ocular damage in humans, rabbits, and primates.

Ultrasonic Doppler technique for monitoring movement by Doppler ultrasound flowmeter for instantaneous observation of atmospheric composition and pressure, surface temperature and features and UV radiation.

Ultrasonic Doppler-cardioqraphy for heart rate and decompression bubbles.

Ultrasonic Doppler technique for monitoring movement by Doppler ultrasound flowmeter for instantaneous observation of atmospheric composition and pressure, surface temperature and features and UV radiation.

Ultrasonic Doppler technique for monitoring movement by Doppler ultrasound flowmeter for instantaneous observation of atmospheric composition and pressure, surface temperature and features and UV radiation.

Ultrasonic Doppler technique for monitoring movement by Doppler ultrasound flowmeter for instantaneous observation of atmospheric composition and pressure, surface temperature and features and UV radiation.

Echocardioqraphy in the diagnosis of congenital mitral stenosis and in evaluation of the results of mitral valveotomy.

Determination of the sensitivity and frequency range of the ultrasonic transducer monitoring of decompression sickness symptoms.

Changes of the atrial echocardiograms with aging and the influence of atherosclerotic risk factors.

Ultrasonic Doppler technique for monitoring movement by Doppler ultrasound flowmeter for instantaneous observation of atmospheric composition and pressure, surface temperature and features and UV radiation.
**UNDERWATER COMMUNICATION**

Biotelemetry system for EKG monitoring of free swimming diver at 15 meter depth, discussing power requirements, antenna design and signal attenuation  
| p0282 A72-27478 |

Anatomical function of spermatoceti organ in sperm whales  
| p0398 N72-25087 |

**UNDERWATER ENGINEERING**

Device for regulating and monitoring pneumatic pressure in underwater space suit  
| p0403 N72-25124 |

Development of deep sea diving technology  
| p0441 N72-27100 |

**UNDERWATER EXPOSIONS**

Lethal head injuries to man swimming underwater caused by detonation of firecracker  
| p0257 N72-19135 |

**UNDERWATER OPTICS**

**UNDERWATER SOUND**

**UNDERWATER ACOUSTICS**

**UNDERWATER TESTS**

Underwater tests of instrumnet system for combined skin temperature and direct heat flow measurement in thermally stressful environments  
| p0100 A72-28334 |

Environmental, medical and acoustic investigations with underwater laboratory, discussing cabin atmosphere control, deecompression, health conditions and sonar operation  
| p0465 A72-19939 |

Physiological and psychological tests to determine effects of isolation during long periods in underwater shelters during Tektite project  
| [NASA-CS-123496] |

Estimating absolute distance underwater, and improvement of visual judgement accuracy by training  
| [AD-734125] |

Pressure regulator for space suit worn underwater to simulate space environment for testing and experimentation  
| [NASA-CS-12332] |

| p0306 N72-20097 |

**UNDERWATER VEHICLES**

**SUBMARINES**

Environmental, medical and acoustic investigations with underwater laboratory, discussing cabin atmosphere control, decompression, health conditions and sonar operation  
| p0465 A72-19939 |

Daily behavior of ten aquanaut teams in underwater habitat and correlation analysis  
| [AD-733413] |

| p0263 N72-19177 |

**UNIDENTIFIED FLYING OBJECTS**

UFO sighting case history and analysis, discussing light perception on collision course during night instrument flight  
| p0216 A72-22646 |

**UNITED NATIONS**

**UNITED STATES OF AMERICA**

**UTARL CAIIFORNIA**

**FLORIDA**

**UNIVERSITIES**

Problem areas defined for university research in astronaut life support systems involving extravehicular guidance and stabilization  
| [NASA-CS-1919] |

| p0261 N72-19168 |

**UNIVERSITY PROGRAM**

University-generated designs for spacecraft electric power supplies  
| [NASA-CS-2061] |

| p0405 N72-25144 |

**UNREVEALED D'S**

**PROBLEM SOLVING**

**UNREVEALED SPACECRAFT**

**ST MICHAELITES**

**ST JUPITER PROBES**

**ST MARS PROBES**

**ST TOND SPACE PROBES**

**UNSTEADY FLOW**

Fluid mechanics of blood pulsatile flow in microcirculation, considering plasma layer nature and transcapillary mass transfer  
| p0160 A72-20087 |

**UNSTEADY STATE**

Solar activity effects on biospheric processes for biological and physicochemical systems in unsteady state, considering effects on man at certain electromagnetic wave frequencies  
| p0289 A72-28211 |

**URANIUM 235**

Exposure rates from experimentally fractionated fission products of U-235  
| p0161 N72-17054 |

**URBAN TRANSPORTATION**

Social survey of annoyance caused by aircraft and road traffic noise  
| [27-7204] |

| p0436 N72-26082 |

**URIC ACID**

Uric acid to urea nitrogen ratio as assay test for identification of avian tissue in verifying bird ingestion or impact as aircraft accident cause  
| [AD-737855] |

| p0163 A72-20184 |

Hyperuricemia, qout and lithiasis among operating air crews, discussing diagnosis and relation to arteriosclerosis  
| p0176 A72-21271 |

**URINARY**

Confinement, physical deconditioning and hypercapnia effects on human musculoskeletal protein by chromatographic method for quantitation urinary peptides and free amino acids  
| [AD-736665] |

| p0109 A72-17869 |

Inhibitive effect of immobilization on urinary catecholamine excretion and blood plasma thyroxine level in rats  
| p0216 A72-22648 |

Food deprivation stress effects on urinary excretion values in unrestrained chimpanzees  
| p0231 A72-24822 |

Paraschutist biomedical responses in aerial tow at 110-175 knots, determining heart and respiration rates and urinary catecholamines  
| p0292 A72-28272 |

Beat, noise and vibration stress combined effects on skin and rectal temperature, heart rate, weight loss and biochemical urinalsysis  
| [AD-746038] |

| p0410 A72-34551 |

Specifications and engineering model of urine sampling and collection system for saaled space flights  
| [NASA-CS-115507] |

| p0310 N72-20109 |

**URINATION**

Isolation stress effect on micturition circadian rhythms and diuresis occurrence in unrestrained chimpanzee under entrained and free running conditions  
| [AD-739668] |

| p0163 A72-20180 |

Interrelation of interoceptors and exteroceptors in the process of urination and defecation  
| [AD-739668] |

Reflex act maturation in ontogeny  
| [AD-739668] |

| p0416 A72-35022 |

Open type urine receptacle with tubular housing  
| [NASA-CS-1232-1] |

| p0353 N72-22093 |

Partially purified thyrocaltcinase causing increased urinary sodium and chloride excretion in men  
| [NASA-TP-F-14356] |

| p0470 N72-28054 |

Zero-gravity open type urine receptacle for Apollo command module  
| [NASA-TP-50085] |

| p0476 N72-28095 |

**URINARY**

Ground and flying activity endurance training effect on urinary excretion of noradrenaline and dopamine  
| [AD-739668] |

| p0064 A72-14866 |

Immobilization hypercalciuria, discussing treatment by diet-induced extracellular volume depletion and possible pathophysiological mechanisms of intercompartmental fluid and
Correlation between stress and urinary levels of bacteria detection of urine using bioluminescent radiation damage in mammals and humans indicated determination of bacterial ATP as measure of nonspecific placental extracts introduced into biodiagnostic technique for determining erythropoietic changes in fish and rats caused by measurement of radionuclide content in feces and using lithium as chemical tracer in urine for unconjugated urinary corticosterone excretion in nitroglycerin excretion as a measure of protein byperbaric environment decompression effects on urea determination in urine and vater wastes for sleep deprivation effect on circadian rhythms in determinations in acclimatized and unacclimatized men before, during and after high altitude ascent sleep deprivation effect on circadian rhythms in human performance, psychological fatigue ratings, catecholamine excretion and urine flow urea determination in urine and water wastes for recycling process, using N-disethylaminoisoazobenzene colorimetric method hyperbaric environment decompression effects on human blood and urine chemistry and homeostatic system, showing physiological parameter alteration in presence and absence of beads symptoms nitroglycerin excretion as a measure of protein metabolism in man under different conditions of renal function. unconjugated urinary corticosterone excretion in laboratory rats exposed to high pressure helium-oxygen environments. determination of bacterial ATP as measure of urinary tract infection using aurantic bioluminescent assay technique using lithium as chemical tracer in urine for providing means for indirect determination of total urine volume by atomic absorption spectrophotometry measurement of radionuclide content in feces and urine of Apollo 12 and 13 astronauts. determining radiation exposure of astronauts by analysis of urine salts and raw feces in gamma ray spectrometers erythropoietic changes in fish and rats caused by water regenerated from human urine correlation between stress and urinary levels of 17 ketogenic steroids and sodium-potassium ratio during 90 day manned test. radiation damage in mammals and humans indicated by biochemical changes in blood and urine. specifications and engineering model of urine pumping and collection system for manned space flights. radiochemical technique for determining radionuclides present in urine and feces of Apollo 15 astronauts. hypercalciemia, gout and lithiasis among operating air crews, discussing diagnosis and relation to arteriosclerosis. space medical urological problems from experience with Biosatellite 3 monkey, discussing closed catheter conduit system, urinary calcium changes in immobilized animals and urinary diuresis. non-specific placental extracts introduced into pregnant and non-pregnant women for studying repeated spontaneous abortions. service life of respirator cartridges in organic vapor atmospheres. Acute toxicity of HCl vapor and HCl aerosol tested on rats and mice.
Physical exercise effects on rat skeletal muscle vasculization in the course of osteomy.

VASCULARIZATION

Antinatriuretic effect of acute thoracic and abdominal inferior vena cava constriction on arterial pressure, renal hemodynamics and electrolyte excretion

Cardiac output and autonomic nervous system role in antinatriuretic response to acute thoracic superior vena cava constriction

Spinal mesenteric vascular reflexes of vasomotor constriction effect of pressure drop in coeliac artery relation to renal nutritional hepatic reflex

Splanchnic vasorestriction in hyperthermic man independent of falling blood pressure

Carbon monoxide induced hypoxia inhibition of reflex vasorestriction in man in presence of normal arterial oxygen tension

Stretch activation of myogenic oscillation of isolated contractile structures of heart muscle in ATP salt solution

Sympathetic response in human skin nerves with accompanying vasomotor reactions induced by emotional, thermal and respiratory stimuli

Acceleration stress effects on splanchnic blood flow due to orinal displacement and neurogenic vasorestriction in vascular beds

Vasomotor reflexes in lower extremities and sympathetic nerve stimulation.

VASOCOMPRESSIVE DRUGS

Autonomic blockade effects on refiex bradycardia due to phenylephrine induced arterial pressure in man during rest and supine exercise

Vasoconstriction

Distribuability and stress relaxation characteristics of capacitance and resistance vessels of isolated rabbit ear as function of vascular tone

Intravascular pressure and extravascular structure effects on radial and longitudinal distribuability of arterial microvessels in dog mesentery

Subarachnoid hemorrhage secondary to ruptured intracranial aneurysm

Thermoregulation changes during simulated weightlessness of prolonged bed rest, noting lower sweating threshold and decreased vasodilation /autonomic dysfuncti

Vasomotor reflexes and the principle of descending control

Unresponsiveness of pial precapillary vessels to catecholamines and sympathetic nerve stimulation.

VASCULAR SYSTEM

Coronary blood flow measurement in various hemodynamic conditions by aron technique, determining oxygen consumption and coronary vascular resistance

Cerebral vascular disorder biochemical analysis, noting retinal vascular change relation to coronary arteriosclerosis and anemia and flight stress effect on serum lipid and cholesterol

Splanchnic vascular bed role in basal blood pressure regulation from lower body negative pressure tests, measuring blood flow from hepatic dye removal rates

Two stage description of middle germ layer chronic polycythemia, noting heart muscle and vascular wall tissues necrosis

Respiratory and vasomotor autonomic centers functional state relation to vestibular system from labyrinth electorial stimulation and shaling experiments

Vasoressin /antidiuretic hormone/ role in central vascular volume and fluid balance maintenance during continuous positive pressure breathing in dogs

Venous responses to stimulation of carotid chemoreceptors by hypoxia and hypercapnia

Role of the autonomic nervous system in the hypoxic response of the pulmonary vascular bed

Intravascular injection and histology studies of human embryonic and fetal choroidal vasculature development

Optical vascular pressure measurements with transducers located outside body with rigid and elastic tube couplings

Vascular headache of acute mountain sickness

Carotid rete role in brain protection against extreme elevations of systemic blood pressure, presentation goat cerebral blood flow measurement procedure

Morphology of cerebral vascular system of dogs subjected to transverse acceleration

Hyperbaric air and cornel vasculization caused by hypoxia

Morphological effects of space flight environment on vascular, muscular, and nervous biological systems

Space flight stress effects on human vascular system anatomy

Morphological effects of gravitationnal forces on animal microcirculatory system

Hypotension, hypokinesia and subsequent hypergravitation effects on vascular system of rabbit knee joint capsule
VEGETABLES

QRS amplitude relation to frontal QRS axis and heart-electrode distance, using 12-lead ECG

p0003 A72-10148

Electrophysiological responses to maximum exercise in healthy humans from polycardiographic display of heart vector changes

p0055 A72-13881

Coronary artery disease and vessel involvement: severity predictions from electrocardiographic and vectorcardiographic patterns of anterior wall myocardial infarction

p0184 A72-18891

ECG and VCG in diagnosis of myocardial infarction and QRS changes

p0162 A72-20174

Diurnal and beat-to-beat variation factors in vectorcardiograms, noting respiratory movements, electrode location shift, skin-electrode impedance and heart electrical center mobility

p0182 A72-21849

Vectorcardiographic and ECG diagnosis of left anterior hemiblock combined with complete right bundle branch block, discussing coexisting myocardial infarction influence

p0182 A72-21850

Gabor-Nelson myocardial electrical activity model for mathematical construction of vectorcardiogram from ECG for comparison of various lead systems

p0273 A72-26629

Stress vectorcardiography quantitative analysis of ECG response to treadmill exercise test to establish diagnosis criteria for coronary heart disease

p0293 A72-28282

Computerized measurement and analysis of day-to-day variations of congested coronary, ECG and vectorcardiograms in normal subjects, using results as assessment standards

p0341 A72-30967

Vectorcardiographic and electrocardiographic differentiation between cor pulmonale and anterior wall myocardial infarction

p0497 A72-40769

The Macnicy index and its clinical evaluation in electrocardiograph with regard to the selection and control of air crews

p0500 A72-41193

Comparison of the vectors of the ventricular depolarization and repolarization of man during immersion in a standing position

p0552 A72-44924

VEGETABLES

Development and evaluation of freeze dried vegetables to be used in Apollo food system [NASA-CR-115429]

p0245 W72-18105

Potential health hazards due to ingestion of garden vegetables contaminated by arsenic, cadmium, lead, and zinc

W72-19390

VEGETATION

Gamma ray absorption method for nondestructive determination of vegetation density [AD-729319]

p0087 W72-13068

Lead, cadmium, and sulfur dioxide contamination of vegetation and aquatic animals [NASA CR-127926]

p0264 N72-19387

Bibliography of simulation models for vegetation

p0339 N72-27082

Remote sensing of wildland and agricultural vegetation, using ERTS-1

p0488 N72-29408

VEGETATION GROWTH

WT CROP GROWTH

VEHICLES

Development of automatic pictorial pattern recognition schemes for use in control of remote launched devices [AD-728216]

p0087 W72-13068

VEGETATION

Antinatriuretic effect of acute thoracic and abdominal inferior vena cava constriction on arterial pressure, renal hemodynamics and electrolyte excretion

p0018 A72-11660

Blood viscosity and distributed external constraints and viscoelastic properties of vessels effects on wave dispersion and dissipation in arteries and veins, using membrane model

p0073 A72-15466

Dog mesentery terminal venous microvascular distensibility characteristics from response to arterial and venous pressure changes

p0113 A72-18196

Combined photoelectric-photographic and plethysmographic technique for continuous measurement of rabbit ear vein diameter and tissue volume changes

p0222 A72-23443

Fat veins porta muscle cells spontaneous activity intensified by direct current depolarization and inhibited by hyperpolarization, noting effects of calcium and sodium ions

p0322 A72-28638

Prolonged bed rest induced muscular activity restriction effect on arterial and venous tone in different body areas

p0336 A72-30385

Dependence of muscle efficiency on oxygen concentration in the venous blood

p0509 A72-42157

Cardiovascular system venous part responsiveness to central nervous and humoral influences

p0520 A72-43167

Tone of arteries and veins in different body areas during prolonged restrictive muscular activity

p0387 N72-24106

VELOCITY

VELOCITY DISTRIBUTION

Arterial velocity profiles measurement in dogs thoracic sorts by hot-fil probe, relating flow disturbances and turbulence to Reynolds number

p0231 A72-24468

VELOCITY FIELDS

U VELOCITY DISTRIBUTION

VELOCITY MEASUREMENT

Doppler ultrasonic probe phascocardiography for human cardiovascular velocity measurement, showing normal tracings and aging effects

p0507 A72-16158

Doppler cardiometry determination of human cardiovascular velocities in patients with heart diseases, discussing impaired left ventricular function detection

p0590 A72-16155

Arterial velocity profiles measurement in dogs thoracic sorts by hot-fil probe, relating flow disturbances and turbulence to Reynolds number

p0231 A72-24468

Instantaneous and continuous blood flow velocity measurement using Doppler ultrasonic flowmeter

p0278 A72-26778

Mose gesture measurement of human walking in forward movement by frequency response of signal on magnetic tape

p0367 A72-32200

Influence of sensory pattern and alcohol on vehicular velocity sensing [ICEL-88-70-81]

p0531 N72-31096

VELOCITY POTENTIALS

U FLOW DISTRIBUTION

VELOCITY PROFILES

U VELOCITY DISTRIBUTION

VENTILATION

Physiological effects of localized ventilation, noting human comfort improvement association with reductions in average skin temperature and sweat rate

p0522 A72-11955

Nonlinear theory of pulmonary ventilation distribution in two compartment model of human lungs

p0372 A72-33025

SUBJECT INDEX

A-428
Physiological response of body temperature to localized ventilation [AD-72-10103]

Synaptic contacts in vertebrate retinas, reviewing bipolar terminals, ganglion cells and amacrine responses from electron microscopy [AD-172-17718]

Reverber flow personal ventilation system for reducing thermal stress during aircraft operations [FFPE-650-250] [P0353 N72-22097]

Pulse modulated biotelemetry system for determining energy budgets in free-ranging vertebrates from heart rate and body temperature measurement [AD-172-17719]

Vertebrates visual processes - Conference, University of Chile, Santiago, November-December, 1970 [P0308 N72-25123]

Absorbed doses at various depths in water target exposed to charged pions, muons and electron beams, using Monte Carlo program [CECM-71-1-16] [P0026 A72-12063]

Depths-dose experiments with monodirectional 14 MeV neutrons in low scatter environment, describing test facility [CECM-71-1-16] [P0027 A72-12068]

Vertebrate atmospheres diversity, discussing abiogenesis failures on life-unsupportable planets [P0064 N72-14805]

Vertical distribution Absorbed doses at various depths in water target exposed to charged pions, muons and electron beams, using Monte Carlo program [CECM-71-1-16] [P0026 A72-12063]

Jupiter atmospheres, discussing abiogenesis failures on life-unsupportable planets [P0064 N72-14805]

Planetary atmospheres composition diversity, discussing abiogenesis failures on life-unsupportable planets [P0064 N72-14805]

Vertebrate atmospheres diversity, discussing abiogenesis failures on life-unsupportable planets [P0064 N72-14805]

Extraterrestrial life on Mars and Venus and Jupiter atmospheres, discussing abiogenesis failures on life-unsupportable planets [P0064 N72-14805]

Phylogenetic response of body temperature to localized ventilation [AD-72-10103]

Synaptic contacts in vertebrate retinas, reviewing bipolar terminals, ganglion cells and amacrine responses from electron microscopy [AD-172-17718]

Reverber flow personal ventilation system for reducing thermal stress during aircraft operations [FFPE-650-250] [P0353 N72-22097]
VESTIBULAR TESTS

Analysis of aircraft pilot reports on occurrence of unreality and detachment during flight and relationship to spatial disorientation

Occurrence of vertigo in hyperbaric atmospheres and among underwater divers with theoretical explanations of etiology involved

Development of procedures for exposing aviators to effects of spatial disorientation in ground based simulator

Application of methods of simulation of instrument flying as means of reducing occurrences of spatial disorientation in flight

Clinical evaluation and medical treatment of spatial disorientation problems in flying personnel

Aptitude for recovery from vertigo in flying personnel

VESTIBULAR TESTS

Vestibular system tests using optokinetic, caloric, positional and rotational stimuli

Vestibular nuclei complex evoked potentials under visceral and somatic nerves electric stimulation in anesthetized cats

Human vestibulo-ocular responses to oscillatory rotational stimulation during various sleep and arousal stages, discussing Veggie-Jones reflex system mathematical model

Visceral afferentation role in vestibular system activity from experiments on rabbit stomach and rectum mechanoreceptor stimulation effects on vestibular-oculomotor reflexes

Human vestibular stability under frontal and sagittal head tilts in rotating chairs, discussing motion sickness onset

Formulas derived for forces on receptor formation from mathematical analysis of natural human head movements, discussing otoliths and semicircular canals

Auto- and cross correlation functions for neuron reactions in vasomotorial center to adequate stimulation of cats vestibular apparatus

Pilot and nonpilot vestibular sensitivity to rotation, determining oculomotor illusions and rotation perception thresholds

Vestibulometric swing to obtain measured doses of receptor stimulation in otolith apparatus and semicircular labyrinth ducts with simultaneous physiological data recording

Galvanic skin response techniques for palmar and dorsal sweat detection during motion sickness by vestibular stimulation, comparing arousal and thermal sweat response

Field and intracellular potentials in cat trochlear muscle following vestibular nerve and nuclear stimulation for synaptic organization study of vestibulo-ocular reflex

Nystagmus and illusory phenomena in man under simultaneous rotation in two perpendicular planes and its relation to vestibular excitation

Efficient vestibular activity in response to horizontal plane rotary stimulation in frog, showing efficient relations between both ears

Tandem walking on floor with eyes closed as static test for vestibular function assessment

Vestibular, auditory, acceleration and altitude decompression testing of pilot following endolymphatic shunt surgery for Meniere disease

BRIEF VESTIBULAR DISORIENTAION TEST TECHNIQUE FOR ASSESSMENT OF POTENTIAL NONPILOT AIRBORNE SPECIALISTS OR NAVAL FLIGHT OFFICERS

Motion sickness experience correlations to vestibular tests in pilots and nonpilots

Vision influence on acute motion sickness elicitation in slow rotation room, comparing with vestibular factors

Semicircular canal function correlation to thresholds, aftereffects and power functions in pilot vestibular tests

Nystagmus eye movements relationship to oculomotor illusion from test involving vestibular stimulation and visual stimuli velocity estimates

Quantitative model to describe vestibular detection of body sway motion in postural response mode

Respiratory and vasomotor autonomic centers functional state relation to vestibular system from labyrinth electrical stimulation and shaking experiments

Human leg muscle reflex excitability changes with angular acceleration, questioning vestibular apparatus as coordination means in quasi-static and dynamic movement control

Alcohol ingestion effect on vestibular responses to angular acceleration and Coriolis stimulation, discussing nystagmus and subjective responses

Propylphatic oto-laryngological investigation of vestibular analyzer function in aviation medicine

VESIBULAR BEHAVIOR OF FISH DURING DIMINISHED g-FORCE AND WEIGHTLESSNESS

Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation

Parallel swing with affixed luminous disks test for induced vestibular stimulation effects on moon illusion, noting eye movement factors

Vestibular labyrinth reactions and nystagmus thresholds in dogs during negative angular accelerations and simulated chronic galactic radiation from Co 60 gamma source

Vestibular and optical stimuli interaction in humans orientation, testing by Barany chair on rotating platform surrounded by optokinetic drum

Influence of vision on susceptibility to acute motion sickness studied under quantifiable stimulus-response conditions

Photocyclogrammetric study of coordination of voluntary movements of humans subjected to negative angular accelerations in plane of horizontal semicircular canals

Otolithic function and orientation of Geomini spacecock during prolonged space flight

Effect of digestive tract receptor stimulation on vestibular nystagmus reflex reactions in rabbit

Human vestibular tolerances in rotating chairs at differing head tilt positions

Mathematical model for acceleration forces acting on receptor formations in human vestibular analyzer during physiological head movements

Alcohol effects on static and dynamic vestibular responses over 32 hour post drinking periods
Vestibular stimulation for determining response from arousal and thermal sweat areas during motion sickness

Analysis of vestibulo-ocular counterroll reflex in Bessus monkeys subjected to high gravity forces

Indirect measurement of primate vestibular system function through analysis of vestibulo-ocular reflex response to various input stimuli

Clinical tandem walking test for evaluating ataxial battery test performance in detecting vestibular problems

Sensory interaction between vision size perception and vestibular stimulation as test for vestibular hypothesis of moon illusion

Physiological tests of vestibulo-ocular reflex by counterroll to determine effects of positive acceleration on dynamics of vestibular system of Bessus monkeys

Effects of alcohol on problems solving tasks and vestibular stimulation

Physical models for visual-vestibular interactions in simulating human nystagmic eye movements

Vestibular system functional relationship to postural reflex mechanism involving labyrinth and gravireceptors responses

Electrical stimulation of vestibular nuclei - role of higher sections of central nervous system

The vestibular apparatus. I - The physics and physiology of the otoliths and the semicircular canals

The vestibular apparatus. II - Effects of motion sickness on autonomic nervous system role in vestibular-respiratory-vasomotor reflexes

Influence of vestibular stimulation on segmentary reflexes in spinal cord

Chronic irradiation effects on vestibular-somatic reactions of dogs

Low level microwave radiation effects on central nervous system and vestibular apparatus

The effects of various cure cycles upon the viability Bacillus subtilis var. niger spores within solid propellant

Viscosity of staphylococci isolated from humans subjected to long-term isolation in pressurized cabins

Effects of dry heat on bacteria spore growth at 125 C at Cape Kennedy

VIBRATION

VIBRATION DAMPERS

VIBRATION ISOLATORS

VIBRATION DAMPING

Hybrid computer simulation of cochlea mathematical model, noting nonlinear damping

VIBRATION EFFECTS

Human and monkey muscle tonic vibration reflex response to vibratory stimulation dependent on frequency range, e.g. electroencephalograph coherence interval length, etc.

Human biodynamic and behavioral response to whole body vibration, discussing subjective judgment of vibration intensity and effects on performance, showing vestibulo-ocular compensation and frequency response characteristics

Biothermal response of increased core temperature in rhesus monkey to mechanical vibration, noting implications for pilot performance during prolonged buffeting

Angular oscillation in yaw effect of pilot visual performance, showing vestibulo-ocular compensation and frequency response

Supine human body mechanical impedances under combined stress of vibration and sustained acceleration

Human hand-arm system vibration characteristics, describing mechanical impedance measurements for mathematical modeling

Mechanical vibration induced physiological changes in rats, determining plasma Ca, Mg and inorganic phosphate concentration and xanthine oxidase activity response to frequency and levels

Vigilance effects for noise or vibration stimuli

Noise and vibration stress combined effects on human mental performance as function of time of day, taking into account circadian rhythm factor
TIBDSBS VISCOSITY

VISCEEA

HT TESTES

HT BLADDEB

HT ADENOVIHUSES

0 EQOILHIOa

HT SPLEEN

HT FABATHTBOID GLAND

HT PAHCBEAS

HT OBGAHS

HT LUNGS

HT LIVES

HT KIDHEYS

NT GOHADS

NT BACTERIOPHAGES

0 VISCOEL1STICITY

HT THIBOID GLAND

HT IHTESTISES

HT ENDOCBIHE GLAHDS

Visceral afferentation role in vestibnlar system

Bathematical model for arterial system pressure,

Acceleration stress effects on splanchnic blood

Vestibnlar nuclei bulbar complex evoked potentials

Viscosity and constraints effects on wave dispersion and dissipation in arteries and veins, using

membrane model

Viscosity and constraints effects on wave dispersion and dissipation in blood vessels, comparing theory with experiments on dogs

Effects of hydrostatic pressure on viscosity of whole blood systems [AD-740853]

VISCORS FLOW

NT STOKES FLOW

VISIBILITY

NT LOW VISIBILITY

Moving display visibility effect on pilot tracking performance, discussing dependence on illumination intensity and color

Viscosity and constraints effects on wave dispersion and dissipation in blood vessels, comparing theory with experiments on dogs

Effects of hydrostatic pressure on viscosity of whole blood systems [AD-740853]

Determing the detectability range of camouflaged targets.

The visibility range when observing an aircraft with and without field-glasses.

Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation.

Determining the detectability range of camouflaged targets.

The visibility range when observing an aircraft with and without field-glasses.

Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation.

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Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation.

Determing the detectability range of camouflaged targets.

The visibility range when observing an aircraft with and without field-glasses.

Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation.

Determing the detectability range of camouflaged targets.
VISUAL ACCOMMODATION

[p0476 N72-28098]
Psychological verification of digitally simulated models of human visual system [AD-742831]
p0565 N72-32132
Behavior of computer generated visual system [AD-749927]
p0569 N72-33086

VISUAL ACUITY

[p0030 N72-12490]
Head movement adaptation to horizontal and vertical field displacements, discussing eye movement, direction learning

[p0104 N72-17410]
Oculomotor accommodation and convergence as distance perception cues, showing size perception change relation to glasses adaptation

[p0105 N72-17411]
Human visual system frequency specific color adaptation, considering neural channels sensitivity to color and frequency input

[p0105 N72-17412]
Oculomotor cue-based distance perception, discussing glasses adaptation-caused accommodation and convergence changes in stereoscopic depth perception

[p0105 N72-17414]
Visual adaptation to light and dark in humans and animals, discussing cellular mechanisms

[p0107 N72-17720]
Computerized simulation from model of human papillary motor behavioral response to light, accommodation and fusional inputs

[p0152 N72-19310]
Counteradaptation and cue discrepancy as perceptual adaptation basis, considering changes in registered and apparent distance of luminous object moving in dark

[p0174 N72-20988]
Adjustment to subjective horizontal, vertical and 45 deg tilt in dark as function of age in 3-20 year old subjects

[p0174 N72-20989]
Auditory flutter fusion frequency changes in humans during prolonged visual deprivation

[p0280 N72-27418]
Circadian rhythms of visual accommodation responses and physiological correlations during target tracking, recording monocular state by IB optometer

[p0296 N72-28306]
Human visual accommodation biorythm and reactions under hard physical work and visual stress

[p0294 N72-28789]
Differential effects of refractive errors and receptive field organization of central and peripheral ganglion cells

[p0451 N72-37826]
Hering's law of equal innervation and the position of the biaoculus

[p0451 N72-37828]
Continuous objective measurement of the accommodation of the human eye

[p0495 N72-40730]
Apparent movement and change in perceived location of a stimulus produced by a change in accommodative vergence

[p0500 N72-41028]
Chromoreflectometric determination of human eye accommodation time and visual acuity in fitting of optical glasses

[p0136 N72-15062]
Development and characteristics of test equipment for research on human visual accommodation system [NASA-CR-2007]
p0261 N72-19170

VISUAL ACUITY

Human visual system multiple channels sensitivity to patterns at low luminance or high drift rates, noting retinal ganglion cells selective sensitivity

[p0105 N72-17462]
Moving target resolution threshold in retina, discussing visual acuity relation to target angular velocity during ocular pursuit

[p0149 N72-19029]
Dynamic visual acuity and eye movement data for moving targets, deriving retinal target image position and velocity errors during ocular pursuit.

Aging effect on visual acuity variations relating to refraction variations in flight deck personnel, noting eye functional value diminution

Visual acuity measurement methods, considering angular acuity by Beyne optometer and morphoscopic acuity by Bercier optometric scale

Dazzle glare effects and acuity recuperation among aircrew, noting civil and military aircraft accidents during daytime and nighttime flights

Stereoscopic acuity for, photometrically matched background wavelengths at scotopic and photopic levels, plotting variable depth error as function of retinal illuminance

Visual evoked cortical responses in objective refraction related to retinal image clarity for clinical applications

Retinal visual acuity testing by zero and first order knife fringes, using square-wave amplitude gratings

Angular oscillation in yaw effect of pilot visual performance, showing vestibulo-ocular compensation and frequency response

Visual acuity measurement by dynamic and static tests as function of target velocity and exposure time

Eye movements and dynamic visual acuity as function of tracking velocity, analyzing pursuit and maccadic component by electrooculography

Execute eye retinal image quality determination by ophthalmoscopic method, comparing to human visual acuity

The effect of target contrast variation on dynamic visual acuity and eye movements

The influence of the modulation transfer function of the dioptric apparatus on the acuity and contrast of the retinal image in Bana esculenta.

Fixation eye movements and the processing of visual information

Visual acuity restoration improvement after flash blindness by monocular shielding and injection of vitamin complexes containing ATP with pyridoxal, considering twilight vision

Ophthalmoscopic, photocalibrometric and ophthalmodynamometric examinations of test subjects visual acuity during bed rest in hypoxic antichoromatic position

Signal detection analysis of monocular variations to vertical and horizontal gratings

Dynamic characteristics and requirements in human visual perception of moving television images [AD-727178]

Local duration space flight effects on visual acuity and visual capability of Gemini crewmembers [FZFP-2006]

Airborne visual reconnaissance tests to determine effect of yellow sunglasses on visual acuity of observers [AD-730920]

Physiological factors in color vision, simulation of visual systems, aerospace environment effects on visual perception, and electrophysiological aspects of eye responses

Color discrimination ability in children with reduced visual acuity

Psychophysiological fatigue effect on human visual analyzer during microscopic assembling of semiconductor devices

SUBJECT INDEX

[p0037 H72-10097]
Airborne visual reconnaissance tests to determine signal detection analysis of meridional variations

[p0324 A72-28749]
Visual acuity measurement by dynamic and static tests as function of target velocity and exposure time

[p0292 A72-28269]
Visual acuity measurement by dynamic and static tests as function of target velocity and exposure time

[p0336 A72-30042]
Eye movements and dynamic visual acuity as function of tracking velocity, analyzing pursuit and maccadic component by electrooculography

[p0452 A72-30043]
Execute eye retinal image quality determination by ophthalmoscopic method, comparing to human visual acuity

[p0365 A72-31724]
The effect of target contrast variation on dynamic visual acuity and eye movements

[p0120 H72-14062]
The influence of the modulation transfer function of the dioptric apparatus on the acuity and contrast of the retinal image in Bana esculenta.

[p0406 A72-38876]
Fixation eye movements and the processing of visual information.
Speed of motion and tracking time effects on human visual acuity in perception of moving objects

Statistical analysis on restoration time of human visual acuity after temporary blinding by light flashes

Chrono-reflectometric determination of human eye accommodation time and visual acuity in fitting of optical glasses

Deterioration of dynamic visual acuity with increasing speed of object under observation

Comparison of relationship between frequency of small eye movements and vernier acuity in human subjects

Testing paradigms for training and measuring visual acuity in Rhesus monkeys suffering from retinal disease

Human visual acuity measured by chromatic square wave gratings under luminance conditions

Naval research on laser caused visual acuity decrement in monkeys and ocular injury in humans

Method for testing myopic, hyperopic, astigmatic vision using speckle patterns of laser

Dynamic visual acuity in motion perception

Spatial sensitivity of visual system

VISUAL AIDS

Development and application of training films for instructing pilots in landing T-33 aircraft

Distribution of visual aids and display devices in front of aircraft pilots

Human operator errors in performing audio-video and audio only tracking tasks

Exposure criteria for visual aids in aircraft recognition training

VISUAL COPELET

Tracker recovery strategy during temporary target obscuration in pursuit tracking task, analyzing control stick movements

VISUAL CUES

U VISUAL PERCEPTION

VISUAL DISCRIMINATION

Intervening discrete elements effects on filled duration illusion in auditory, tactual and visual presentation

Threshold stimulus for visual motion discrimination as function of velocity and luminance

Temporal characteristics of wavelength and luminance modulated light perception, discussing visual system dynamics of color discrimination

Color defective vision performance predictions during day and night tests of aviation color signal light discrimination

Visual discrimination task-trained monkeys performance after combined gamma-neutron irradiation, noting blood pressure and respiratory and heart rate changes

Objects visual detection probability distribution as function of angular size, contrast and search time, comparing binocular and monococular search effectiveness

Natural visual capture result of vision and touch conflict in bilateral comparisons of object length
Considerations in the design of an automatic visual field tester.

Discontinuity of seen motion reduces the visual motion aftereffect.

Differential effects of refractive errors and receptive field organization of central and peripheral ganglion cells.

Visual field Analyzer presentation of simple and multiple stimuli for differential threshold levels investigation, discussing eccentricity, spatial orientation and suprathreshold stimuli effects.

Receptive fields of units in the visual cortex of the cat in the presence and absence of bodily tilt.

Investigations concerning the problem of virtual contours in visual perception.

An electronic model of visual receptive fields.

Parametric adjustment to a shifting target alternating with successions to a stationary reference point.

Interactions between spatial and kinetic dimensions in movement aftereffect.

Temporal and spatial characteristics of selective encoding from visual displays.

Visual experience as a determinant of the response characteristics of cortical receptive fields in cats.

Visual angle and apparent size of objects in peripheral vision.

Motion thresholds for fovea and peripheral retina with/without correction for peripheral refractive error.

Information aspects in visual perimetry, obtaining memory requirement for control computer in automated perimetry.

Photopic and scotopic contributions to the human visually evoked cortical potential.

Line length detectors in the human visual system - Evidence from selective adaptation.

Techniques for analyzing differences in VESs: Colored and patterned stimuli.

Small field tritanopia of central fovea in terms of dichromatic area color response mechanisms and adaptation speed.

Visual stimuli distance estimation with head stationary or moving, discussing performance after monocular motion parallax training.

Optical directionality of retinal receptors and corresponding points. I - Nasal-temporal asymmetry of retinal spatial values and orientation of receptors: are the corresponding points correct? II - Variation of form of the experimental horopteric, and possibility of reorganization of the retinal correspondence according to the orientation of the eyes.

Functional organization of the periphery effect in retinal ganglion cells.

The effects of simultaneous and successive contrast on perceived brightness.

Control, by the visual cortex, of the posterior lateral thalamic group in the cat.
Research projects to determine visual perception capability and factors which affect visual perception efficiency

Automated visual sensitivity tester for determining visual field sensitivity and blind spot size

Perception of real motion by human eye

Experimental determination of visual field dependency of human text subjects in erect and supine positions

Visual fields of luminous objects in earth atmosphere

Bibliography from 1958 to 1970 on visibility and air navigation

Human engineering survey of Canadian VFB air traffic training base capacity

Detection range, color, brightness and flash subjective response tests to evaluate light signals for nighttime sea navigation and visual collision avoidance

Human vision sensitivity to covert IR illuminators for image intensification during night observation

Visual optical system evaluation from viewpoint of human operator target detection under field conditions in terms of resolution, transfer functions, aberration and eye movements

The visibility range when observing an aircraft with and without field-glasses.

Optical vision testing unit for testing eyes and visual system of human subject

Detection of Cerenkov radiation in relativistic monsoons by human eye

Google device for measuring visually perceptive direction of space

Radar and visual tracking of migratory birds to determine correlation of flight altitude and wind direction on direction of migration

Detection of Cerenkov radiation in relativistic monsoons by human eye

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Detection of Cerenkov radiation in relativistic monsoons by human eye

Detection of Cerenkov radiation in relativistic monsoons by human eye
VISUAL PERCEPTION CONT'D

Phylo-ontogenetic saturation of corticopetal projections of visual cortex, using evoked potential measurements in rabbits
p0108 A72-17723

Bisensory performance in simultaneous auditory and visual verbal information recognition, demonstrating integrative action between hearing and vision
p0108 A72-17736

Suppression of visual evoked responses to low intensity light flashes and shifting stripe patterns during saccadic eye movements
p0111 A72-17949

Flicker and flash threshold experiments, discussing flicker cut-off frequency and flash duration relations and visual sensitivity
p0149 A72-19025

Visual space geometry and perception experiments, demonstrating size-distance relations for various visual cues
p0150 A72-19031

Moving visual stimuli apparatus with independent control over size, shape, background intensity, orientation and velocity of motion, describing cat neuronal sensitivity studies
p0150 A72-19032

Optic disk drum and Marcus Gunn pupillary phenomenon relation to visual field defects, discussing need for calibrated perimeter and binocular field testing [AD-737860]

Reaction time to visual orientation change, obtaining aftereffects as function of orientation specific adaptation duration and separation angle between inspection and test lines
p0174 A72-20986

Rotating disk background and speed effects on perception of verticality motion is clockwise or counterclockwise direction
p0174 A72-20987

Three color response of human vision, noting relationships to color matching function and brightness
p0215 A72-22617

Psychological aspects in aerial photointerpretation, discussing importance of perception of image contrast, contours and areal distribution
p0222 A72-23299

Visual search model from perceptual theory, animal studies and search data, discussing selection, inspection and naming single cued letters in visual array
p0225 A72-23647

Stochastic model for eye movements during fixation on stationary target
p0228 A72-23795

Visual and haptic perception in angle reproduction matching task, noting performance differences relation to nature of form discrimination and task
p0236 A72-25126

Spatial frequency specificity of edge contingent color aftereffects
p0237 A72-25182

Vascular-capillary study of age related angiarchitectonic features of human brain optic lobe
p0274 A72-26675

Red rest and positive radial acceleration effect on peripheral visual response time, considering blackout or grayout prediction possibilities
p0295 A72-28297

Neck proprioception effects and otolithic organ activity in perceived visual target elevation under centrifuging stress
p0296 A72-28305

Relationship of visibility fluctuations in set of luminous circles to verbal response learned for each circle, showing word association influence on stimulus perception
p0329 A72-28305

Visual latencies measurement as function of stimulus luminance and adaptation state by stereoscopic null method, characterizing relationship by inverse power function
p0331 A72-29957

Matched luminance chromatic stimulus wavelength effects on human visual latency
p0331 A72-29968

Pupil reflex loss /pupillotonia/ diagnosis in pilots, testing sensitivity to anticholinergic chloride
p0335 A72-30267

Human eye relative luminous efficiency for near IR and UV coherent light, using ruby laser pumped tunable dye laser primary and second harmonic outputs
p0340 A72-31096

Visual and acoustic image processing rates during letter sequencing tasks, suggesting implicit verbal control involvement
p0363 A72-31380

Stabilized retinal image techniques to examine functional relationships between nonstabilized grating pattern orientation adaptation and stabilized line stimulus fading rates
p0371 A72-32764

Occipital EEG activity during fluctuations of perception under stabilized image and simplified stimulus conditions.

Evidence for the role of the transient neural 'off-response' in perception of light decrement - A psychophysical test derived from neuronal data in the cat.

Quantitative decision criteria for identification of visual evoked responses obtained during binocular rivalry.

On the apparent orbit of the Pulfrich pendulum.

Novelty, recency and frequency effects on visual recognition and pseudo-recognition thresholds.

Assessment of life span age difference relations in visual perceptual tasks, taking into account maturational and generational differences

Effects of visual cues on the standing body sway of males and females.

Manipulation of projected afterimages by means of the physiological theory imposed on the observer.

Calculating the perceived level of light and sound.

Investigations concerning the problem of virtual contours in visual perception

An electronic model of visual receptive fields.

Visual depth perception response functions for sine and square wave modulated binocular parallax

Evidence for the role of the transient neuronal 'off-response' in perception of light decrement - A psychophysical test derived from neuronal data in the cat.

Visual and acoustic image processing rates during letter sequencing tasks, suggesting implicit verbal control involvement

Evidence for the role of the transient neural 'off-response' in perception of light decrement - A psychophysical test derived from neuronal data in the cat.

Quantitative decision criteria for identification of visual evoked responses obtained during binocular rivalry.

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Evidence for the role of the transient neuronal 'off-response' in perception of light decrement - A psychophysical test derived from neuronal data in the cat.

Quantitative decision criteria for identification of visual evoked responses obtained during binocular rivalry.

On the apparent orbit of the Pulfrich pendulum.

Novelty, recency and frequency effects on visual recognition and pseudo-recognition thresholds.

Assessment of life span age difference relations in visual perceptual tasks, taking into account maturational and generational differences

Effects of visual cues on the standing body sway of males and females.

Manipulation of projected afterimages by means of the physiological theory imposed on the observer.

Calculating the perceived level of light and sound.

Investigations concerning the problem of virtual contours in visual perception

An electronic model of visual receptive fields.

Visual depth perception response functions for sine and square wave modulated binocular parallax

Evidence for the role of the transient neuronal 'off-response' in perception of light decrement - A psychophysical test derived from neuronal data in the cat.

Quantitative decision criteria for identification of visual evoked responses obtained during binocular rivalry.

On the apparent orbit of the Pulfrich pendulum.

Novelty, recency and frequency effects on visual recognition and pseudo-recognition thresholds.

Assessment of life span age difference relations in visual perceptual tasks, taking into account maturational and generational differences

Effects of visual cues on the standing body sway of males and females.
Visual evoked potential changes of chloralose atmospheres.

Medical research abstracts on visual visual system, electronic neuron model development, and auditory adaptation in horseshoe crab.

Sonar operator visual sampling of simulated PPI display.

Human perceptual characteristic data relating to individual electronic flight display design.

Characterization and origin of light flashes seen by astronauts onboard Apollo 11, 12, 13, and 14.

Sensory interaction between vision size perception and vestibular stimulation as a test for vestibular hypnosis of moon illusion.

Pattern recognition in perception of binary sequences and effect of number of stimuli in pattern.

Function of visual cues in orientation navigation systems of desert ants.

Visual evoked response as measure of nitrogen narcosis in divers breathing compressed air from 0 to 250 feet.

Methodology and analysis of visual evoked cortical responses as a measure of stress in hyperbaric atmospheres of naval environments.

Effects of ultrastructural manipulations on optical component depth and component interface amplitudes of primate eye.

Electroretinographic evaluation of Bunsen-Boscoe law for human eye at high energy levels.

Incremental thresholds for two nonidentical flashes.

Effects of color, spatial, and conventional visual cues on human performance.

Effects of training in oculocurvilinear pursuit tracking on subsequent performance.

Binocular disparity tolerances of pilots viewing dynamic head-up displays.

Depth judgements of Bach-Dvorak phenomenon induced by cyclic, intermittent stimulation to assess eye movement orientation.

Dynamic visual acuity in motion perception.

Effect of schedule control and sleep deprivation on human eye movement behavior.

Colorimetric photometric matching tests, showing subject differences in paraveissual spectral sensitivity indicated by photopic curve peaks.

Optical flash rate and duty cycle for flashing visual indicators, testing observer ability to determine indicator state.

Alerting light and audio signals for aircraft pilots, considering implications for aircraft design.

Color defective vision performance predictions during day and night tests of aviation color signal light discrimination.

Visual response to monocularly and dichoptically presented flashed patterns, discussing physiological mechanisms based on cortical visual field concept.

Visual response to monocularly and dichoptically presented flashed patterns, discussing physiological mechanisms based on cortical visual field concept.

Lateral inhibition effect on disappearance node of visual perceptual units and angles.

Fragmentation and closure in afterimages of bright flash stimuli.

Visual cortex neuron responses to light flashes under hypobaric and reticular electric stimulation in rate.

Visual response to monocularly and dichoptically presented flashed patterns, discussing physiological mechanisms based on cortical visual field concept.

Hypothesis of noo illusion.

Visual masking effect due to light offset, stimulating performance.

Human factors engineering to determine visual discrimination of helicopter pilot and effect on helicopter control.

Physiological response to affective visual stimuli, observing signal change effect on forward pulse amplitude and galvanic skin response.

Spatio-temporal scalp mapping localization of human visual evoked responses to full field light adapted stimuli, comparing to half-field situation.

Body cooling effect on human vigilance in hot environments, testing reaction time to visual stimuli and auditory signal detection rate.

Visual masking effect due to light offset, investigating human identification response to lighted background with simultaneous shut-off.

Visual cortex neuron responses to light flashes under hypobaric and reticular electric stimulation in rate.

Visual response to monocularly and dichoptically presented flashed patterns, discussing physiological mechanisms based on cortical visual field concept.

Human trace responses generation and storage under light stimulus reinforcement of maze conditioning from galvanic skin reactions observation.

Perceived common rotary motion of ambiguous stimuli as criterion of perceptual grouping.

Occupational and sensory response relation to sensory information, perception and stimulation.
Retina, tectum opticum and rostral brain structures role in analysis and processing of visual sensory stimuli in toad distinguishing between prey and enemies.

Suppression of visual evoked responses to low intensity light flashes and shifting stripe patterns during scotopic eye movements

Moving target resolution threshold in retina, discussing visual acuity relation to target angular velocity during ocular pursuit.

Dynamic visual acuity and eye movement data for moving targets, deriving retinal target image position and velocity errors during direct pursuit.

Moving visual stimuli apparatus with independent control over size, shape, background intensity, orientation and velocity of motion, describing cat neuronal sensitivity studies.

Occipital electroencephalographic response to slowly repeated aperiodic light flashes, discussing alpha wave and rhythmic afteractivity amplitude changes.

Evoked cortical potentials changes from emotional visual word stimuli stress under asyssi anticholinesterase drug influence.

Hypothalamic single neuron unit discharge pattern response to acoustic, light and somatosensory stimulation in cats.

Cat retina ganglion cell threshold and latent responses to separate stimulation receptive field center and periphery.

Light variation threshold amounts for flicker and flickering pattern detection as function of variation frequency.

Photically induced and spontaneously discharged — neuron impulse propagation through direct pathways from superior colliculus to dorsal and ventral lateral geniculate nuclei in cats.

Isolated specific color dependent waveforms of visual evoked response to strong colored lights relating luminance and wave amplitude changes.

Photostimulated potentials of human visual cortex, determining retinal vascular area involvement pathways from superior colliculus to dorsal and ventral lateral geniculate nuclei in cats.

Single lateral geniculate neuron recording during receptive field-centered flashing spot variations for intensity response function comparison with optic neurons in cats.

Stimulus complexity effect on amplitude of human cyclofusional response, evaluating relative roles of compensatory eye movements and central responses.

Anisotropic responses to dot and line visual stimuli, obtaining judgments on apparent straightness of various visual field locations and dot densities.

Visual evoked cortical responses in objective refraction related to retinal image clarity for clinical applications.

Lenticular conditioning-shock ataxia stimulation effect on cat visual cortex response to light stimuli, noting lateral geniculum photically evoked potential amplitude increase.

Orienting response indication by EOG alpha rhythm desynchronization in relation to visual stimulation intensity.

Intraelectroretinographic analysis of light signal spatial summation at different retinal nerve levels in frogs.

Response latencies and correlation in single units and visual evoked potentials in cat striate cortex following monocular and binocular stimulations.

Image visual recognition during voluntary sacadic eye movements, noting striatal visible luminance change effect.

Visual cortex neuronal background activity in unsensitized rabbits under stimulation and depression of lateral geniculate body and mesencephalic reticular formation, considering synaptic organization.

Spatial characteristics of equal energy visual stimuli in metacount design for targets and masks of a constant separation and varying width, deriving weighting functions.

Vision influence on acute motion sickness elicitation in slow rotation room, comparing with vestibular factors.

Hypothet eye movements relationship to oculoocular illusion from test involving vestibular stimulation and visual stimuli velocity estimates.

Frequency-specific color aftereffects as result of alternate exposure of subject to inspection gratings of different spatial frequencies.

Conditioned stimuli presentation role in successive differentiation and inhibition limits in monkeys.

Illumination code efficiency in impulse activity of neurons of outer geniculate body of cat visual system, emphasizing pulse per ramp technique.

Visual cortex neuron reactions to antidiabetic stimulation of cat pyramidal tract, noting axon activation increased discrimination in animals.

Human flexible processing accomplishment in speeded recognition task with visual stimulus dimension relevancy contingent upon other dimension stimulus values.

Relationship of visibility fluctuations in set of luminous circles to verbal response learned for each circle, showing word association influence on stimulus perception.

Spatial and temporal summation characteristics and relationship in human peripheral retina investigated for stimuli viewed at eccentricity.

Cat visual cortex receptive field responses to light bands of variable widths and intervals.

Hatched luminance chromatic stimuli wavelength effects on human visual latency.

Visual cortex repetitive stimulation effect on primary response habitnation in young normal rabbits and adults with septum pellucidum lesion.

Voluntary saccade length dependence on visual field nontarget stimuli number, locus and distance from target.

Compensatory tracking task performance with continuous error information feedback via visual, auditory or electrocutaneous displays.

Target and surrounding nontarget stimuli size differences effect on visual search time for displays with large fields.

Heat chamber treadmill work-induced thermal stress effects on reaction time to foreally and peripherally presented visual stimuli.

Human retinal rod rhodopsin bleaching and regeneration measurements, tracing work adaptation curves.
Dark adaptation studies of bleach-induced visual threshold rise and subsequent return to rhodopsin level

Disparity-associated depth sensation masking, suggesting visual signal processing inhibitory mechanisms for crossed and uncrossed stimuli

Linear systems theory for mathematical model of retinal line and ganglion cell excitation, calculating receptor layer luminance distributions for several stimulus patterns

Visual stimulus orientation effect on movement perception, relating physiological and psychological factors

Monocular retinal ganglion and lateral geniculate nucleus cell maintained discharge rate indication of receptive field organization for various light stimuli intensities

Experimental testing of theory of signal detectability derived psychophysical models application to two-pulse visual stimuli temporal discrimination

Poveal light pulse duration effects on reaction time, showing stimulus intensity-time reciprocity

Size scaling rate from retinal image size comparison judgment time during observation of briefly presented concentric rectangles of varying size and orientation

Stabilized retinal image techniques to examine functional relationships between nonstabilized grating pattern orientation adaptation and stabilized line stimuli fading rates

Hypoxia and peripheral visual stimulus position effects on response time during monitoring of centrally located stimulus light

Occipital EKG activity during fluctuations of perception under stabilized image and simplified stimulus conditions.

Stimulus complexity and the EKG - Differential effects of the Weber and the variety of display elements

Electroretinographic evidence for a photopic system in the rat.

Peripheral contrast thresholds for moving images.

Effect of selective adaptation and detection of simple and compound parafoveal stimuli.

Optokinetic thresholds in the normal monkey.

Model to account for visual responses to light flashes of dark adapted eye, discussing perceived brightness variation with intensity.

Vergence eye movements to pairs of disparity stimuli with shape selection cues.

Hue shifts accompany phase induced modulation enhancement of sinusoidally flickering lights.

Visual half-field differences in the recognition of bilaterally presented single letters and vertically spelled words.

Non-monotonicity of temporal recognition of brief duration

Division and orientation in the vertical-horizontal illusion.

Perception of tachistoscopic binary patterns, examining reproduction accuracy with respect to pattern length and fixation and end-segregation reference points.

Expression-sensitization and duration of visual attention.

Subject index

Effect of net size, age, and mode of stimulus presentation on information-processing speed.

Contour-contingent color aftereffects - Retinal area specificity.

Each band measurement, psychological compensation technique, causing band disappearance by changes in stimulus pattern luminance and brightness distribution relations.

Psychophysical procedures to investigate selective visual adaptation to light of different wavelengths from test gratings with various orientations and spatial frequencies.

Visual Field Analyzer presentation of single and multiple stimuli for differential threshold levels investigation, discussing eccentricity, spatial orientation and supraliminal stimulus effects.

Electrical stimulation of vestibular nuclei - Effects on light-evoked activity of lateral geniculate nucleus neurons.

Parallel swing with affixed luminous disks test for induced vestibular stimulation effects on moon illusion, noting eye movement factors.

Influence of rhythmic photostimulation on lower-order monkeys with hyperkinesia of post-encephalitic origin.

Operative memory mechanism as visual system neuron chain storage of stimuli from image recognition time measurements.

Spatial interaction with different-diameter stimuli matched on the basis of threshold, luminance, or total luminous flux.

Linear stimulus bionoptic detection variation with ratio of left eye to right eye detection probabilities.

Vestibular and optical stimulus interaction in human orientation, testing via Barany chair on rotating platform surrounded by optokinetic drum.

Characteristics of certain parameters of memory for visual signals in lower monkeys.

Perceptual differentiation of sequential visual patterns.

Target distance and adaptation in distance perception in the capacity of visual direction.

Apparent movement and change in perceived location of a stimulus produced by a change in accommodative vergence.

The effect of size, retinal locus, and orientation on the visibility of a single afterimage.

Temporal and spatial characteristics of selective encoding from visual displays.

Book - Aspects of motion perception.

Moving spot detection threshold measurement for varying exposures, noting product of stimulus duration and velocity for comparison with Bloch law.

Visual angle and apparent size of objects in peripheral vision.

Simultaneous detection and recognition of chromatic flashes.

Development of a defensive condition reflex to a light stimulus after previous visual deprivation.

Sensory events during specific and unspecific inhibition of visual cortex neurons.
Neuronal and focal reactions of the parietal associative cortex to various peripheral stimuli
056 A72-44089
Responses of anterior suprayllamic tyron neurons to peripheral stimuli of different modalities
056 A72-44090
Photopic and scotopic contributions to the human visually evoked cortical potential
058 A72-44380
Sensitivity of the human HFG and VECP to sinusoidally modulated light
058 A72-44383
Perceptual latency as a function of stimulus onset and offset and retinal location
058 A72-44386
Techniques for analyzing differences in YBFs: Colored and patterned stimuli.
058 A72-44387
Signal detection analysis of meridional variations to vertical and horizontal gratings
059 A72-44389
Visual stimulus distance estimation with head stationary or moving, discussing performance after monocular motion parallax training
059 A72-44557
Ensemble characteristics of the human visual evoked response - Periodic and random stimulation.
050 A72-44575
Functional organization of the periphery effect in retinal ganglion cells.
052 A72-44580
The suppression-recovery effect in relation to stimulus repetition and rapid light adaptation.
052 A72-44590
The effects of simultaneous and successive contrast on perceived brightness.
052 A72-44591
Perception near suppression during sacadic eye movements in terms of metacritical flicker stimuli determined by post-saccadic accumulated luminance relation to stimuli masking
056 A72-45377
Enforced delay of human response to stimuli for observing memory and higher mental processes
[BAK-LIB-T1S06-1498]
0087 A72-13046
Minimum time interval in human visual discrimination of successive, optical stimuli
0133 A72-15039
Neuron inhibition in subcortical response of rabbit visual system to repetitive flicker stimuli
0134 A72-15046
Physiological effects of photic and acoustical stimuli on evoked potentials in rabbit visual cortex
0134 A72-15047
Flash perception period measurements for determining human visual thresholds
0135 A72-15063
Psychophysiology of evoked cortical potentials and human information processing
[AD-730564]
0474 A72-28080

VISUAL TASKS

Methodological problems in unidimensional information transmission involving circular light identification tasks
0009 A72-10718
Selective attention and short term memory encoding, using tachistoscopic visual display arrangements of capital letters
0018 A72-11549
Perspective effects on direction of rotation judgments, using figures with rectangular and trapezoidal contours
0022 A72-11698
Head mounted monkey eye orientation measuring system for performance of brightness discrimination tasks
0050 A72-13073
Inokihara charts readings in artificial daylight at low color temperatures, low light intensity and limited exposure time by normal and color defective subjects
0056 A72-13393
Horizontal and vertical eye motions and saccadic system orthogonal interaction mechanisms
0105 A72-17601
Human vision match adaptation effects on dichromatic color matches for bipartite centrally fixated circular matching field
0150 A72-19033
Uniform visual field influence on electroencephalographic alpha rhythms in man, discussing ocular fixation, visual attention and vigilance change effects
0150 A72-19040
Visual search model from perceptual theory and experimental studies and search data, discussing selection, inspection and making single cued letters in visual array
0225 A72-23647
Stochastic models of human performance effectiveness functions reliability and correctness from error data generated by tracking and vigilance tasks
0229 A72-24001
Head steadiness during unrestricted linear arm movements and eye-hand coordination tasks, showing tremor occurrence in up-down plane
0235 A72-25113
Multichannel information processing task complexity relation to operator performance for rapidly increasing input conditions
0235 A72-25115
Vigilance performance prediction for difficulty-matched auditory and visually and closely coupled visual intensity discrimination tasks
0236 A72-25127
Anisotropic responses to dot and line visual stimuli, obtaining judgments on apparent straightness for various visual field locations and dot densities
0237 A72-25183
Short sleep period and oxygen breathing effects on arousal level of air traffic controller during detection task performance
0275 A72-26686
Work-rest scheduling and sleep loss effect on operator performance in watchkeeping and active multiple visual tasks
0275 A72-26689
Cumulative sleep deficit, preceding sleep or wakefulness period duration and body temperature effects on reaction time in multiple choice visual task
0276 A72-26690
Project Pegasus vigilance tasks for mental performance aspects of time zone change effects on human circadian rhythms
0276 A72-26695
Character recognition experiments to determine attention control and temporal-spatial capacity limitation during visual information processing
0276 A72-27074
Interhemispheric effects on choice reaction times to single and multiple letter displays, analyzing cerebral dominance and visual information transmission compared with verbal response
0279 A72-27075
Computer analysis of helicopter pilots eye movement patterns dependence on visual task skill and performance time
0281 A72-27475
Human visual accommodation biorythm and reactions under hard physical work and visual stress
0327 A72-28749
Individual differences in motion-in-depth detection from Lissajous pattern test for judgment of object approach, receding and movement rate
0341 A72-30965
Target and surrounding non-target stimulus size differences effect on visual search time for displays with large fields
0345 A72-31553
Predictive model for human operator performance in short term visual information processing based on psychological research to obtain decision accuracy and response time
0378 A72-33665
Hyporia and peripheral visual stimulus position effects on response time during monitoring of centrally located stimulus light
0379 A72-34095
The effect of target contrast variation on dynamic visual acuity and eye movements.
Colorimetric photometric matching tests, showing subject differences in parafoveal spectral sensitivity indicated by photopic curve peaks.

Eye movement pattern monitoring to investigate retinal afterimage role in release of pursuit movements.

Experimental tests of Von-Behrens hyperactivity of autokinesis mediation by attention distribution mechanisms.

Assessment of life span age difference relations in visual perceptual tasks, taking into account extraneous and generational differences.

Theoretical models for speed-accuracy tradeoff during difficult visual discrimination tasks under time pressure.

Brightness vision performance measure based on object recognition experiments with optical instruments, noting improvement with image intensifier.

Team size and decision role in the performance of simulated monitoring teams.

Proximity and direction of arrangement in numeric displays.

Error search reading tasks to investigate practical applicability of blinking display coding techniques, noting reading speed reduction compared to steady display.

Body orientation under vertical sinusoidal vibration.

A psychologist's laboratory approach to a human factors problem.

Human operator dynamics for aural compensatory tracking.

Interruption movement control theory for prediction of visual correction applied to target aiming during illumination loss.

Visually directed pointing as a function of target distance, direction, and available cues.

Moving spot detection threshold measurement for varying exposures, noting product of stimulus duration and velocity for comparison with Bloch law.

Role of eye movements in the perception of apparent motion.

Mathematical model for digit summation task search time distribution dependence on size of visual display with randomly arranged three digit numbers.

VOLCAB010SI

Volcanic island of Surtsey after 1967 lava eruption, discussing terrestrial and submarine and subaerial volcanoes.

Ecogenesis of volcanic island of Surtsey after 1967 lava eruption, discussing terrestrial and submarine and subaerial volcanoes.

Ecogenesis of volcanic island of Surtsey after 1967 lava eruption, discussing terrestrial and submarine and subaerial volcanoes.

Echocardiographic determination of left ventricular dimensions, volumes and performance.

Volterra integral equations for analyzing significant biological products and relation to physiology.

Vapor-liquid equilibrium analysis of water soluble volatile organic compounds in closed air tight systems by gas chromatography.

VOLUME ANALYSIS

Volumetric analysis of blood oxygen and CO, showing combination with hemoglobin without significant molecular volume increase.

Effect of beta-adrenergic blockade on plasma volume in human subjects.

Echocardiographic determination of left ventricular dimensions, volumes and performance.

A method for spirographic display of functional residual capacity and other lung volumes.

Electrocardiographic data for tidal volume and minute ventilation measurements.


WAVETRAIN

Wave action theory of wave height and period, considering wave length and wave period.

WATERFALL

Wave action theory of wave height and period, considering wave length and wave period.

Wave action theory of wave height and period, considering wave length and wave period.

Wave action theory of wave height and period, considering wave length and wave period.

Wave action theory of wave height and period, considering wave length and wave period.
Subject Index

Sleep-wakefulness cycle variations effect on reaction time and spontaneous tempo during time isolation experiment, showing tendency toward circadian rhythm

[Page 275] A72-26667

Nocturnal private motus trivirgatus: wakefulness-sleep cycles during dark/light periods expressed in REM/non-REM cycles

[Page 226] A72-29300

Weightlessness effects on animal voluntary motor activity and wakefulness from brain and muscle area electrical activity recordings during ballistic flight

[Page 374] A72-33548

Cerebral blood flow and metabolic changes during wakefulness, sleep, coma and epileptic seizures in terms of homeostatic mechanisms

[Page 376] A72-33558

Biotometry and computer analysis techniques for sleep states and wakefulness studies during aerospace flight

[Page 376] A72-33560

Dynamics of the electrical activity of various regions of the neocortex during the sleep-wakefulness cycle

[Page 518] A72-82955

Spectral analysis and integration of electroencephalograms during sleep and wakefulness  [NASA-TT-F-14172]

[Page 225] A72-18110

Adaptation of cardiac contractions to changes in weightlessness

[Page 338] A72-24112

Effect of circadian variations in sleep-wake cycle on optical and acoustic stimuli reaction times  [IAE-LIB-TRANS-1668]

[Page 505] A72-32093

Wake

Hydrodynamic wake, drag, and vortex formation behind fish and dolphins

[USPS-55163]

Vortex formation and vortex-induced resistance in fish wakes

[Page 240] A72-18067

Walking

Tandem walking on floor with eyes closed as ataxia test for vestibular function assessment

[Page 240] A72-27476

Energy cost/oxygen consumption/prediction for treadmill and various levels terrain walking at two speeds under three different pack loads

[Page 240] A72-30706

Rhesus macaque performance on an anterior superior iliac spine used during terrestrial movement by frequency response of signal on magnetic tape

[Page 307] A72-73200

Metabolic energy requirements for pushing loaded handcar, measuring expenditure during treadmill and outdoor asphalt circuit walking

[Page 404] A72-40419

Application of cyclogrammetric method for analyzing the walking characteristics of crew members following flight of Soyuz 9 spacecraft

[Page 203] A72-17069

Analysis of motion of legs and center of gravity of torso in walking on flat, level ground

[Page 528] A72-30105

Walking Machines

Artificial biped locomotion dynamic equilibrium, representing mathematical model by two nonlinear differential equations with variable coefficients

[Page 515] A72-18703

Wall Temperature Distribution

Wall Temperature Distribution

Warfare

St Chemical Warfare

St Corpus

Wartime setting of air force pilots returning from Vietnam  [Ad-742665]

[Page 353] A72-31113

Warning Devices

Warning Signals

Warning Systems

Alerting light and audio signals for aircraft pilots, considering implications for aircraft design

[Page 1015] A72-11291

Vibrotactile warning device effectiveness under auditory and visual loadings, investigating reaction time and errors number

[Page 180] A72-21569

Automation in planning and execution of flights, considering navigation, communication, flight instruments monitoring, control/stabilization and warning systems

[Page 2216] A72-22780

Pilot warning systems for visual midair collision avoidance, noting reaction to imminent threats, scanning patterns and display sector size effects  [SAE PAPER 720371]

[Page 2265] A72-25576

Head-up omni-directional retinal display device for visual detection facilitation in aircraft collision avoidance systems

[Page 2599] A72-28297

Analysis of pilot performance and response to collision threats provided by pilot warning instruments  [FAA-AH-71-54]

[Page 2087] A72-13082

Effectiveness of tactile warning system under varying gravity loads and flight conditions

[Page 1915] A72-16090

Evaluation of oxygen-sensing warning device for use in damage control suit system  [AD-73577]

[Page 3317] A72-21082

Waste Disposal

Food ration effect on metabolite elimination rate in humans waste isolation garment at rest or performing physical labor

[Page 3065] A72-31825

Catalytic oxidation of gaseous products formed during thermal treatment of human wastes, considering bopalcatal, Cu-Cr, Cu-Co, Pt and Pd catalysts for oxidation of vapor-gaseous phase

[Page 3061] A72-31764

Development of a spacecraft wet oxidation waste processing system

[Page 562] A72-39714

Dry incineration of wastes for aerospace waste management systems

[Page 562] A72-39715

Some transport techniques for liquid human wastes and wash water under space flight conditions

[Page 562] A72-40786

Catalysts for oxidation of vapor-gaseous phase formed during pyrolysis of human wastes

[Page 5013] A72-14084

Design and fabrication of prototype for automatic transport system for transferring human and other wastes to incinerator unit onboard spacecraft  [NASA-CS-114303]

[Page 5127] A72-14113

Simulated flight tests of waste disposal system for use on manned spacecraft  [NASA-CS-115327]

[Page 5141] A72-15093

Pressurized tank for feeding liquid waste into processing equipment  [NASA-CR-681-10365-1]

[Page 5041] A72-27102

Human liquid waste and water transportation during space flight

[Page 5041] A72-29067

Design and development of prototype wet oxidation system for water reclamation and fecal/urine processing equipment  [NASA-CS-1125151]

[Page 5072] A72-33115

Waste Utilization

Water and waste management subsystem design for a space station prototype

[Page 5062] A72-30169

Compression distillation unit design and development for integrated water and waste management system onboard spacecraft, describing reliability and performance tests  [ASA PAPER 72-5328-1]

[Page 5062] A72-39176

Spacecraft food synthesis, using carbon dioxide from space and water from chemically regenerated human
Posthypoxic thirst and relative dehydration of functional adaptation, thermoregulation, and water balance of miners doing heavy work in hot damp climate.

- Water loss replacement effect during rest and exercise in high temperature environment thermoregulation experiment.
- Effect of prolonged restricted motor activity on metabolism and water loss in miners.

Aerospace waste and water management technologies for community and household applications.

- Water and waste management subsystem design for space station prototype.
- Mechanism for dispensing precisely measured charges of potable water into reconstitution bags.
- Human liquid waste and waste water transportation during space flight.

Design principles of hyperfiltration shower wastewater reclamation system operating at elevated temperature.

Low hydrodynamic drag of fish and dolphins related to biochemical processes and organic molecule synthesis for evolution of life.

- Influence of thermal, osmotic, and chemical challenges of potable water into reconstitution bags.
- Waste and water management technologies for community and household applications.

- Biowaste resistojet propulsion system for space station prototype.

- Spinal cord heating and cooling effects on body temperature, respiratory and heart rates and arterial blood pressure, investigating feeding and drinking behaviors.

- Weight loss due to respiratory tract evaporative water loss during exercise, from humidity change, ventilatory exchange and oxygen uptake data.

- Water loss replacement effect during rest and exercise in high temperature environment thermoregulation experiment.
- Effect of activity and temperature on metabolic and water loss in miners.

Aerospace waste and water management technologies for community and household applications.

- Water and waste management subsystem design for space station prototype.
- Human liquid waste and waste water transportation during space flight.

Design principles of hyperfiltration shower wastewater reclamation system operating at elevated temperature.

Low hydrodynamic drag of fish and dolphins related to biochemical processes and organic molecule synthesis for evolution of life.

- Influence of thermal, osmotic, and chemical challenges of potable water into reconstitution bags.
- Waste and water management technologies for community and household applications.

- Biowaste resistojet propulsion system for space station prototype.
moisture condensates

The problem of decontaminating and preserving drinking water in spacecraft water supply systems

Engineering process of obtaining bacteria free water from human waste during extended space missions

[AD-727040] p0037 A72-10096

Synthesis and application of redox polymers in sorption method for purifying water of organic impurities


Erythropoietic changes in fish and rats caused by water regenerated from human urine

[AD-722912] p0123 A72-14083

Development and evaluation of method for producing potable water from condensates and poorly mineralized water

[AD-727044] p0204 A72-17075

Possibility of chemiluminescence method for monitoring sterility of reconstituted water using tape sample transport system


Sanitary and chemical evaluation of water regenerated from atmospheric condensate by extraction with amine and alkylo phosphonic acids

[AD-721358] p0481 A72-29056

Design principles of hyperfiltration shower wastewater reclamation system operating at elevated temperature


Design and development of prototype wet oxygen system for water reclamation and fecal/waste disposal on manned spacecraft


WATER RECOVERY

U WATER RECLAMATION

WATER TREATMENT

Vapor-liquid equilibrium analysis of water soluble volatile organic compounds in closed airtight systems by gas chromatography

[p0328 A72-29325]

Some transport techniques for liquid human wastes and wash water under space flight conditions

[p0491 A72-40436]

The problem of decontaminating and preserving drinking water in spacecraft water supply systems


Annotated bibliography of water purification and decontamination including recycling of closed ecological systems for potability of water

[NAS-725610] p0480 A72-29056

Water decontamination by silvered filters that create silver ion concentrations in solutions

[AD-721358] p0123 A72-14083

Development and evaluation of method for producing potable water from condensates and poorly mineralized water

[p0204 A72-17075]

Development of bactericidal agent for space shuttle potable water systems


WATER VAPOR

Development of a desiccant CO2 adsorbent tailored for shuttle application

[AD-PAPER 72-ENAV-11] p0461 A72-39166

Integrated water vapor electrolysis oxygen generator and hydrogen depolarized carbon dioxide concentrator development

[AD-PAPER 72-ENAV-7] p0622 A72-39170

Six-sea solid electrolyte oxygen regeneration system for producing 12.5 lbs oxygen daily by electrolysis of CO2 and water vapor


WATER VEHICLES

MT AIRCRAFT CARRIERS

MT SHIPS

MT SUBMARINES

MT UNDERWATER VEHICLES

Portable life support system for protective fully enclosed suits of shuttle personnel

[p0443 A72-27111]

WAVE ATTENUATION

MT ACOUSTIC ATTENUATION

WAVE DISPERSION

Blood viscosity and distributed external constraints and viscoelastic properties of vessels effects on wave dispersion and dissipation in arteries and veins

Viscosity and constraints effects on wave dispersion and dissipation in blood vessels, comparing theory with experiments on dogs

[p0073 A72-15466]

WAVE OSCILLATORS

U OSCILLATORS

WAVE PROPAGATION

MT LIGHT SCATTERING

Human pulse wave propagation velocity measurement, using biotelemetry system of photoresistance sensors and endoscopic bulbs connected to electrocardiograph

[p0031 A72-12519]

Blood flow mathematical formulation, considering tissues constitutive equations, effects of pilot configurations, arterial wave propagation, etc

[p0111 A72-17959]

Digital computer simulation of human systemic arterial pulse wave transmission - A nonlinear model.

[p0429 A72-37028]

Propagation of longitudinal elastic waves along spinal column

[AD-720471] p0528 A72-30106

WAVE RADIATION

U ELECTROMAGNETIC RADIATION

MT LIGHT SCATTERING

WAVE SUPERSONICITY

U SHOCK TUNES

WAVEFORMS

MT PULSE AMPLITUDE

MT PULSE DURATION

WAVELENGTH

Device for irradiating biological materials with light at wavelengths between 250 and 650 nm

[ML-1972-1] p0383 A72-24077

WEAPONS SYSTEMS

Pilot-aircraft system model for relationship between weapons delivery accuracy and manual flight control system design, noting display, computation and control aids to pilot

[p0288 A72-28121]

Development of model to determine effects of pilot performance and aircraft dynamics on accuracy of tactical weapon delivery

[AD-728243] p0082 A72-12037

WEAPONS DEVELOPMENT

USAF aerospace medical research on human capabilities as limiting factor in defense systems development, discussing environmental simulators and human test facilities

[p0498 A72-40973]

WEATHER

MT COLD WEATHER

MT WEATHER (NAMES)

MT WEATHER (TOPICS)

MT ORGAN WEIGHT

WEIGHT MEASUREMENT

Construction of animal centrifuge, and relationship between discriminability of g differences and location along effective weight continuum

[NASA-CR-127067] p0431 A72-26043

WEIGHTING FUNCTIONS

Spatial characteristics of equal energy visual stimuli in setacontrast design for targets and bands of constant separation and varying width, deriving weighting functions

[p0285 A72-27680]

Man machine control system synthesis, noting quality criteria and estimates for weighting function coefficients of optimization potential

[p0552 A72-35508]

WEIGHTLESSNESS

Stability hypothesis for zero gravity produced inversion illusion mechanism in aircraft parabolic flight, noting otolithic membrane deflection result of force on maculae

[p0020 A72-17110]

Astronaut zero gravity adaptive responses in performance, locomotion, orientation, sleep and physiological and functional characteristics

[p0055 A72-13867]
WEIGHTLESSNESS

Soviet book on astronaut activity psychological features covering space flight living conditions, space and time perception, psychophysiological mechanisms changes and weightlessness effects

Space environment weightlessness and radiation effects on locomotor, metabolism, reproduction and growth from rocket biological experiments

Soviet book on gravitational effects on animal evolution covering land and aqueous conditions adaptation and weightlessness in space

Calcium metabolism perturbations in astronauts under weightlessness conditions and in immobilized test subjects, noting bone tissue renewal cycle modification, calcification variations and drug reactivity

Medicobiological investigations of prolonged weightlessness effects on astronaut physiological system based on Soyuz flight program

Weightlessness effects on human organism, discussing physiological changes, artificial gravity by spacecraft rotation and exercise to counter adverse reactions

Prevention of weightlessness effects on blood hydrostatic pressure, musculoskeletal system and sensorimotor performance, discussing space flight training and space environment simulation tests

Human organism readaptation after prolonged hypokinesia and weightlessness, discussing coordination disturbances, vegetative and vascular system instabilities, reduced orthostatic stability and asthenia

Human waste management system evaluation in zero gravity flight tests, presenting design concept for collection by air flow technique

Medical investigations at Salyut space station flight, discussing weightlessness effects and efficiency evaluation of preventive measures for crewmembers high performance in space flight

Long term weightlessness-induced physiological response normalization by muscle bioelectrostimulation, muscular tissue energy load increase and mineral metabolisms stabilization

Technology B and D program to qualify for long term weightlessness, assessing space flight stress effects on physiology and psychology

Prolonged weightlessness effects on cardiovascular, digestive, musculoskeletal and nervous systems, blood and metabolism, noting compensatory reactions

Physiological effects on prolonged weightlessness in dons aboard Cosmos 110 biosatellite, emphasizing body weight loss and enzyme activity and bone tissue mineral concentration changes

Weightlessness effects on animal voluntary motor activity and wakefulness from brain and muscle area electrical activity recordings during ballistic flight

Space environment weightlessness induced perceptual deprivation, considering hand-eye coordination, visual judgments and action and time perception

Long term space flight weightlessness and hypodynamic effects on orthostatic and vestibular tolerances, infection susceptibility and drug reactivity

Weightlessness effects on calcium and electrolyte metabolisms from measurements during Geissini 7 flight, using dietary control and excreta collection techniques

SUBJECT INDEX

Sleep factors and limitations during prolonged space flights, considering weightlessness effects, hypokinesia, nervous tension, cabin confinement, rhythm, environment and noise effects

Vestibular behavior of fish during diminished g-force and weightlessness

Russian book - Intracranial blood circulation under conditions of accelerations and weightlessness

Space shuttle waste collection system development, discussing human-interface requirements, zero gravity effects and operational considerations

Effects of weightlessness on astronauts - A summary

Effects of an 18-day flight on the human body

Functional insufficiency of the neuromuscular system caused by weightlessness and hypokinesia

Studies on weightlessness in a primate in the Biosattellite 3 experiment

Calcium metabolism under stress and in repose

GFO A orbital flight recording of bullfrog vestibular gravity sensor nerve fiber pulses for assessing necessity of artificial gravity during prolonged weightlessness

Effects of true and simulated weightlessness on human cardiovascular system

Medical research performed with crew of Soyuz spacecraft

Cosmos 368 weightlessness experiments on microorganisms, insects, animal cells, vegetable tissue, and seeds for biomedical control of long manned space flights

Laboratory simulation of weightlessness in order to develop methods for preventing harmful effects to human subjects

Methods for conditioning cardiovascular system during prolonged weightlessness

Metabolic weightlessness effects on calcium and nitrogen balance in skeletal and muscular systems of spacecru on Gemini 7

Synergistic effect of zero gravity and radiation on human leukocytes and Neurospora crassa

Weightlessness effect on fertilized egg growth

Weightlessness effects on achronic and achronic visual perception in humans

Pathogenesis of weightlessness syndrome during prolonged space flight

Aerospace-environment effects (noting weightlessness and bioevolution) on planets, cells, and frogs observed in Gemini and Biosattellite experiments

Effects of weightlessness on reactions and physiological responses of animals and humans

Experiments for asserting the pulmonary ventilation in weightlessness

Effects of weightlessness on cellular systems

Development of unstabilized propulsion devices for astronaut maneuvering in zero gravity - Skylab program

Effect of weightlessness and spacecraft environment on spontaneous and radiation induced somatic mutation rates and cytologic changes in Tradescantia

p0375 A72-33552
p0376 A72-33561
p0418 A72-35860
p0539 A72-43385
p0580 A72-43386
p0580 A72-43388
p0580 A72-43389
p0580 A72-43391
p0033 A72-10073
p0080 A72-12013
p0081 A72-12023
p0084 A72-12050
p0085 A72-12051
p0199 A72-16057
p0192 A72-16032
p0193 A72-16036
p0193 A72-16041
p0194 A72-16045
p0261 A72-19169
p0302 A72-20054
Wind Direction

Navigational behavior...

Wind Direction

Physiological and biological mechanisms responsible for amnesio-nautic orientation in beetles and scorpions...

Wind Effects

Radar observations of birds migrating in opaque cloud cover to determine effects of wind and meteorological conditions...

Wind Erosion

Effects of aeolian erosion on microbial release from solids...

Wind Pressure

Effects of Q forces on injuries during ejection/escape... Performance tests of protective clothing to determine effectiveness against air blast during high speed ejection...

Wind Tunnels

Laughing quail metabolism dependence on flight speed and angle during wind tunnel tests from oxygen consumption, carbon dioxide production and aerodynamic forces analyses...

Wind Velocity

Ground humidity and wind velocity effects on terrestrial scatometry and treadmill walking tests, measuring oxygen uptake, ventilatory parameters, and excess carbon dioxide production...

Winter

Earth biology likelihood from long winter model, suggesting north polar cap summer remnant vaporization at atmosphere, liquid water and greenhouse effect source...

WEB

NT ELECTRIC WIRE

WORDS (LANGUAGE)

NT SYLLABLES

cortical responses to visually displayed word and non-see syllable stimuli, using EEG and computer techniques...

Relationship of visibility fluctuations in set of luminous circles to verbal response learned for each circle, showing word association influence on stimuli perception...

Language and speech capacity of the right hemisphere...

Work

NT PHYSICAL WORK

Operator, task level and workload effects on... Frankfurt Airport air traffic controller opinion survey of attitudes toward work and working environment...

Work Capacity

Human exercise capacity assessment from maximal oxygen intake estimates and Harvard step test...

Optimal muscle work conditions experiments with rabbits, correlating total work performance and power output with muscle temperature variations...

Human mental working capacity estimation relation to functional state, discussing brain performance tests...

CO hypoxia effect on oxygen transport during exercise, discussing changes in cardiac and respiratory functions and work capacity...

ATC tasks workload assessment - conference, Dortmund University of Technology, June 1971...

Operator mental processes during ATC task performance, discussing work load effect, mental representation and operator algorithms definition...

Subject Index

Pilot and ATC radar controller workload variations, discussing distraction stress effects...

ATC task analysis by subjective rating of work load, discussing information processing measures, scoring method and observer rating procedure...

Time series analysis of physiological and work study data in ATC tasks, using heart rate as strain indicator...

Acceptable load standards in ATC tasks, defining moments of conscious brain control as mental load measure...

Ergonomic simulators for testing individual mental working capacity, using stress-strain and fatigue relation...

Aerobic work capacity indices of gas exchange pulse rate, pulmonary ventilation and acid base balance in runners, determining maximum oxygen utilization...

Protracted water immersion effects on renal function and plasma volume in trained and untrained subjects, noting deleterious effect on orthostatic tolerance and work capacity...

Physical work capacity comparison during bicycle ergometry and treadmill running tests, measuring oxygen uptake, ventilatory parameters, and excess carbon dioxide production...

Maximal oxygen uptake and heart rate during landerless climbing, inclined treadmill running and cycling ergometer tests...

Sleep deprivation effects relation to work duration, time of day, circadian rhythms, memory function, task performance, environmental factors, sleep and age...

Work capacity evaluation from fatigue, physiological factors, task performance, environmental consumption studies, discussing pharmacological stimulation effects...

Annual clinical and physiological evaluation of test pilots physical performance over ten year period from body composition, pulmonary function and work capacity measurements...

Work capacity and physiological responses to maximal exercise in 54 year old men in relation to heart disease and cardiovascular hazard studies...

Muscle metabolism of ATP, CP, glycogen and lactates at rest and during submaximal and maximal exercise...

Muscle and physical workload measures and differentiation in man machine systems...

Changes in certain hemodynamic indices during muscular strain in people with differing capacity to perform work...

Pilot workload assessment technique during transport aircraft approach and landing, correlating with aircraft maneuverability, crew efficiency, navigation aids, meteorological conditions and control procedure factors...

Accumulation ability of divers analyzed to determine effect of cold tolerance on work capacity...

Development of method for assessing information workload based on physiological measurements...

Effects of NaCl drinks on working efficiency in high temperature environments...

Health hazards and efficiency reductions of personnel exposed to simulated nuclear shock waves in protective shelters...
X-RAY PHOTOGRAPHY

Brain tumors in irradiated monkeys. p0816 72-35647
Neuropathological evaluation of monkeys exposed to body-alone X-radiation. p0824 72-36439

The use of a scintillation counter to measure diagnostic X-ray tube kilovoltage, radiation exposure rates and contamination by low energy gamma emitters. p0830 72-37197

Changes produced in the nerve structures of the stellate ganglion by total X-ray irradiation. p0507 72-41925

Summary of latent effects in long term survivors of whole body irradiations in primates. p0541 72-83393

Influence of X-ray irradiation in 25- and 250-r doses on the transplant immunity in mice differing by weak and strong histoincompatibility systems. p0542 72-83910

Effect of X-ray stimulation on olfactory system of rabbits and rats (COD-1669-7). p0043 72-11076

Effect of 6 MeV X-ray irradiation on blood plasma reducing substances in primates (AD-73109). p0242 72-18087

X-RAY PHOTOGRAPHY

U RADIATION

U X-RAY SPECTROSCOPY

U X-RAY SPECTROSCOPY

U X-RAY SPECTROSCOPY

X-RAYS

Biological damage inflicted to rats by protons, X rays and gamma rays. p0106 72-17675

XENOPHOBIA

BY CAFFEINE

BY UREA ACID

Mechanical vibration induced physiological changes in rats, determining plasma Ca, Na and inorganic phosphate concentration and xanthine oxidase activity response to frequency and g-levels. p0330 72-29560

Studies of the influence of theophylline on the vasodilating action of different medications on the cerebral and coronary circulation of man. p0426 72-36799

XENON COMPOUNDS

A note on the biological activity of the noble gas compound xenon trioxide. p0043 72-36044

XENON 133

Myocardial blood flow measurement in ischemic heart disease assessment, discussing Xenon 133 injection into coronary arteries. p0052 72-13179

Xenon 133 method for coronary blood flow measurement during exercise, noting unsuitability for patients with coronary disease. p0052 72-13180

Xenon 133 myocardial clearance method accuracy and reliability in determining high and low left coronary artery blood flow under different hemodynamic conditions. p0052 72-13181

Myocardial blood flow measurement by Xe 133 clearance method after direct application of isotope into subendocardial and subepicardial layers of left ventricle. p0052 72-13182

Blood flow stratification effect on alveolar gas exchange in liquid filled lungs in dogs from Xe 133 concentration measurements. p0232 72-24381

Coronary flow determination in experimental conditions with the use of radioactive xenon. p0850 72-37475

YAN

Lowular oscillation in yax effect of pilot-visual performance, showing vestibulo-ocular compensation and frequency response. p0897 72-35692

Congenent and spurious motion in the learning and performance of a compensatory tracking task. p0897 72-35692

INDEX

U ATTITUDE INDICATORS

U YEAST

Yeast glycolytic pathway oscillations related to concentration of diphosphopyridine nucleotide and other metabolites, noting analogy to behavioral and physiological rhythms. p0150 72-19541

Influence of Cosmos 368 space flight conditions on radiation effects in yeasts, hydrogen bacteria and seeds of lettuce and pea. p0540 72-43390

Effect of specific flight factors on preirradiated yeast cells during flight of Cosmos-368 artificial earth satellite. p0202 72-17059

Effect of specific flight factors on preirradiated yeast cells during flight of Cosmos-368 artificial earth satellite. p0202 72-17060

Sond 8 space probe experiments to determine effects of flight factors on physiological and biochemical properties of yeast and algal bacteria. p0203 72-17067

Experiments involving parasitic wasp Habrobracon, yeast, and Artemia salina on Biosatellite 2. p0302 72-20050

Inhibitory effects of glucose on biosynthetic respiratory adaptation of protozoans by yeast. p0435 72-26073

Freeze-striking method for studying yeast cell envelope structure. p0469 72-28046

Elevation of endogenous metabolism of Baker's yeast (Saccharomyces cerevisiae) as function of oxidized exogenous substrate (acetate, ethanol, or glucose). p0470 72-28055

Oxidative catabolism of pyruvate to acetyl coenzyme A in yeast cells. p0560 72-32077

YOUNG MODULUS

U MODULUS OF ELASTICITY

Z

ZERO GRAVITY

U WEIGHTLESSNESS

ZEBRA

In concentration in chlorella bodies of ribosome crystals in Ecteobea invadens, using absorption spectroscopy, electron microscope and dilithium staining techniques. p0365 72-31725

Simultaneous neutron-activation analyses of scandium, cobalt, iron, and zinc in biological objects with the aid of a total-absorption gamma spectrometer. p0539 72-43347

ZOND SPACE PROBES

Space flight effects on chlorella cell survival and mutability in Zond automatic stations. p0102 72-16775

Biological experiments on plants, animals and bacteria aboard Zond 5, 6 and 7 space probes, noting flight conditions effect on physiological functions and hereditary structures. p0267 72-25941

Space flight effects on chlorella cell survival and mutability in Zond automatic stations. p0417 72-35278

Zond 8 space probe experiments to determine effects of flight factors on physiological and biochemical properties of yeast and algal bacteria. p0203 72-17067

Biological effects of Zond 5, 6, and 7 flight on plants, animals, and bacteria. p0357 72-23072

ZOND 5 SPACE PROBES

Cytological, genetic and physiological analyses of space flight factors effects on seeds and plants aboard Zond 5 probe. p0366 72-31828
Typical Personal Author Index Listing

<table>
<thead>
<tr>
<th>PERSONAL AUTHOR</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABBREVIATIONS, N.</td>
<td>Varicose pattern synthesis techniques and their applications.</td>
</tr>
<tr>
<td>ABBOTT, J.</td>
<td>A computer model for the genesis of the electrocardiogram.</td>
</tr>
<tr>
<td>ABBOTT, J. K.</td>
<td>A comparison of serum cholesterol-esterase methods, 2</td>
</tr>
<tr>
<td>ABBONET, P. H.</td>
<td>Plasma erythropoietin in men and mice during acclimatization to different altitudes.</td>
</tr>
<tr>
<td>ABBOTT, J.</td>
<td>Erythrocyte life-span in mice acclimatized to different degrees of hypoxia.</td>
</tr>
<tr>
<td>ABBOTT, J.</td>
<td>Digital computer simulation of human systemic arterial pulse wave transmission - a nonlinear model.</td>
</tr>
<tr>
<td>ABBOTT, J. N.</td>
<td>Effect of selenium on the formation of the electrical potential in the retina.</td>
</tr>
<tr>
<td>ABBRECHNOVA, Y. K.</td>
<td>The secretion of pepsinogen and amylase in rat liver and hepatic autotransplants.</td>
</tr>
<tr>
<td>ABRESKOV, K.</td>
<td>Mathematical model of two-component alga-bacteria biocenosis.</td>
</tr>
<tr>
<td>ABRESKOV, K.</td>
<td>Mathematical model of a two-component algal-bacterial biocenosis.</td>
</tr>
<tr>
<td>ACHEKASA, T.</td>
<td>Changes in the hemostatic system and in blood and urine chemistry of human subjects following decompression from a hyperbaric environment.</td>
</tr>
<tr>
<td>ACHEKASA, T.</td>
<td>Experimental study of the effect of extremely-low-frequency electromagnetic fields on warm-blooded animals and microorganisms.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>The estimation of biological efficiency of effects of age.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>The effect of heat stress on reaction time to centrally and peripherally presented stimuli.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>A study of operator's work with data input devices.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>Information display method in discrete-production automatic control systems.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>Effect of hyperoxic media on the stability of rats during acute carbon monoxide exposure.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>Influence of a high oxygen content on the rate of formation and elimination of gaseous wastes in albino rats.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>Influence of a preliminary exposure to carbon monoxide on the development of hypokinetic disturbances in albino rats.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>Effect of a hyperoxic atmosphere on rat tolerance to acute carbon monoxide exposure.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>Handbook of aerosol behavior in saturation diving environments.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>Mathematical model of two-component alga-bacteria biocenosis.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>Mathematical model of a two-component algal-bacterial biocenosis.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>Changes in the hemostatic system and in blood and urine chemistry of human subjects following decompression from a hyperbaric environment.</td>
</tr>
<tr>
<td>ACHEKASA, T. N.</td>
<td>Experimental study of the effect of extremely-low-frequency electromagnetic fields on warm-blooded animals and microorganisms.</td>
</tr>
</tbody>
</table>
| ACHEKASA, T. N. | The estimation of biological efficiency of
secondary radiation of 70 GeV protons. [CEHR-71-16] p0025 A72-12057

ACKLES, K. B.
Cortical evoked response and inert gas narcosis in man. [NASP-TR-P-10211] p0262 A72-19171

ADAMS, D. O.
Retina - Ultrastructural alterations produced by extremely low levels of coherent radiation. p0417 A72-35396

ADAMS, J. A.
The forgetting of instrument flying skills. p0007 A72-10566

ADAMS, J. D.
Hematologic responses to hypobaric hyperoxia. p0217 A72-22876

ADAMS, K. A.
A continuum model of the priate body response to impact. [AD-739249] p0473 A72-28077

ADAMS, W. J.

ADAMS, W. J.
Life support system requirements. Volume 3: Section 3: Environment description. [AD-732075] p0244 A72-18101

ADAMS, W. R.
Chimpanzee sleep stages. p0001 A72-10074

Effect of a 30-day isolation stress on calcium, phosphorus and other excretory products in an unrestrained chimpanzee. [AD-739467] p0163 A72-20179

Bicarbonate patterns of an unrestrained chimpanzee under entanred and free running conditions. [AD-739467] p0163 A72-20180

Sleep-wake cycle of an unrestrained isolated chimpanzee under entanred and free running conditions. [AD-739469] p0163 A72-20181

Urinalogical considerations in space medicine. p0226 A72-23728

Urinary excretion values in 2-day food-deprived, unrestrained chimpanzees. p0234 A72-24822

EEG monitoring of a free-swimming diver at a working depth of 15 meters. p0282 A72-27878

Bioelectroencephalograhic and binaural analysis of sleep processes on earth and in space. p0376 A72-33550

Studies on weightlessness in a priate in the Biosatellite 3 experiment. p0540 A72-63388

PERSONAL AUTHOR INDEX

Neurophysiological estimates of human performance capabilities in aerospace systems (AD-735778) p0352 A72-22087

ADAMS, C.
Physical examinations of workers exposed to trichlorotrifluoroethane. p0233 A72-24590

ADAMS, B.
Conadrotropin secretion during sleep in normal adult men. p0103 A72-17128

ADAMS, K. A.
The optimal use of simulation. [AD-730591] p0206 A72-17086

ADAMS, O. S.
Frontal cerebral region and elementary mental activity. p0243 A72-36600

ADVANTAGE, S. N.

A Model for predicting aortic dynamic response to G sub x impact acceleration. p0292 A72-28271

AFREZI, B.
The production and characterization of specific antibodies to aldosterone. p0453 A72-38175

AGDENZIANI, N. A.
Influence of pressure chamber training on chain motor conditioned reflexes in rats. p0323 A72-28641

AGHADZHAN, R. A.
Effect of an atmosphere with a high carbon dioxide content on human tolerance to acute hypoxia and acceleration. p0204 A72-17071

Effects of hyperoxia on coagulating and anticoagulating systems in blood. [JPHS-5555] p0312 A72-21044

AGAPOV, V. T.
An investigation of the contractile function of the myocardium by the phase-coordinate method. p0187 A72-22186

AGABOV, G. B.
On the hydrolocation capability of dolphins. p0400 A72-25107

AGAYEKO, 0. I.
Glycolysis in adenovirus infected rat cell cultures and in adenovirus type 12 induced hamster sarcoma cells. [NASSA-TR-P-140561] p0087 A72-13062

AGEBY, G. B.
Military human factors engineering. [JPHS-5665] p0530 A72-30119

AGA, A. S.
Contribution of HIF bond recordings to the understanding of clinical arrhythmias. p0017 A72-11473

AGOSTON, N.
The Picosecond blood diagnostic device. p0221 A72-23257

AGRESS, C. M.
An indirect method for evaluation of left ventricular function in acute myocardial infarction. p0464 A72-39662

AGULIAN, S. E.
Intracellular potassium in cells of the distal tubule. p0555 A72-45231

AHBERG, B.
Muscle metabolism during isometric exercise performed at constant force. p0890 A72-40425

AIDARALIEV, A. A.
Brain and muscle state during stepwise adaptation to high mountain conditions. p0186 A72-22085

Conservation time limits of heightened organism resistance under various altitude aclimation conditions. p0542 A72-43908

AZAPET'IANTS, N. SH.
Spatial orientation of bats under the action of hypergravity. p0333 A72-30015
Cerebral apparatuses and internal analyzers

AKAPANTJEE, N. G.
Physiology of higher nervous activity. Part 2 - conditioned reflexes and adaptive behavior

AKAGI, J. M.
Therastable triose phosphate isomerase in a psychrophilic Clostridium

AKATOV, A. K.
Activation of biological properties of staphylococci isolated from persons during a prolonged stay in an air tight chamber

AKOB, G. B.
Functional asymmetry of the large cerebral apparatuses and internal analysers

AKOPIAN, A. I.
The history and clinical findings related to selective coronary angiography.

ALBERGHT, J. D.
The testing of thermal protective clothing in a reproducible fuel fire environment, a feasibility study

ALBERGHT, R. L.
An evaluation of regenerating hepatic tissue subjected to radio-frequency irradiation.

ALCALY, D.
Lymphohlastic transformation in vitro of blood lymphocytes in conjunction with the study of repeated spontaneous abortions

ALDICH, R. B.
Underwater space suit pressure control regulator

ALEKSAHDBOTA, I. T.
Comparision of tolerance to hypoxia and hyperoxia in chinchillas and quinea pigs.

ALEKSAHDBOVA, I. T.
Cerebral apparatus biosynthesis of substances which participate in neurohumoral mechanisms

ALEKSAHDBOVI, B. I.
Evoked responses in the auditory cortex of the cat to sounds from different directions. Part 2: Quantitative characteristics

ALEKSAHDBOVI, B. I.
Evoked responses in the auditory cortex of the cat to different sound orientation, part 1

ALEKSAHDBOVI, B. I.
The testing of thermal protective clothing in a reproducible fuel fire environment, a feasibility study

ALEKSAHDBOVI, B. I.
Study of bilateral cortical nerve connections between the preoral gyri and various cortical regions

ALEKSAHDBOVI, B. I.
Comparison of tolerance to hypoxia and hyperoxia in chinchillas and quinea pigs.

ALEKSAHDBOVI, B. I.
An examination of regenerating hepatic tissue subjected to radio-frequency irradiation.

ALEKSAHDBOVI, B. I.
Study of the resistance to infection of pregnant women by the lymphohlastic transformation test

ALEKSAHDBOVI, B. I.

ALEKSAHDBOVI, B. I.
The testing of thermal protective clothing in a reproducible fuel fire environment, a feasibility study

ALEKSAHDBOVI, B. I.

ALEKSAHDBOVI, B. I.

ALEKSAHDBOVI, B. I.

ALEKSAHDBOVI, B. I.

ALEKSAHDBOVI, B. I.

ALEKSAHDBOVI, B. I.

ALEKSAHDBOVI, B. I.

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ALEKSAHDBOVI, B. I.

ALEKSAHDBOVI, B. I.

ALEKSAHDBOVI, B. I.

ALEKSAHDBOVI, B. I.
Bioelectric control: Man and automatic systems
(SELECTED ARTICLES)
[AD-734Q53]

ALESHEV, N. P.
Modern concepts of electroreception
[AD-72-11545]

ALESHEV, N. P.
Potassium chloride test for echocardiogram
evaluation in flight personal medical appraisal
[AD-72-14748]

ALEXANDRO, L. E.
Change in growth processes in irradiated lettuce
seeds
[AD-72-17062]

Effect of flight factors on radiation damage to
chromosomes in dormant pea seeds
[AD-72-17064]

ALEGNA, L. A.
The effect of hypokinesis and hypodynamia on
inotropic cardiac arteries
[AD-72-19087]

ALEXANDER, B. B.
Safety of HBO chemoprophylaxis in aviation
personnel.
[AD-72-18972]

ALEXANDER, J. K.
Cardiac performance and the coronary circulation
of man in chronic hypoxia.
[AD-72-34992]

ALEXANDER, J. B.
Report of nine four hour exposures to 100 percent
oxygen at 11-13 feet of seawater
[AD-72-12038]

Biocmulical studies during saturation diving: A
comparison of a saturation dive with
satisfaction-exursion dives
[AD-74-00508]

ALEXANDER, K.
Sensihtization by annular surrounds - Sensitization
and masking.
[AD-72-13936]

ALEXANDER, B. L.
Effects of radiations on the genetic systems of
organisms in relation to their physical and
biochemical systems
[AD-72-12027]

AVERBE, P.
Human EEG is response to double flashes of light
during the course of dark adaptation - A Fourier
analysis of the oscillatory potentials.
[AD-72-19024]

ALL, K. A.
Retinoceptor responses - Their characteristics and
mechanisms.
[AD-72-12428]

ALLANREDS, E. S.
The problem of latent desynchronization
[AD-72-29314]

ALLAN, J. R.
Reverse flow personal ventilation
[AD-72-22097]

A laboratory comparison of three methods of
personal conditioning
[AD-72-12101]

ALLEE, P.
Systematic detection of myocardial infarction in
the course of medical screening of flight
personnel
[AD-72-29052]

Place of tropical pathology in medical assessment
of aircraft
[AD-72-37881]

ALLEE, K. L.
A study of the pressure of the cerebro-spinal
fluid by remote monitoring through the skull. I
-Biology.
[AD-72-19911]

ALLEE, H. P.
Hazard rate of recurrence in patients with
malignant melanomas
[AD-72-17113]

The USFSM cardiovascular disease follow-up study
- 1972 progress report.
[AD-72-28292]

Hazard rate of recurrence in germinal cell tumors
of the testis.
[AD-72-82498]
Unsuccessful attempts of asymmetric synthesis

Factor analysis of undergraduate and postgraduate

Left ventricular dynamics during handgrip.

Evaluation of the thermodilution technique for measuring coronary sinus blood flow.

Left ventricular dynamics during handgrip.

The brief vestibular disorientation test as an assessment tool for non-pilot aviation personnel.

On man-computer dialogue.

Evaluation of the thermoregulation technique for measuring coronary sinus blood flow.

Left ventricular dynamics during handgrip.

The brief vestibular disorientation test as an assessment tool for non-pilot aviation personnel.

On man-computer dialogue.
AABAS, A.
Hemodynamic reactions of man subjected to a gradually increasing stress measured by an external technique useful for the selection and supervision of personnel in aeronautics.

AABSEN, L. L.
Adaptation level and visual space perception [AD-733918].

AABYANOV, A. A.
Dynamic characteristics of human sight [AD-727174].

AABSEBRE, R. D.
Disqualification of flight personnel on the basis of the state of sight organs.

AABV, P.
Plasmatic and alimentary lipids among atherosclerotic subjects.

AACHEM, R. H.
Disparasitic action potentials registered in the electrocardiogram - A clinical and experimental study.

AACK, H. B.
The determination of an optimum size cylindrical handle by use of electrocytography.

AACHIT, P.
The effect of size, retinal locus, and orientation on the visibility of a single afterimage.

AAMF, A.
Natural aging and radiation-induced life shortening in Drosophila melanogaster.

AAMOS, F. P.
A system of differentiation in vitro of redees aquepti.

AABBACH, H.
Latencies and correlation in single units and visual evoked potentials in the cat striate cortex following monocular and binocular stimulations.

AABBREU, R.
Fascicular bladder: Physiological effects, tolerance.

AABBREU, R.
Radiological study of spinal injuries to pilots undergoing sudden ejection.

AABBREU, R.
Psychophysical principles of binocular vision.

AABBREU, R.
Human estimation of proportional distances and distance ratios with the aid of a reference length [AD-730283].

AABBREU, R.
Plasma renin activity in supine muscular exercise. Work capacity and physiologic responses to work - Men born in 1913.

AADBOSSHAR, M.
Experimental reproduction of intravascular erythrocyte aggregation.

AADODIC, A.
Statistical study of the clinical, physical, and psychic causes of temporary and permanent unfitness for flight service in air crews of the Italian Air Force.

AADOLIF, D. M.
A large-scale model of the human cardiovascular system and its application to ballistocardiography.

AADUER, D. P.
The effect of chloridperazine on visual field, extraocular muscle balance, colour matching ability and hand-eye co-ordination in man.

AADUER, D. P.
Non-invasive assessment of prosthetic mitral paravalvular and intravalvular regurgitation.

AADUER, D. W.
Visual acuity and visibility, experiments 5008 and 5013 [ERPT-S008].
BACH-Y-ETTA, P.
Neural substrates of sensory substitution. p0005 A72-10470

BACHE, B. J.
Simplified estimation of aortic valve area. p0286 A72-27734

BACHOPP, H.
Vagal control of ventilation and respiratory muscles during elevated pressures in the cat. p0155 A72-19446

BACHRACH, A. J.
Timing behavior in the assessment of adaptation to nitrogen narcosis [AD-728269] p0138 A72-15077
Effects of breathing air and helium-oxygen at several depths on response rates in multiple schedules [AD-730609] p0076 A72-28802
Differential behavioral effects of breathing air and helium-oxygen at three to ten atmospheres [AD-747680] p0532 A72-31106

BACHURSKY, T. I.
Determination of the functional state of the auditory analyzer through the action of short-term acoustic stimuli of increasing intensity. p0458 A72-36939

BACUS, K. C.
Neontal effects of long-term continuous animal exposure to carbon monoxide [AD-727564] p0034 A72-10080
Effects of inhalation of Freon 113 on laboratory animals [NASA-TT-F-67061] p0087 A72-13050
Hypotension during bronotrilfluoromethane exposure [AD-731569] p0242 A72-18048

BACON, B. J.
Development of planetary quarantine in the United States. p0539 A72-33882
Scientific and technical services for development of planetary quarantine measures for automated spacecraft [NASA-CR-126347] p0568 A72-33076

BADALAN, G. G.
Turbulent velocity in undisturbed and active photosphere. p0332 A72-29929

BAHRDEIN, L. K.
On the dynamics of various rhythms in the electrocorticogram of a cat asleep and awake [NASA-TT-F-140267] p0088 A72-12022
Spectral analysis of an electroencephalogram during sleep and wakefulness [NASA-TT-F-14772] p0245 A72-18110

BAHSKII, B. M.
The prediction of the condition of man during a space flight. p0508 A72-42067

BAYNOS, D. A.
Inhibition of vertebrate retinal lactic dehydrogenase during exposure to normobaric oxygen. p0226 A72-23729

BAGOD, V. G.
Biological properties of an anti-icing additive [AD-735541] p0315 A72-21068

BAGHUIS, L. C. J.
Hypersensitivity of the pupil - Periods of slow oscillations of unknown origin. p0030 A72-12490

BAGLAN, R. J.
An experimental comparison of scintillation and semiconductor detectors for isotope imaging and counting [0800-2401-48] p0572 A72-33120

BAGNAROVA, H. A.
Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord. p0550 A72-48589

BANADORA, E.
Detection of nuclear acid bases in photochemically synthesized self sustaining coacervates. p0285 A72-27657

BALLEY, J. C.
The postextrasystolic T wave change. p0017 A72-11474

BALLY, B. A.
Fluctuations in energy loss and their implications for dosimetry and radiobiology. p0207 A72-17622

BAIHOV, V. A.
Differential radiation effects of prolonged local vibration. p0072 A72-15235

BAKANSKA, V. V.
Influence of anodic acid on the coagulation of dogs with acute hypoxia. p0290 A72-28217

BAKER, H.
POLAC: A computer program to compute auto-, cross-lagged and pooled within-cell correlations [AD-73052] p0139 A72-15081
Diagnosis and prediction: A study of daily behavior patterns in TETTLE 2 [AD-733443] p0263 A72-19177
BAKER, G.
An investigation of visual, aural, motion and control movement cues [AD-726430] p0040 A72-10120
BAKER, W. M.
Acquisition of electroencephalographic data in a large regional hospital - Bringing the brain waves to the computer. p0152 A72-19307

BAKER, C. A.
Thermal relationship between tympanic membrane and hypothalamus in conscious cat and monkey. p0408 A72-23438

BAKES, G.
Anti-hijacking efforts and cardiac pacemakers - Report of a clinical study. p0228 A72-23740

BAKERS, J.
Synaptic organization of the vestibulo-trochlear pathway. p0417 A72-20501

BAKER, T. J.
Effects of physical training and electric muscle stimulation on the metabolism. p0543 A72-63921

BAKLAHOYAN, G. O.
Analysis of hypothalamic neuron discharges induced by somatosensory, sound, and light stimuli. p0173 A72-20895

BAKLAHOYAN, G. O.
Hypothalamic control of the electrical activity of the spinal cord. p0041 A72-20588

BAKLAHOYAN, G. O.
Characteristics of the background activity of hypothalamic neurons. p0550 A72-44588

BALCHANDRAH, V.
Reliability design for an airborne ecological system. p0229 A72-23999

BARKHOVSKII, I. S.
Effects of physical training and electric muscle stimulation on the metabolism. p0543 A72-43921

BALAGANTAN, L. A.
Analysis of hypothalamic neuron discharges induced by somatosensory, sound, and light stimuli. p0177 A72-21471

BALAB, R.
Effect of bursal state on cell number and functional saturation of the bursa. p0280 A72-27298

BALDESSAIRE, E. J.
Symposium on Linear Acceleration of Impact Type Introductory remarks. p0255 A72-19121

BALDESSAIRE, E.
Implantable blood pressure telemetry system. p0457 A72-38820

BALDREIG, G.
Vestibular behavior of fish during diminished g-force and weightlessness. p0040 A72-34569

BALDWIN, H. A.
Instrumentation for remote observation of physiology and behavior. p0159 A72-19912
BALDWIN, K. M.
Respiratory capacity of white, red, and intermediate muscle - Adaptive response to exercise.
0075 A72-21083

BALDWIN, B. D.
Studies of aircraft recognition training (AD-739923) .
0080 A72-28123

BALD, A. M.
Application of college and flight background questionnaires as supplementary nonscognitive measures for use in the selection of student naval aviators.

Factor analysis of undergraduate and postgraduate flight training grades.
0019 A72-11704

Effects of instructions on measures of stress and trait anxiety in flight students.
0009 A72-34664

BALES, H. B., JR.
Hazard rate of recurrence in patients with malignant melanoma.
0020 A72-11713

Hazard rate of recurrence in germinal cell tumors of the testis.
0051 A72-42969

Hazard rate of symptomatic recurrence in Hodgkin's disease.
0058 A72-45661

BALLE, A.
Behavior of some enzymatic activities of serum in polytraumatized subjects.
0050 A72-41188

The use of cholesteric liquid crystals in the study of skin temperature and their applications in aviation medicine.
0050 A72-41192

Behavior of some serum enzyme activities in man, after crash accidents, causing massive injuries.
0028 A72-19138

BROW, D. I.
Hemodynamic changes in man during immersion with the head above water.
0049 A72-34543

Regional lung function in man during immersion, with the head above water.
0045 A72-38701

BALLETT, T. J.
Specialized testing and evaluation of space-suit materials.
0016 A72-16432

BALLINGH, B. N.
Acute changes in the central nervous system of workers exposed to toluene.
0031 A72-29833

BALLOD, A. A.
Preparation and efficiency evaluation of silver-coated filters used for water disinfection and conservation.
0050 A72-16637

Producing and evaluating the effectiveness of silvered filters for decontaminating and preserving water.
0012 A72-14075

BALTSEFFI, E.
Inorganic pyrophosphate and the origin and evolution of biological energy transformation.
0064 A72-14798

BAMBE, R. G.
Extended testing of compression distillation. [NASA-PAPER 72-287176]
0062 A72-39176

Potable water bactericide agent development (NASA-CR-115595).
0078 A72-28108

BANCHERO, R.
Liquid breathing - Prevention of pulmonary arterial-venous shunting during acceleration.
00270 A72-26609

Effects plus Gx on acceleration on blood oxygen saturation and pleural pressure relationships in dogs breathing first air, then liquid fluorocarbon in a whole body water immersion respirator. (NASA-CR-127262).
00630 A72-27070

BANCHOFF, E. U.
Arterial blood gas tensions using phased dilution oxygen delivery techniques.
00290 A72-28255

Effects of exposure at 80,000 feet at different decompression rates.
00298 A72-28322

BANCHOFF, W. H., JR.
Ballistocardiographic and angiographic correlative study in idiopathic hypertrophic subaortic stenosis.
0051 A72-13142

Ventricular function in idiopathic hypertrophic subaortic stenosis - A ballistocardiographic and angiographic correlative study.
0056 A72-18442

BAND, E. G.
Calculation of rocket powered trajectories of a plane of symmetry model of a human subject and ejection seat (AD-730507).
00131 A72-14137

BAND, J.
Analytical study of the causes of medical unsuitness of flying personnel in the Belgian Air Force.
00126 A72-14903

BARBERE, R.
Effect of local heating and arterial occlusion on sweat electrolyte content.
00153 A72-15437

BARKS, D. C.
Clinical significance of the coronary arteriogram.
00055 A72-13484

BARKS, W. P.
Discontinuity of seen motion reduces the visual motion aftereffect.
00450 A72-37600

BAR-NOH, A.
Thunder: Shock waves in pre-biological organic synthesis.
00424 A72-36443

BARR, G.
The effects of heat stress on reaction time to centrally and peripherally presented stimuli.
00246 A72-31154

BARANETZ, D. G.
Functional condition of preocartilary arteries during experimental hypoxia and hypokinesia.
00106 A72-17674

BARAMONOV, V. L.
Methodical aspects of studies of organic differential-game systems.
00557 A72-45517

Investigation of an organic differential game.
00557 A72-45523

BARAMONOV, V. N.
Diurnal changes of gas exchange indices in man.
00326 A72-29318

BARAMONOV, V. P.
Investigation of otocholinaryngological organ reactions in man under hypoxia.
00543 A72-43917

Study of selectivity in adaptation to Coriolis and linear accelerations.
00075 A72-11997

BARANES, S.
Effect of chronic microwave irradiation on the blood forming system of guinea pigs and rabbits.
00019 A72-11708

Effect of hypoxia on the diurnal mitotic activity rhythms of the normal erythropoietic system.
00092 A72-40442

Effect of hypoxia on the diurnal rhythms of mitotic activity in the bone marrow erythropoietic system.
00121 A72-14069

BARR, A. S.
Acceleration tolerance of man after a lasting exposure to conditions of simulated weightlessness.
00131 A72-26404

BARETTA, R. D.
Experimental human exposure to carbon monoxide.
00305 A72-10087

BARETTO, J. C.
Activity of laryngeal motoneurons during Bering-Breuer reflexes.
00218 A72-22975

BARKEE, R. S.
Computer simulation of the space shuttle orbiter environmental thermal control system.
space shuttle. [NASA PAPER 72-ZHAP-13] p0461 A72-39164

BELCHER, D. N.
Effect of psychotropic substances on human tolerance to acceleration p0034 A72-26055

BENNSHEI, I. B.
Study of electrobioluminescence of the blood p0225 A72-23694

BELL, V. E.
Pathophysiological principles of air and space pharmacology p0288 A72-27926

Effect of psychotropic substances on human resistance to acceleration p0092 A72-40443

The simultaneous action of stimulants and tranquilizers on the efficiency of a human operator p0540 A72-43923

BELASCO, W.
An integrated medical system for long-duration space missions. p0501 A72-41305

BELAY, V. Y.
Effect of psychotropic substances on man's tolerance to accelerations p0482 A72-29065

BELDA, R. V.
Prediction of vegetative reactions to extremal actions on the organism p0509 A72-42168

Effects of physical training and electric muscle stimulation on the metabolism p0543 A72-43921

BELKII, T. I.
Modifications of the rate of renewal of norepinephrine in various peripheral organs of the rat during exposure and acclimatization to cold p0547 A72-44244

BELKII, V. B.
Correlation between biopotentials of the deep brain structures during sleep development in man p0322 A72-28634

BELKOV, R. V.
Hypothetical 'heart-lungs' model p0233 A72-24640

Muscle-like structures and the problems of the polymer engine p0054 A72-38200

Automatically controlled delay in self-excited pulsating systems based on artificial muscles p0456 A72-38464

BELANTS, Y. N.
A life-supporting biological system with lower and higher plants p0365 A72-31826

BELBISH, S. H.
Subject organization and the health condition of test subjects p0543 A72-43913

BELV, Y. V.
Problems of modeling perception of distance from visible brightness of landmarks p0389 A72-20129

BELTSKII, N. A.
Biomedical problems of space flight (JPDFS-51660) p0562 A72-32107

BELJAN, J. B.
Effect of altered 'weight' upon animal tolerance to restraint. p0064 A72-14866

BELKII, V. L.
Effect of hyperoxic media on the stability of rats during acute carbon monoxide exposure p0091 A72-30837

Influence of a high oxygen content on the rate of formation and elimination of gaseous wastes in albino rats p0542 A72-43906

Influence of a preliminary exposure to carbon monoxide on the development of hypokineti s disturbances in albino rats p0542 A72-43909

Effect of a hyperoxic atmosphere on rat tolerance to acute carbon monoxide exposure p0431 A72-29058

BELI, C. R.
Duration of safe exposure for men at work in high temperature environments. p0235 A72-24990

The prediction of safe exposure times for men working in thermally severe environments [AD-732019] p0247 A72-18121

BELI, D. W.
Effect of binge drinking on maximum-level difference when getting from uncorrelated to correlated noise. p0489 A72-40346

BELI, G. R.
Short-term effects of ozone on the lung. p0171 A72-20884

BELI, I. R.
Perceptual differentiation of sequential visual patterns. p0499 A72-41021

BELI, V. B.
Animal response to sonic booms. p0182 A72-21909

BELIY, T. I.
Animal orientation and navigation [NASA-SP-262] p0306 A72-25062

BELBOUSE, B. J.
Fluid mechanics of a model mitral valve and left ventricle. p0277 A72-26775

BELIS, E.
Mathematics in biology and medicine [USCEE-416] p0523 A72-30069

BELROSE, P. C.
Possible steps in the evolutionary development of bird navigation p0397 A72-25076

BELGOSTE, V. M.
Effect of haaptobalin on the immunochemical properties of hemoglobin p0225 A72-23695

BELGOSKOVA, O. I.
Proliferative activity of blood-forming tissues under conditions of chronic experimental gamma-ray irradiation p0056 A72-14607

BELBIA, T. I.
Physio-ontogenetic laws of the maturation of corticometal projections of the visual cortex p0108 A72-17736

BELIBOV, B. V.
A hypothetical heart-lungs model p0405 A72-25140

BENG, C.
Study of times of tolerance to hypoxia among pupil pilots in the course of their aeromedical instruction in a decompression chamber p0056 A72-14567

BENCHOHOL, A.
Vectorcardiographic features of left anterior hemiblock combined with complete right bundle branch block. p0182 A72-21850

Clinical application of the Doppler ultrasonic flowmeter. p0278 A72-26778

BENDEB, N. A.
Radiation and zero-gravity effects on human leukocytes and Neumopsia crassa [EXP-5004] p0120 A72-14063

BENDER, B.
Evaluation of the hazard from exposure to electron irradiation simulating that in the synchronous orbit p0210 A72-17690

BENDER, R. S.
BR for late somatic effects in mice irradiated with 60 MeV protons relative to X-rays. [CEPR-1511] p0025 A72-12054

BENDEY, R. L.
A report of aviator grounding and aviator salvage in high performance fighter aircraft p0124 A72-14094

BENDEY, J. V.

Use of a mathematical model for the evaluation of head injury criteria [AD-764441] p0524 A72-30087

BENNOVERESKII, V. P.
Influence of cosmic 368 space flight conditions on radiation effects in yeasts, hydrogen bacteria
BERGMAN, S. A., JR.
"Diving reflex" in man - its relation to isometric and dynamic exercise.
0547 J72-44370

BERGSTROM, J.
Muscle metabolism during isometric exercise performed at constant force.
0421 J72-35964

BERGSTROM, B. H.
The voluntary regulation of breathing in man.
0288 J72-27803

BERKHEISER, S. W.
Intracranial aneurysm and sudden death.
0228 J72-23742

Berkley, D. A.
Fluid mechanics of the cochlea. I.
0230 J72-24295

Bernd, J. P.
A new approach to clinical electrocardiography: The phase plane cardiogram.
0003 J72-10148

Benn, E. A.
The BIORAD user's reference manual (B-786-MIN).
0309 J72-20108

bernard, A. H.
Thermoelectric heating and ventilating system (AD-777720).
0391 J72-24139

Benns, D. H.
\( O_2 \) tolerance after 14 days bed rest and the effects of rehydration.
0295 J72-28295

BERNARD, B. L.
Determination of cardiovascular velocities by dopplercardiography. II - Detection of impaired left ventricular function.
0098 J72-16155

BERNOS, C. D.
Dark adaptation in the presence of waning background illuminance.
0158 J72-19827

BERNOAT, E. K.
Division of labor between man and machine in aircraft-based flight control - Development, status, and technology.
0237 J72-22781

BERNOAT, E. K.
0501 J72-41802

Goals and approaches of anthropotechnics.
0501 J72-41803

Prediction displays based on extrapolation method.
0502 J72-41809

Rental workload summary.
0504 J72-41827

BERRY, P.
Study of the diffusing properties of the retina - Application to the optical system of the eye.
0548 J72-104736

Phase correlation between two sources forced on a diffusing surface - Application to the human retina.
0548 J72-104736

BERRY, C. A.
Biomedical findings on American astronauts participating in space missions.
0055 J72-13867

Man, space flight and medicine.
0269 J72-26100

Biomedical aspects of Apollo biomedical operations.
0366 J72-31087

Past and future space flight experiments on man, and their spin-off contribution to world health.
0376 J72-33562

Effects of the space flight environment on man's immune system. I - Serum proteins and immunoglobulins.
0511 J72-42893

Effects of weightlessness on astronauts - A summary.
0539 J72-83385

BERRY, G. A.
Cross-sensory effects of white noise on color perception (AD-728199).
0087 J72-13065

Four in-depth studies of a flight training skill: Trial and error versus prompt learning evaluated on efficiency, transfer and stress.
0679 J72-28120

BERRY, W. M.
0382 J72-24070

BERRY, W. M.
Mechanisms of hemodynamic changes during muscle activity.
0071 J72-15232

BETTOLA, A.
The human body and vibrations (NASA-TP-F-10411).
0197 J72-17029

BETTOLAYA, V. D.
Effect of 5-ctryryptophan on the hypothalamic-hypophysial-adren'al complex under conditions of complete deafferentation of the medial-base hypothalamus.
0333 J72-30016

BETTENDORF, J. P.
Investigations to improve carbon dioxide control with anime and molecular sieve type sorbers (NASA-CR-112021).
0353 J72-22094

BETTENDORF, J. P.
Action of beta-adrenergic inhibitors on the coronary output of man.
0179 J72-21549

BRESCH, E. L.
Response of human subjects to reduced levels of water consumption under simulated civil defense shelter conditions.
0435 J72-26076

BRESSE, P.
Myocardial contractility assessment in man.
0360 J72-32493

BRUEGEL, R. M.
Biophysical and cytological studies with laser microbeams (AD-734181).
0307 J72-20090

BRUHLE, T. G.
Influence of prolonged photic and acoustic stimuli on unit activity in the lateral geniculate body of rabbits.
0134 J72-15045

BREULL, G. C.
Training airline flight crews.
0278 J72-26998

BROVAN, W.
Adaptation level and visual space perception (AD-733918).
0307 J72-20086

0388 J72-22086

BRUSSIS, N.
Inhaled ozone as a mutagen. II - Effect on the frequency of chromosome aberrations observed in irradiated Chinese hamsters.
0013 J72-11149

BRUNN, J. S.
A dynamic analysis of the arm complex subjected to an external load (AD-735078).
0441 J72-27096

BIANCHI, A. L.
Modification of the activity of bulbar respiratory neurons induced by cortical stimulation.
0341 J72-30843

BIANCHI, A. L.
Activity of laryngeal motorneurons during Hering-Breuer reflexes.
0218 J72-22975

BIANCHI, A. L.
Investigation made at CERN into the biological effectiveness of high-energy radiations (CERN-71-16).
0205 J72-12050

BICHER, M.
Light flash phenomenon seen by astronauts (NASA-CR-125453).
0192 J72-16034

BICHER, M.
Light flash phenomenon seen by astronauts (NASA-TP-1-60819).
0382 J72-24076
Left ventricular pressure-dimension relationships in the conscious dog.

DISSERT, A.
Analysis of mental processes involved in air traffic control.

DITTER, R. A.
Encoupetuated urinary corticosterone excretion in laboratory rats exposed to high pressure helium-oxygen environments.

DIXEY, E. W., JR.
A simplified technique for obtaining the high frequency ballistocardiogram in the erect position.

DJUREN, J.
Work capacity and physiologic responses to work - Men born in 1919.

DILL, A.
The oxygen supply to the retina. II.

DILLINGER, J.
Temperature controller for a fluid cooled garment

DILLINGHUR, C. E.
Handbook of sensor behavior in saturation diving environments

DILLINGUS, M. P.
The effects of alcohol on pilot performance during instrument flight

DILLINGUS, M. P.
A new model for estimating space proton dose to body organs.

DINNORD, J. H.
Modality, difficulty, and "coupling" in vigilance behavior.

DINWITCHEI, K. B.
Variation of the acetylcholine content and of the cholinesterase activity in the blood under muscular strain

DIENSS, M. D.
Changes in the hemostatic system and in blood and urine chemistry of human subjects following decompression from a hyperbaric environment.

DINEVOOY, V. I.
Effects of physical training and electric "muscle" stimulation on the metabolism

DINEVOOY, V. I.
The role of noncovalent interactions in the process of membrane stabilization of Micrococcus lysodeikticus

DICKHEAD, W. C.
Physiological changes during prolonged bed rest

DIBBAHFORD, W. L.
Temperature controller for a fluid cooled garment

DIBBAHOM, W. L.
Temperature controller for a fluid cooled garment

DIBBOS, K. A.
Analysis of mental processes involved in air traffic control.

DIBBON, W. H.
Encoupetuated urinary corticosterone excretion in laboratory rats exposed to high pressure helium-oxygen environments.

DIBFZ, E. W., JR.
A simplified technique for obtaining the high frequency ballistocardiogram in the erect position.

DJOZ, J.
Work capacity and physiologic responses to work - Men born in 1919.

DICK, A.
The oxygen supply to the retina. II.

DILL, A.
The oxygen supply to the retina. II.

DILLINGER, J.
Temperature controller for a fluid cooled garment

DILLINGHUR, C. E.
Handbook of sensor behavior in saturation diving environments

DILLINGUS, M. P.
The effects of alcohol on pilot performance during instrument flight

DILLINGUS, M. P.
A new model for estimating space proton dose to body organs.

DINWITCHEI, K. B.
Variation of the acetylcholine content and of the cholinesterase activity in the blood under muscular strain

DIENSS, M. D.
Changes in the hemostatic system and in blood and urine chemistry of human subjects following decompression from a hyperbaric environment.

DINEVOOY, V. I.
Effects of physical training and electric "muscle" stimulation on the metabolism

DINEVOOY, V. I.
The role of noncovalent interactions in the process of membrane stabilization of Micrococcus lysodeikticus

DICKHEAD, W. C.
Physiological changes during prolonged bed rest

DIBBAHFORD, W. L.
Temperature controller for a fluid cooled garment

DIBBAHOM, W. L.
Temperature controller for a fluid cooled garment

DIBBOS, K. A.
Analysis of mental processes involved in air traffic control.

DIBFZ, E. W., JR.
A simplified technique for obtaining the high frequency ballistocardiogram in the erect position.

DJOZ, J.
Work capacity and physiologic responses to work - Men born in 1919.

DICK, A.
The oxygen supply to the retina. II.
BREIDO, G. I.

Parameters of the oxygen metabolism in the skeletal muscles of adrenalectomized rats after physical strain

BREITSCHEIDER, H. G.

Frequency-specific color adaptation in the visual system

BREITSCHEIDER, H. O.

Holography as an aid for verifying a model of red blood cell rotation

BRENNER, G. L.

Skin and muscle components of forearm blood flow in directly heated resting man

BRENNAN, J. A.

Clinical and anatomic implications of intraventricular conduction blocks in acute myocardial infarction

BRENNAN, D. H.

Threshold levels for damage of the cornea following irradiation by a continuous wave carbon dioxide

BRENNER, R. H.

Factors that modif.[sic] the biosynthesis of saturated fatty acids in the endoplasmic reticulum

BRENNER, W. S.

The effects of various cyclic drugs upon the viability of Bacillus subtilis var. niger spores within solid propellant

BRENNER, B.

Dose-equivalent measurement in sized radiation field - The tissue-equivalent counter and processing of data.

BROCK, C. A.

Prediction of pilot performance during initial carrier landing qualification.

BUBERT, J. E.

An introduction to electromagnetic interaction hazards of electromedical equipment.

BUBERT, M. A.

Susceptibility of cardiac pacemakers to ELF magnetic fields

BUBERT, W. H.

Ecophysiology and space flight

BUBERT, G. H.

On the locus of the divided-attention effects.

BUBERT, J. W.

Studies of performance in complex aircrew tasks

BUEHLER, A. B.

Digital systems for data acquisition and storage

BUEHLER, L. E.

An experimental comparison of scintillation and semiconductor detectors for isotopes imaging and counting

BUEHLER, D. A.

Quadrupole components of the human surface electrocardiogram.

BUEHLER, A. G.

Ensemble characteristics of the human visual evoked response - Periodic and random stimulation.

BUEHLER, J. W.

Restrain design: Laboratory test and evaluation of operational effectiveness

BUEHLER, A. G.

Dynamic simulation techniques for the design of escape systems: Current applications and future Air Force requirements

BUEHLER, K.

Metabolic control of temperature compensation in the circadian rhythm of Zyglena gracilis.

BUESO, E.

Prolongation of BCG survival in the hypophysectomized rat.

BUESO, J. D.

Interrelationships of hemodynamic alterations of valvular heart disease and renal function - Influences on renal sodium reabsorption.

BUESSO, A. H.

Holography as an aid for verifying a model of red blood cell rotation

BUESSO, S. E.

Threshold levels for damage of the cornea following irradiation by a continuous wave carbon dioxide

BUESSO, J. D.

The origins of bacterial respiration.

BUESSO, B.

The origins of bacterial respiration.

BUESO, E.

Enzymatic and anatomic implications of intraventricular conduction blocks in acute myocardial infarction

BUESO, S. E.

High to low frequency electromagnetic fields - The tissue-eguivalent counter and processing of data.

BUESO, J. D.

The measurement of radiation exposure of astronauts by radiochemical techniques

BUESO, S. E.

The measurement of radiation exposure of astronauts by radiochemical techniques

BUESO, J. D.

The measurement of radiation exposure of astronauts by radiochemical techniques

BUESO, S. E.

The measurement of radiation exposure of astronauts by radiochemical techniques

BUESO, J. D.

The measurement of radiation exposure of astronauts by radiochemical techniques

BUESO, S. E.

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BUESO, J. D.

The measurement of radiation exposure of astronauts by radiochemical techniques

BUESO, S. E.

The measurement of radiation exposure of astronauts by radiochemical techniques

BUESO, J. D.

The measurement of radiation exposure of astronauts by radiochemical techniques

BUESO, S. E.

The measurement of radiation exposure of astronauts by radiochemical techniques

BUESO, J. D.

The measurement of radiation exposure of astronauts by radiochemical techniques

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

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Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches

PEDIOSO, E.

Pulse count audiometric equipment: New electromechanical and digital electronic approaches
The temporal relation of the second heart sound to aortic flow in various conditions. 

Primary prevention of atherosclerotic cardiovascular disease among the SABENA flying personnel. 

The effect of target contrast variation on dynamic visual acuity and eye movements.

The relationship of oxygen uptake and body temperature in man in acute and severe hypoxia. 

The relationship between anxiety and success in flight students.

The development of a motion picture measurement instrument for aptitude for air traffic control.
PERSONAL AUTHOR INDEX

California psychological inventory as a predictor of success in the Naval flight program. p0557 A72-45655
State and trait anxiety in the student naval aviator who voluntarily withdraws from flight training. [AD-727614] p0046 A72-11097
BODNER, H. C.

Bodner's polio in the pig-tailed monkey Macaca nemestrina during chronic altitude exposure. p0463 A72-39384

BOHNING, T. P.
Visual flash perception of accelerated nuclear flashes with the human retina. p0545 A72-43940
Light flash phenomenon seen by astronauts. (NASA-CR-125453) p0192 A72-16034
Light flash phenomenon seen by astronauts. (NASA-TM-X-86419) p0383 A72-24076
Visual phenomena induced by cosmic rays and accelerated particles. (NASA-TM-X-86460) p0432 A72-26051

BUDELIN, V. H.
Non-uniform distribution of the absorbed dose and radiobiological effect Assessment of radiation hazard in space flights. [CERN-71-16] p0025 A72-12060

BOECKE, H.
Effects of simulated space vacuum on bacterial cells. The combined action of individual heavy nuclei of cosmic radiation and space flight factors on biological systems in resting states: Biostack. p0194 A72-16050

BUEN, D. W.
Water-soluble insulin receptors from human lymphocytes. p0556 A72-45375
BUEN, J. C.
The standard 12-lead scalar electrocardiogram — an assessment of left ventricular performance. p0542 A72-43812

BUFFINGTON, H. E.
Nitrogen excretion as a measure of protein metabolism in man under different conditions of renal function. p0505 A72-45123

BOGER, E. M.
Influence of a high oxygen content on the rate of formation and elimination of gaseous wastes in albinos rats. p0542 A72-43906
BURL, D.
Interstellar molecules and the origin of life. p0216 A72-22645

BOHNER, F.
Medical and technical aspects of rescue and survival of astronauts in high mountain and mountainous remote areas. p0409 A72-34830

BOUTOLOVA, W. M.
Changes in cerebral, pulmonary, and peripheral circulation. p0543 A72-43914

BOKHAVOY, I. R.
Control mechanism of the pulmonary diffusion capacity. p0233 A72-24787

BOLLER, D.
Dependence of muscle efficiency on oxygen concentration in the venous blood. p0509 A72-42157

BOLEVEL, C. H.
Evaluation of a power-assisted breathing device. Part 1: Airflow characteristics. Part 2: Subjective preference for airflow over the face. [AD-740643] p0486 A72-25093
BOLLADOR, R. W.
Effect of high altitude on lactic dehydrogenase isozymes and anoxic tolerance of the rat myocardium. p0032 A72-12834
Effect of local heating and arterial occlusion on sweat electrolyte content. p0153 A72-19437

Adaptation to hypobaria — Sensitivity of myocardial tissue to carbon dioxide. p0271 A72-26616
Thyroidal influence on myocardial changes induced by simulated high altitude. p0411 A72-34730

BULBELL, H.
The measurement of three-dimensional body movements by the use of photographmetry. p0465 A72-39806

BULBER, T. H.
Neurophysiological findings relevant to echolocation in marine animals. p0388 A72-25086

BULGREN, E. L.
Characteristics of the afferent link of interoceptive reflexes. p0468 A72-40755

BULINSK, S. G.
Multichannel bioelectric control of the movements of humans in normal and pathological conditions. [NRC-TT-15521] p0495 A72-27134

BUSS, J. C.
Control of ventilation during speech. p0070 A72-15218

BURNET, L. M.
Exposure rates from experimentally fractionated fission products. [AD-732375] p0201 A72-17054
BUNO, W., JR.
Evoked potentials and central processing of visual information. p0108 A72-17723

BUCH, A. A.
Some effects of cognitive similarity on proactive and retroactive interference in short-term memory. p0512 A72-42548

BUCH, P. B.

BULILADANE, L. P.
Characteristics of the vascular-capillary network of the brain stem in man. p0321 A72-28462

BUDRIN, V. S.
Frequency rate of ranging signals of dolphins as a function of distance to target. [IAEA-P-59729] p0382 A72-24066
BUNGER, H. E.
Control theory applied to the chemical regulation of breathing. p0224 A72-12040

BUNGER, W. J.
Prediction of pilot performance during initial carrier landing qualification. p0343 A72-31088

BUNGCHE, W. A.
Respiratory protective device design, using control system techniques. p0485 A72-27128

BURN, P. E.
Foot forces exerted at various aircraft brake-pedal angles. [AD-733551] p0007 A72-10567

BURNETT, E. P.
A systems approach to C-130B aircraft. transitional training. [AD-727055] p0087 A72-12064
BURN, E. J.
Some observations on the three-dimensional growth of L5478Y cell colonies in soft agar culture. p0013 A72-11039

BUNOVSKAYA, T. E.
Physiological and hematological effects of chronic irradiation. p0540 A72-13392

BURNET, H. N.
The role of mast cells in the peroxidase activity of the thymus gland in experimental burns. p0329 A72-29330

BURNESTRUM, H.
Measurement of visual reaction time in both positive and negative g. [NASA-TJ-2-18000] p0083 A72-11071

BURNET, J. A.
The space flight crew and system reliability. [AIAA PAPER 72-228] p0230 A72-24439

B-22
to time and intensity.
the military environment  
[AD-736932]  p0351  N72-22081

CARB, R. W.  
A statistical investigation of crash accelerations  
effects on a seated occupant.  
[AD-726306]  p0369  N72-32603

Impact and vibration test equipment design and  
experimentation  
[AD-726119]  p0407  N72-11105

Two biodynamic models used to determine optimum  
energy absorber characteristics  
[AD-740447]  p0408  N72-29077

CARET, J. B.  
Miniature biotelemeter gives multichannel wideband  
bioelectrical data.  
[AD-729095]  p0480  N72-28956

CAREN, A.  
Systematic detection of myocardial infarction in  
the course of medical screening of flight  
personnel  
[AD-729096]  p0452  N72-37881

CABREDO, W. J.  
An annotated bibliography of the literature  
dealing with the physiological correlates of  
attitudes and attitude change  
[AD-739505]  p0472  N72-28071

CABROL, D.  
Signal value and physiological response to  
effective visual stimuli.  
[AD-728105]  p0428  N72-36917

CABRALL, H. W.  
Exercise-induced changes in serum enzyme  
activities and their relationship to maximum  
oxygen uptake.  
[AD-728107]  p0464  N72-14997

CABRELL, J. J.  
What the pilot sees during instrument approach in  
low-visibility conditions.  
[AD-728108]  p0417  N72-18832

CABSON, H. A.  
Apollo portable life support system performance  
report.  
[AD-728109]  p0442  N72-27110

CABER, P. B.  
New cancer therapy treatment techniques using  
space dosimetric concepts.  
[AD-728110]  p0553  N72-85112

CABPER, S. D.  
Investigations of laser skin hazards  
[AD-735794]  p0358  N72-23080

CABPER, V. L.  
Effects of inhalation of Freon 113 on laboratory  
animals  

CABDAI, F. W.  
Implantable blood pressure telemetry system.  
[AD-728111]  p0457  N72-38024

CASCAB, J.  
Mitochondrial alterations in heart, liver, and  
kidney of altitude-acclimatized rats.  
[AD-728112]  p0514  N72-82673

CASE, R. B.  
Ion alterations during myocardial ischemia.  
[AD-728113]  p0414  N72-36994

CAST, H. W.  
Neuropathological evaluation of monkeys exposed to  
[AD-728114]  p0424  N72-36439

Summary of latent effects in long term survivors  
of whole body irradiations in primates.  
[AD-728115]  p0541  N72-63393

CASE, C. H.  
Peripheral thermoregulation - Foot temperature in  
two arctic canines.  
[AD-728116]  p0303  N72-22019

CASTRA, L. E., JR.  
Interval scanning photomicrography of microbial  
cell populations.  
[AD-728117]  p0330  N72-29749

CASE, P. H.  
Liquid breathing - Prevention of pulmonary  
effects on the respiratory system during acceleration.  
[AD-728118]  p0270  N72-26609

Effects plus Gy acceleration on blood oxygen  
saturation and pleural pressure relationships in  
dogs breathing first air, then liquid  
fluorocarbon in a whole body immersion  
respirator.  
[AD-728119]  p0430  N72-27076

CASTAGNOLO, P.  
Development of the inner ear in albino rat embryos  
subjected to transverse accelerations of plus or  
minus 3 GY  
[AD-728120]  p0167  N72-20446

CASTELLANOS, A., JR.  
Contribution of EIS bundle recordings to the  
understanding of clinical arrhythmias.  
[AD-728121]  p0017  N72-11673

CASTILLO, A.  
Analysis of intracavitary electrocardiograms  
through a saline bridge in the diagnosis of  
cardiac arrhythmias.  
[AD-728122]  p0549  N72-44559

CASTILLO, C. A.  
Contribution of HIS bundle recordings to the  
understanding of clinical arrhythmias.  
[AD-728123]  p0617  N72-11673

CASTLE, B. E.  
External auditory canal temperature as an estimate  
of core temperature.  
[AD-728124]  p0171  N72-22086

Effect of stratified inequality of blood flow on  
gas exchange in liquid-filled lungs.  
[AD-728125]  p0232  N72-24081

CASTLE, B. W.  
The ultimate strength and failure mechanism of  
anthropoid knee joints  
[AD-740452]  p0526  N72-30095

CASTLES, T. W.  
Biomedical applications of aerospace technology  
[AD-734377]  p0400  N72-25101

CASTON, J.  
Efficient vestibular activity in the frog  
[AD-728126]  p0235  N72-25099

CATALL, A.  
Factors that modify the biosynthesis of saturated  
fatty acids in the endoplasmic reticulum  
[AD-728127]  p0467  N72-28056

CAUDY, D. W.  
Sessile-closed-circuit atmosphere control in a  
portable recompression chamber  
[AD-728128]  p0483  N72-27116

CAVAGNA, G. A.  
Jumping on the moon - Power output at different  
gravity values.  
[AD-728129]  p0282  N72-27479

CAVALLO, H.  
Analysis of intracavitary electrocardiograms  
through a saline bridge in the diagnosis of  
cardiac arrhythmias.  
[AD-728130]  p0549  N72-44559

CAVOKINS, C. B.  
Sensitivity of the human ERG and VEP to  
simultaneously modulated light.  
[AD-728131]  p0548  N72-44383

The study of retinal burn: A method for training  
and measuring visual acuity in Rhesus monkeys  
[AD-733888]  p0255  N72-19916

Visual acuity under conditions of chromatic  
differences without differences in luminance  
[AD-728132]  p0315  N72-21063

Threshold for permanent functional and  
morphological visible damage in human retina  
using visible radiation  
[AD-735802]  p0356  N72-23079

CBREN, R.  
Effects of radiation and acceleration on the  
structure of cytoplasm in vivo  
[AD-728133]  p0296  N72-16071

Effects of radiation and acceleration on the  
structure of cytoplasm in vivo  
[AD-728134]  p0194  N72-16047

CESSION-POISSON, A.  
Stimulation of the adrenergic system by potassium  
ions in rats  
[AD-728135]  p0239  N72-18061

CHEFALIS, A. M.  
Chemosensory ventilatory response to CO2 in man at  
low and high altitudes.  
[AD-728136]  p0286  N72-27720
### Personal Author Index

**Engineering modeling of data encoding in biological sensors**
- Chapeau, R. A.

**Biochemical changes in the endosperm of wheat seedlings in the weightless state**
- (BEEP-P-1138)
  - p003 A72-20058

**The limb angle of a plagiogeotropic organ under weightlessness**
- (BEEP-P-1017)
  - p030 A72-20059

**Light flash phenomena seen by astronauts**
- [NASA-CR-125451]
  - p0192 A72-16034
  - p0303 A72-20059

**Visual phenomena induced by cosmic rays and accelerated particles**
- [NASA-TM-X-68069]
  - p0342 A72-26051

**The effect of wavelength on the organization of the reptilian visual system**
- (BEEP-70286)
  - p0140 A72-15089

**Economic procedures for simulating the effects of linear collisions in view of studies of restraining devices for the protection of automobile occupants**
- p0256 A72-19122

**Bacterial adenine triphosphate as a measure of urinary tract infection**
- [NASA-CG52-GDC-11092-21]
  - p0043 A72-11074

**Automated detection of bacteria in urine**
- p005 A72-25800

**Neuroinhibition in the regulation ofikesis**
- [API-AB-72-4]
  - p0386 H72-24094

**The effect of wavelength on the organization of the reptilian visual system**
- (BEEP-70286)
  - p0140 A72-15089

**Sustained linear acceleration**
- p0944 A72-27126

**Temperature controller for a fluid cooled gasket**
- [AD-701087]
  - p0526 A72-33097

**A liquid cooled gasket temperature controller based on heat rate**
- p0440 A72-27125

**Effect of neck warming and cooling on thermal comfort**
- p0440 A72-27126

**Effect of head warming and cooling on thermal comfort**
- p0478 A72-26079

**Preliminary survey of diver anthropometries**
- p0161 A72-20162

**Testing dynamic material properties of brain arteries**
- (AD-700454)
  - p0526 A72-33097

**Temperature controller for a fluid cooled gasket**
- [NASA-CG52-GDC-11092-21]
  - p0043 A72-11074

**Automated detection of bacteria in urine**
- p005 A72-25800

**Measurement of signal transmission in the human thigh covered with a protective suit**
- [BASA-TH-1768419]
  - p0383 B72-24076

**Investigation of the primate vestibular system function through analysis of the vestibulo-ocular reflex response to various inertial stimuli**
- [AD-7845452]
  - p0315 A72-21065

**Effects of viscosity and constraints on the dispersion and dissipation of waves in large blood vessels. I.**
- p0073 A72-15466

**Effects of viscosity and constraints on the dispersion and dissipation of waves in large blood vessels. II.**
- p0073 A72-15467

**Design of digital low-pass and band pass filters for biomedical data series**
- [CONF-710217-1]
  - p0128 B72-11126

**Analysis of left ventricular wall motion by reflected ultrasound — application to assessment of myocardial function.**
- p0184 A72-22013

**The pain sensitivity of cardiac membranes under the sensitizing influence of acetylcholine**
- p0329 A72-29329

**A computer model for the genesis of the electrocardiogram.**
- p0153 A72-19313

**Ultrastructure of Pseudomonas macchrophila at early and late log phase of growth.**
- p0164 A72-20238

**A review of the bases for the hydraulic transmission line equations as applied to circulatory systems.**
- p0234 A72-24811

**Data processing in biological sensors**
- p0283 A72-27577

**Further studies on the dimensionless parameters associated with the ‘in vivo’ transport of heat within biological tissue.**
- p0056 A72-16567

**Analytical solutions to the problem of transient heat transfer in living tissue.**
- [ASME PAPER 71-WA/HT-36]
  - p0095 A72-15887

**Steady state and transient temperature distributions in thehuman thigh covered with a cooling pad.**
- [NASA-CR-127523]
  - p0439 A72-27084

**Removal of metabolic heat from man working in a protective suit.**
- p0444 A72-27120

**Analytical prediction of the heat transfer from a blood vessel near the skin surface when cooled by a symmetrical cooling strip.**
- [NASA-CR-127460]
  - p0467 A72-28033

**Radiological physics characteristics of the extracted heavy ion beams of the bevatron.**
- p0054 A72-13693
B-27

CHERKHOVA, M. A.
A study of in-flight acceleration sensations and methods of controlling them
In-flight acceleration sensations and methods for countering with them

CHEN, C.-F.
Functional development of the altitude correlation mechanisms in mice and rabbits

CHEN, S.-S.
The facilitating effects of mental rehearsal in the acquisition of rotary pursuit tracking

CHEN, W.-T.
The heart sound preprocessor

CHIRICHA, H. S.
Control of cerebral blood flow in the goat—Role of the carotid rete.

CHIRICHA, H. S.
Hypercapnia with relief of hypoxia in normal individuals with increased work of breathing.

CHIRICHA, I. S.
Thermo vision and disease diagnostics.

CHIRICHA, V. M.
Encephalographic investigations of human adaptation to a changed diurnal cycle

CHIRICHESKI, V. N.
New approaches to some physiological problems

CHIRICHESKI, V. N.
Cortico-visceral interrelations in physiology, biology and medicine

CHIRICHESKI, V. N.
Problems of the 'behavior' of visceral systems

CHIRICHESKI, V. N.
Investigating the dose field of an electron beam

CHIRICHESKI, V. N.
The methods of remetry in the fields of mixed radiation

CHIRICHESKI, V. N.
Recording of blood content variations and the possibility of determining the total value of blood in the organism by measuring the electrical resistance of the human body

CHIRICHESKI, V. N.
Methods of phenomenological birochmics study with the aid of hybrid computers.

CHIRICHESKI, V. N.
The influence of the I-ray irradiation in 25- and 250-r doses on the transplant immunity in mice differing by weak and strong histoincompatibility systems

CHIRICHESKI, V. N.
Human blood monocytes: Stimulators of granulocyte and mononuclear colony formation in vitro

CHIRICHESKI, V. N.
Lysozyme enzymes of eye tissues during the action of hydrocortisone

CHIRICHESKI, V. N.
Base-reference model of pulmonary oxygen transport

CHIRICHESKI, J.
Comparative study of visual acuity measured with the Berne optometer and the Nerzal optometric scale

CHIRICHESKI, J.
Resistance to dazzle among aircrew

CHIRICHESKI, J.
Resumption of flight after retinal surgery

CHIRICHESKI, J.
Interest in measuring resistance to vertigo among flying personnel

CHIRICHESKI, J.
Relationship between the time constants of EC networks and nitrogen washout in the respiratory system

CHIRICHESKI, J.
Heat transfer through fabrics as related to thermal injury.

CHIRICHESKI, J.
Cochlear pathology in monkeys exposed to impulse noise

CHIRICHESKI, J.
The effect of electrical stimulation of the olfactory bulbs on the behaviour of cats and on the electrical activity of the neo- and archepaleocortex.
CHIKATSU, A.

CHIDLE, L. I.

CHILES, B. D.

CBOBAB, I. S.

CBIZBIKOVA, G. I.

CBISTIAICOV, V. A.

CHIBIFE, B.

CHILDBESS, J. D.

CBiIDEB, D. G.

CBiKOS, T. B.

CBiKOS, P. H.

CBiZBO7, S. ".

CBIBCHENKO, E. I.

- diffusing capacity estimates by steady-state catalytic oxidation of some gaseous products of combustion.

The influence of increased atmospheric pressure on residual performance effects of simulated sonic booms introduced during sleep.

The problem of decontaminating and preserving water.

Preparation and efficiency evaluation of silver-coated filters used for water disinfection and preservation.

Hypercapnia with relief of hypoxia in normal individuals with increased work of breathing.

Blood coagulation changes at high altitude predisposing to pulmonary hypertension.

CHIKATSU, A.

CHIDLE, L. I.

CHILES, B. D.

CBOBAB, I. S.

CBIZBIKOVA, G. I.

CBISTIAICOV, V. A.

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CBiIDEB, D. G.

CBiKOS, T. B.

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- diffusing capacity estimates by steady-state catalytic oxidation of some gaseous products of combustion.

The influence of increased atmospheric pressure on residual performance effects of simulated sonic booms introduced during sleep.

The problem of decontaminating and preserving water.

Preparation and efficiency evaluation of silver-coated filters used for water disinfection and preservation.

Hypercapnia with relief of hypoxia in normal individuals with increased work of breathing.

Blood coagulation changes at high altitude predisposing to pulmonary hypertension.
<table>
<thead>
<tr>
<th>Last Name, First Name</th>
<th>Title and Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLAYBONE, H. C.</td>
<td>Primary and secondary particle contributions to the depth dose distribution in a phantom shielded from solar flare and Van Allen protons. (NASA-CR-71-16) p0207 H72-16518</td>
</tr>
<tr>
<td>CLAPP, B. H.</td>
<td>BBE for late somatic effects in mice irradiated with 60 MeV protons relative to X-rays. [CH2N-71-16] p0025 H72-12056</td>
</tr>
<tr>
<td>CLARK, R.</td>
<td>Pilot reports of disorientation across 14½ years of flight. p0016 H72-11281</td>
</tr>
<tr>
<td>CLARK, D. A.</td>
<td>The relationship between motion sickness experience and vestibular tests in pilots and nonpilots. p0109 H72-17857</td>
</tr>
<tr>
<td>CLARK, J. L.</td>
<td>Disorientation incidents report by military pilots across 14½ years of flight. p0377 H72-33559</td>
</tr>
<tr>
<td>CLARKE, C. C.</td>
<td>The mathematics of impact, and crash tests of airplane ejection restraint systems. p0259 H72-19155</td>
</tr>
<tr>
<td>CLARKE, P.</td>
<td>An automatic measuring and recording system for clinical electro-oculography. p0449 H72-37400</td>
</tr>
<tr>
<td>CLARK, J. B.</td>
<td>The mathematical estimation in judging the noisiness of aircraft. [AD-736053] p0056 H72-38708</td>
</tr>
<tr>
<td>CLARK, E. O.</td>
<td>Pattern of filling in the pulmonary capillary bed. p0056 H72-38710</td>
</tr>
<tr>
<td>CLARK, J. H.</td>
<td>Human head linear and angular accelerations during impact. [AD-732290] p0000 H72-17045</td>
</tr>
<tr>
<td>CLARKSON, D. P.</td>
<td>Thermal neutral temperature of rats in helium-oxygen, argon-oxygen, and air. p0410 H72-34728</td>
</tr>
<tr>
<td>CLAYTON, R.</td>
<td>Photosynthesis. p0438 H72-27060</td>
</tr>
<tr>
<td>CLAYTON, B. G.</td>
<td>On the apparent orbit of the Polfrich pendulum. p0426 H72-36608</td>
</tr>
<tr>
<td>CLAYERS, L. B.</td>
<td>Research to determine the role of gravity in neurosecretory physiology. [NASA-CR-125639] p0229 H72-19072</td>
</tr>
<tr>
<td>CLAYTON, J.</td>
<td>Grottis opening and airway resistance. p0070 H72-26151</td>
</tr>
<tr>
<td>CLAYTON, F. W., JR.</td>
<td>The impact of modern equipment design on the functions and responsibilities of the Naval Flight Officer. p0294 H72-28291</td>
</tr>
<tr>
<td>CLAYTON, A. B.</td>
<td>Metacarotid and saccadic suppression. p0556 H72-45377</td>
</tr>
<tr>
<td>CLELAND, J.</td>
<td>Possibilities and dangers during long working periods in space rescue. p0409 H72-34346</td>
</tr>
<tr>
<td>COBOL, W. T.</td>
<td>Quantitative relationships between ultrasonic cavitation and effects upon amoebae at 1 MHz. p0073 H72-15299</td>
</tr>
<tr>
<td>CLEVER, D. H.</td>
<td>Trends in problem-solving research - Twelve recently described tasks. p0013 H72-11192</td>
</tr>
<tr>
<td>COBB, B. B.</td>
<td>Attitudes and motivations of air traffic controllers in terminal areas. p1019 H72-17865</td>
</tr>
<tr>
<td>CLEVER, J. R.</td>
<td>A proposed new test for improved aptitude screening of applicants for air traffic control training. p0290 H72-28252</td>
</tr>
<tr>
<td>COBB, R. E.</td>
<td>The relationship between chronic alcohol use and aptitude test measures of advanced level air traffic control trainees. [FAA-AP-71-36] p0006 H72-12061</td>
</tr>
<tr>
<td>CLEVER, H. F.</td>
<td>Air traffic aptitude test measures of military and air controller trainees. [FAA-AP-71-40] p0246 H72-18113</td>
</tr>
<tr>
<td>CLEVER, D. P.</td>
<td>A proposed new test for aptitude screening of air traffic controller applicants. [FAA-AP-72-18] p0085 H72-29088</td>
</tr>
<tr>
<td>CLEVER, J. R.</td>
<td>Effects of the space flight environment on man's immune system. I - Serum proteins and immunoglobulins. p0511 H72-42493</td>
</tr>
<tr>
<td>CLEVER, H. F.</td>
<td>Quantitation of serum proteins on whole blood-electroimmunodiffusion technique applicable to capillary blood. p0511 H72-42495</td>
</tr>
</tbody>
</table>
| COBB, R. E.          | Interaction model between the circulatory and
COCKETT, A. T. K.

respiratory systems.

COCKETT, A. T. K.

Urological considerations in space medicine.

COCKETT, A. T. K.

EEG monitoring of a free-swimming diver at a working depth of 15 meters.

CODY, J.

BM environment control and life support subsystem.

CORR, B. H.

Data processing in biological sensors.

COTTER, J. F.

Individual strategies in ATC freedom and choice.

COPP, C. 1.

Portable life support for instrumentation of an offshore platform.

COHEN, E. S.

Reaction time to change in visual orientation.

COHEN, J. J.

Suggested guidelines for low dose radiation exposure to populations based on benefit-risk analysis.

COHEN, N. B.

Proprioceptive and otolateral variables in the perceived elevation of visual targets.

CORR, B. L.

Disorienting effects of aircraft catapult landings.

COHEN, N. L.

Movement detection thresholds and stimulus duration.

COHEN, V.

A psychologist’s laboratory approach to human factors problems.

COW, S. H.

Comparison of techniques for the total-body neutron activation analysis of calcium in man.

COW, R. 1.

Aural responsivity of a pilot following endolymphatic shunt surgery.

COLB, J. A.

The incidence and mortality of intraventricular hemorrhage in premature newborns.

COLB, J. A.

Physiologic effects of 2,3-DPG-depleted red cells with high affinity for oxygen.

COLLINS, J. K.

Hustachian tube function testing using an acoustic impedance bridge.

COLLINS, F. E.

Comparison of techniques for the total-body neutron activation analysis of calcium in man.

COLLINS, R. P.

Atitudes and motivations of air traffic controllers in terminal areas.

COLLINS, J. R.

Response of a seat-passenger system to impulsive loading.

COLLINS, W. E.

Effects of alcohol ingestion on tracking performance during angular acceleration.

COLLINS, F. R.

Physiologic effects of mechanical vibration.

COLLINS, F. R.

Vestibular response to angular accelerations and to Coriolis stimulation following alcohol ingestion.

COLLINS, W. F.

Effects of alcohol ingestion on tracking performance during angular acceleration.

COLLINS, R. E.

Preliminary results from ‘Exercise Meridian’.

COLE, B. P.

Cerebral ischaemia and hyperoxia in the anaesthetised patient.

COLE, B. L.

Medical and physiological problems for passengers and crew of supersonic transports.

COLE, J.

Skin temperatures in warm environments and the control of sweat evaporation.

COLE, J.

Endstachian tube function testing using an acoustic impedance bridge.

COLE, H. L.

A mathematical theory of lateral sensory inhibition.

COLE, W. L.

Conserve and aberration in marginally hyperoxic space capsule environments.

COLE, A. 0.

Thermal balance in man during 24 hours in a controlled environment.

COLE, A. 0.

A study of the transient stage of sweating in man.

COLE, J. E.

Conjugate and disjunctive optokinetic eye movements in the rabbit, evoked by rotary, and translatory motion.

COLE, I. S.


COLE, A. P.

Study of advanced vehicle simulation techniques.

COLE, D. C.

Structural languages and biomedical signal analysis using interactive graphics.

COLE, F. R.

Physiologic effects of 2,3-DPG-depleted red cells with high affinity for oxygen.

COLE, G. N.

Hustachian tube function testing using an acoustic impedance bridge.

COLE, J. E.

Conjugate and disjunctive optokinetic eye movements in the rabbit, evoked by rotary, and translatory motion.

COLE, I. S.


COLE, A. P.

Study of advanced vehicle simulation techniques.

COLE, D. C.

Structural languages and biomedical signal analysis using interactive graphics.

COLE, F. R.

Physiologic effects of 2,3-DPG-depleted red cells with high affinity for oxygen.

COLE, G. N.

Hustachian tube function testing using an acoustic impedance bridge.

COLE, J. E.

Conjugate and disjunctive optokinetic eye movements in the rabbit, evoked by rotary, and translatory motion.

COLE, I. S.


COLE, A. P.

Study of advanced vehicle simulation techniques.

COLE, D. C.

Structural languages and biomedical signal analysis using interactive graphics.

COLE, F. R.

Physiologic effects of 2,3-DPG-depleted red cells with high affinity for oxygen.
CORTES, S.
Effect of non-target stimuli upon length of voluntary saccades.

COURLESS, J. N.
Lamellar structure of bleached and unbleached rod photoreceptor membranes.

COOLEY, R. C.
Long-term measurement of pulsatile blood pressure and ECG in the squirrel monkey.

CORNWELL, T. N.
Experimental study of visual accommodation [NASA-CS-2007]

CORTIN, B. P.
Testing and modeling standing man's response to impact with applications toward predicting leg fractures to shipboard personnel [AD-727713]

CORTIN, B. P.
The position of cardiac rupture and bearing loss in the scale of injuries from nuclear blast [AD-737643]

CORTH, B. R.
Cardiac arrhythmias observed during axial treadmill exercise testing in clinically normal men.

COSBY, B. S.
Functional relationships among populations of orientation-specific mechanisms in the human visual system.

COSGROVE, N. P.
Stabilized images - Functional relationships among populations of orientation-specific mechanisms in the human visual system.

COST, L. C.
Effects of altitude on cell number and functional saturation of the brain.

COST, S. C.
Factors discriminating men with coronary heart disease from healthy controls.

COUTS, S. G.
A computer-controlled scintiscanning system and associated computer graphic techniques for study of regional distribution of blood flow.

COWE, T.
Skylab regenerative carbon dioxide removal system. [ASME PAPER 72-ENAV-4]

COURTNEY, G. A.
Adrenocortical steroids during acute exposure to environmental stresses. I - Disappearance of infused cortisol. II - Ouptake and release of infused cortisol by the hind limb of dog.

COURTNEY, R. D.
The US Navy Special Board of Flight Surgeons: Keep them flying safely.

COURJANIS, E.
Cardiocirculatory adaptation to chronic hypoxia.

COURJANIS, E.
Cardiocirculatory adaptation to chronic hypoxia.

COWIN, S. C.
A continuum model of the primate body response to impact [AD-739289]

COX, D. B.
A model for the dynamic mechanical properties of arteries.

CRAIG, P. H.
Training to improve endurance in exhausting work of men wearing protective masks: A review and some preliminary experiments [AD-729787]

CRAIG, R. D.
Verbal reports of pain without noxious stimulation.

CRAIG, R. D.
Evaluation of left ventricular function by echocardiography.

CRAIGHED, P. C., JN.
Satellite monitoring of black bear.

CRAIGHED, J. J.
Satellite monitoring of black bear.

CRAIHE, D. B.
The influence of vision on susceptibility to acute motion sickness studied under quantifiable stimulus-response conditions.

CRAHE, D. B.
The influence of vision on susceptibility to acute motion sickness studied under quantifiable stimulus-response conditions.

CRAHE, R. L.
Comparative study of myocardial metabolism of glucose, lactate, pyruvate and free fatty acids between sea level and high altitude residents.

CRAHE, R. L.
The influence of vision on susceptibility to acute motion sickness under quantifiable stimulus-response conditions [NASA-CS-125596]

CRAHE, R. L.
Responses to Coriolis stimulation in nonsotionsick and motionsick-prone navigators compared with pilots and airman trainees.

CRAHE, R. L.
Testing of the vestibular system.

CHANDPHER, R.
Searches for physiological mechanisms concerning the modifications of behavior in weightlessness.

CHANDPHER, R.
Searches for physiological mechanisms concerning the modifications of behavior in weightlessness.

CHANDPHER, R.
Toxicology of dichlorvos at operational aircraft cabin altitudes.

CHOINGE, D. D.
A comparison of serum cholinesterase methods, 2 [FAA-AB-72-12]

CHOINGE, D. D.
Experimental study of visual accommodation [NASA-CS-2007]

CHOINGE, D. D.
Radiotelemetric cardiorespiratory determinations during subaerial dynamic exercise.

CRAFTE, C. G.
Contamination of planets by nonsterile flight hardware.

CRAWFORD, R. G.
Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components.
CROSBY, B. G.
Reactions of pilots to warning systems for visual collision avoidance.

CROGGIN, R.
The kinetics of recovery oxygen intake and blood lactic acid concentration measured to a baseline of mild steady work.

CROSBY, B. L.
Inhaled ozone as a mutagen. II - Effect on the Occipital EEC activity during fluctuations of posture, blood loss, transfusion, and antonomic blockade.

CROSS, B. I.
Some possibilities for collaboration in the Post-Apollo program.

CULCASH, D. F.
Symposium on the development of the technology - Pre- and post-Apollo program.

CUNNINGHAM, D. A.
The heavy particle hazard, what physical data are needed?

CUNNINGHAM, D. J. C.
Psychophysiological and environmental factors affecting disorientation in naval aviation accidents.

CUNNINGHAM, D. R.
Psychophysiological and environmental factors affecting disorientation in naval aircraft accidents.

CUNNINGHAM, J.
Protection against the chronic effects of hyperbaric oxygen toxicity by amphetamine and reduced glutathione.

CUNNINGHAM, J.
A portable water dispenser.

CUNNINGHAM, J.
Life support system.

CUNNINGHAM, J.
An emergency survival suit.

D'ACEZERDO, L. M.
Study of hemodynamics during the action of decompression and accelerations.
DA COSTA, B. B.

DA COSTA, B. B.
Non-reproducibility of serial vectorcardiograms obtained by the Frank system. p0182 A72-21849

DA COSTA, C. P.
The impedance of stainless-steel electrodes. p0049 A72-12953

DADDY, V. P.
Growing plants in space (NASA-TG-P-704) p0350 A72-22075

DAHLBACK, G. O.
Pulmonary air-trapping induced by water immersion. p0056 A72-38711

DAILY, J. M.
Human factors in the development of air traffic control automation p0477 A72-28105

DAMIUTOLO, G.
Dynamic tests of general aviation occupant restraint systems. [SAE PAPER 720325] p0266 A72-25588

DARSHYAMUSTI, C.
Preliminary investigations on the root wilt disease in coconut plants in Kerala State /India/ by remote sensing technique /NASA-THRO-TARI-CCBS project/. p0012 A72-10951

DALLE, H.
Some observations on the three-dimensional growth of L5178Y cell colonies in soft agar culture. p0013 A72-11039

DALLE, D. J.

DALLAI, A.
Retinal laser irradiation diameter estimation, p0265 A72-25314

DANTON, K. J.
The effects of added elastic loads on the respiratory response to CO2 in man. p0257 A72-27726

DANLY, G. H.
Testing dynamic material properties of brain arteries. [AD-730545] p0526 A72-30097

DANLY, J. R.
Preliminary results of the vigilance tests from 'Project Pegasus.' p0266 A72-26695

DANINO, A. N.
Supraventricular tachycardia initiated by sinus beats. p0017 A72-11423

DANLJANOTIC, D.
Health physics instrumentation and systems [A/CONF-49-F/552] p0194 A72-16052

DANKO, G. O.
Comparative effects of hyperoxia and hyperbaric pressure in treatment of primary blast injury [AD-731396] p0243 A72-18093

DANKO, K. X.
The biodynamics of air blast p0257 A72-19130

DANKO, K. X.
The biodynamics of airlift [AD-738208] p0313 A72-21054

DARWOOD, J. B.
Testing dynamic material properties of brain arteries. [AD-740654] p0526 A72-30097

DANIELITI, G. S.
The strength of the tentorium cerebelli as judged from the effect of chronic and acute hypoxia on its structure p0220 A72-23193

DARWELL, L. A.
Advanced deep sea diving equipment p0043 A72-27118

DARWORTH, R. Jr.
Study of the feasibility of using perforated and split ear protectors in aircraft during flight. p0164 A72-20187

A feasibility study of the use of ear protectors in aircraft. p0253 A72-28276

Comparison of serial audiograms as measured by three threshold procedures [AD-739896] p0478 A72-28113

PERSONAL AUTHOR INDEX

DANIELS, A. F.
A method of man-display/control system evaluation p0355 A72-22629

DANIELS, E.
Hemoglobin-facilitated diffusion of oxygen - Interfacial and thickness effects. p0425 A72-36569

DANIELS, E. W.
Nuclear and cellular division in Pelomyxa carolinensis during weightlessness [KEPT-P-1035] p0303 A72-20061

DANIELS, J. C.
Effects of the space flight environment on man's immune system. I - Serum proteins and immunoglobulins. p0511 A72-42493

Quantitation of serum proteins on whole blood/elctroimmunoassay technique applicable to capillary blood. p0511 A72-42495

DANIELI, V. I.
Certain theoretical problems of gravitational biology p0023 A72-12016

DANILOV, L. V.
Influence of rhythmical photostimulation on lower-order monkeys with hyperkinesia of post-encephalic origin p0457 A72-38930

DART, J. G.
Vegetation density determinations by gamma ray absorption [AD-728319] p0087 A72-13068

DANISCH, E. E.

DARDANO, J. F.
Preference for locus of punishment in a response sequence. p0377 A72-33773

DARROW, B. B., Jr.
RBE for late somatic effects in mice irradiated with 60 MeV protons relative to X-rays. [CRHR-71-16] p0025 A72-12054

Relative biological effectiveness of fast neutrons compared with X-rays: Prenatal mortality in the mouse p0209 A72-17685

DARLING, R. C.
A feedforward-feedback mechanism for human thermoregulation. p0023 A72-12036

The role of skin temperature in human thermoregulation. p0024 A72-12041

DANBERG, K. L., Jr.
Acute toxicity in rats and mice resulting from exposure to HCl gas and HCl aerosol for 5 and 30 minutes [AD-744829] p0569 A72-33080

DANJAJ, B.
Reliability of electroencephalography. p0174 A72-21000

DASH, G. I.
Factors that modify the biosynthesis of saturated fatty acids in the endoplasmic reticulum [NASA-TH-F-14357] p0470 A72-28056

DANDA, G.
Increased fluid turnover and the activity of the renin-angiotensin system under various experimental conditions. p0545 A72-43997

DAVID, K.
Contributions of the higher auditory pathway to pattern recognition in cats p0012 A72-10951

DAVID, R. N.
The development of insulated electrocardiogram electrodes [NASA-CH-115530] p0353 A72-22096
Hadiological examination of the spine and the combat pilot's capability for duty

First results of massive dosimetric cosmic radiation effects onboard a prototype of the Concorde 001 supersonic transport

DEVLAND, J. C.

Biomedical data processing

[AD-737676]

DEVLANS, A.

Hyperlipidemia among flying personnel /Civil aviation/

Primary prevention of atherosclerotic cardiovascular disease among the SABENA flying personnel.

DEVLAND, J. C.

Influence of exercise to compulsive locomotion and of hyperbaric oxygenation to gamma-amnlobutyric acid levels in mice.

DELOIS, M.

Manoeuvres affecting sympathetic outflow in human skin nerve.

DELOINE, R. L.

Some results of experiments with plant objects exposed aboard the 8ond-5 probe

DELORE, N.

Central nervous system effects as measured by reaction time in squirrel monkeys exposed for short periods to extremely low frequency magnetic fields

[AD-731999]

DEETE, D. E.

Nervous-emotional stress as a problem of modern work physiology

DEEB, U.

Changes of the mitral echocardiogram with ageing and the influence of atherosclerotic risk factors.

DEBOZ, G. G.

Changes produced in the nerve structures of the retina in man and animal.

DEBOZ, G. G.

New data on the mechanisms of action of ionizing radiation on functional properties of the retina

DEBROE, J. A.

Effects of acute through life-long hypoxic exposure on exercise pulmonary gas exchange.

Muscular exercise, 2,3-DPG and oxy-hemoglobin affinity.

DEBROE, D. H.

Changes in mixed venous gas tensions at start of exercise in man.

Airway structure and alveolar emptying in the lungs of sea lions and dogs.

DEBROE, V. E.

Incorporation of methionine-S-35 into the proteins of the digestive organs of rabbits 
under the action of radiation and vibration

Incorporation of methionine-S-35 into the proteins of digestive system organs of rabbits exposed to irradiation and vibration

DEBROE, W. L.

Some results of experiments with plant objects exposed aboard the 8ond-5 probe

DEBROE, N.

Central nervous system effects as measured by reaction time in squirrel monkeys exposed for short periods to extremely low frequency magnetic fields

[AD-733963]
Thermal scale modeling of spacecraft radiators.

Thermal stability of blood serum proteins during dienecephalic syndromes.

Experimental studies on the alkali-acid equilibria in the blood gases under the chronic action of low concentrations of lead.

Experimental studies on the class of hereditary processes in biomechanics.

Acute toxicity in rats and mice resulting from exposure to BC1 gas and HCl aerosol for 5 and 30 minutes.

Experimental assessment of prosthetic mitral valve function.

The influence of a prediction display on the human dexterity of muscular exercise.

Problems of complex object modeling based on heuristic self-organization.

Non-invasive assessment of prosthetic arterial, intravascular and intimal vascular resuscitation.

Non-linear viscoelastic materials: A problem suggested in biomechanics.

On a class of nonlinear viscoelastic materials: The problem suggested in biomechanics.

Gene in vivo studies of effect of left atrial distension in the dog.

Problems of human biology.

Some numerical aspects in the identification of a class of nonlinear viscoelastic materials: A problem suggested in biomechanics.

Cardiac electric activity during various degrees of decompression of the lower body.

Cardiac electric activity accompanying different degrees of decompression of the lower body.

Cardiac electric activity accompanying different degrees of decompression of the lower half of the body.

Acute toxicity in rats and mice resulting from exposure to BC1 gas and HCl aerosol for 5 and 30 minutes.

Problems of human biology.

Non-invasive assessment of prosthetic arterial, intravascular and intimal vascular resuscitation.
The effect of random vibrations of a limited frequency range with sinusoidal vibrations in regard to their effect on man. 

DUNN, J. D.


DUNLAP, C. A.

Mechanisms and kinetics of cellulose fermentation for protein production [NASA-4-122368] p0065 A72-57966

DUNLAP, W. P.

Perceptual latency as a function of stimulus onset and offset and retinal location. p0068 A72-44386

DUNSTAV, J. G.

Armor materials for life support p0258 A72-19143

DURAY, F.

Quantitative relationships between ultrasonic cavitation and effects upon macrobae at 1 MHz. p0073 A72-15299

DURAY, J. D.

Circadian variation in rat serum 5-hydroxytryptamine and effects of stimuli on the rhythms. p0174 A72-21081

DURATE, W. H.

A computer-controlled scintiscanning system and associated computer graphic techniques for study of regional distribution of blood flow. p0012 A72-11038

DURATR, S. G.

Visual acuity and visibility, experiments 5008 and 5013 [EXPT-5008] p0120 A72-14062

DUPUIS, H.

Comparison of irregular vibrations of a limited frequency range with sinusoidal vibrations in regard to their effect on man p0065 A72-39804

Human stress loads induced through simulated pressures on underground shelters p0257 A72-19116

The effect of random vibrations of a limited frequency range with sinusoidal vibrations on human beings [NASA-LIB-TRANS-1603] p0383 A72-24074

DURANT, J.

Resistance and capacitance vessels of the skin in permanent and temporary residents at high altitude. p0513 A72-42595

DURBAR, U. A.

Neurophysiological mechanisms of the action of barbiturates on projection systems of the brain p0176 A72-21195

DUTOY, A. N.

Role of visceral afferentation in vestibular system activity p0099 A72-16630

Role of visceral afferentation in vestibular system activity p0120 A72-14068

DUTRANNOIS, J.


Some studies in pion beam dosimetry. [CEBP-71-16] p0026 A72-12063

Use of visual solid detectors in high-energy radiation dosimetry [CEBP-71-16] p0026 A72-12066

DVOVAK, J.

Possibilities and dangers during long working periods in space rescue. p0409 A72-34436

DYRSETSKY, L. I.

Problems of biological dosimetry in the acute irradiation of men p0056 A72-14606

DYRSETSKY, L. I.

Investigation of hemodynamics with exposure to decompression and accelerations p0057 A72-14606

DYRSETSKY, L. I.

Cerebral cortex potentials evoked in man by perceived and not perceived acoustic stimuli. [AD-735270] p0473 A72-26078

DYREH, P. M.

Latencies for movement naming with congruent and incongruent word stimuli. [AD-734299] p0308 A72-20095

DYRSET, I. A.

The condition of neurons in the autonomic nervous system guinea following exposure to G forces p0249 A72-19077

DYSSA, O. P.

Methods of information presentation to operators of automatic control systems and informative value estimates for such methods p0260 A72-26451

DROGOLET, E.

Comments on Sjoberg's hypothesis for the mechanism of the inversion illusion under zero-gravity conditions. p0020 A72-11710

DROHSAV, M. I.

Energetic activity of the cardiac muscle in experimental ischemia of the myocardium. p0321 A72-24863

DROHSAV, M. I.

A method of measuring cardiac cycle intervals. p0152 A72-15583

DROHSAV, M. I.

A method of measuring cardiac cycle intervals. p0220 A72-23192

DROHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

E

DRENKOSKII, S. L.

The reflex control of blood volume and the renal THB system activity p0020 A72-11710

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0220 A72-23192

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.

A method of measuring cardiac cycle intervals. p0542 A72-83908

DREHSAV, M. I.
The influence of physical training and other factors on the subjective rating of perceived exertion.

Principles of the control of machines and living organisms by means of the biopotentials of the muscles.

Muscle activity during isometric exercise performed at constant force.

Anthropometry of flying personnel in the Royal Swedish Air Force.

Work capacity and physiologic responses to work - Men born in 1913.

Studies on stabilized human plasma protein solution.

Crew performance in extended operation under vibrational stress.

Changes in the reflex reactions of human muscles during adequate vestibular stimulation.

Responses to stretching in human antagonist muscles.

Electrophysiological correlates of behavioral temporary threshold shifts in chinchilla.

Influence of pressure chamber training on chain motor conditioned reflexes in rats.

Threshold for permanent functional and morphological visible damage in human retinas using visible radiation.

Development of a solid electrolyte carbon dioxide and water reduction system for oxygen recovery.

Conceptual design study of a six-man solid electrolyte system for oxygen regeneration.

Influence of pressure chamber training on chain motor conditioned reflexes in rats.

Threshold for permanent functional and morphological visible damage in human retinas using visible radiation.

Effect of local heating and arterial occlusion on sweat electrolyte content.

Pulmonary vascular response to exercise in the dog.

Biophysical studies of military parachutists via FL/FR telemetry. II - Heart rate and respiration rate responses to parachuting. III - Acceleration and opening shock forces during free-fall parachuting: Physiological.
Control of cerebral blood flow in the goat - Role of the carotid reti.

Effect of short periods of hypoxia, hyperoxia, and hypercapnia on brain O2 supply.

Influence of elevated partial oxygen pressure on the sympathetic-adrenal and acetylcholine systems.

Physical training as a prophylactic measure against the hypodynamic syndrome.

Synthesis of oxidation-reduction polymers and their use in eliminating organic impurities from aqueous solutions.

Splanchnic blood flow and plus minus Gx acceleration.

Cardiac beta-adrenergic receptors and coronary hemodynamics in the conscious dog during hypoxic hypoxia.

Autonomic control of cardiac function and myocardial oxygen consumption during hypoxic hypoxia.

Effects of exposure at 80,000 feet at different decompression rates.

The effects of carbon monoxide on coronary hemodynamics and left ventricular function in the conscious dog.

Digital systems for data acquisition and storage of simple and complex sounds.

Psychological background of tactile perception.
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fife, B. A.</td>
<td>Determination of revised Air Force permissible application of electrical current in dental procedures.</td>
</tr>
<tr>
<td>Fields, C. B.</td>
<td>Automated instructional monitors for complex operational tasks.</td>
</tr>
<tr>
<td>Fick, B. B.</td>
<td>Organic substances in the universe.</td>
</tr>
<tr>
<td>Fink, J. B.</td>
<td>Dynamics of cerebral blood circulation in orienting reaction in man.</td>
</tr>
<tr>
<td>Fink, J. B.</td>
<td>Trace-metal concentrations in human hair.</td>
</tr>
<tr>
<td>Fink, J. B.</td>
<td>Dynamic and structural characteristics of human skin: A comparative study with chamois leather.</td>
</tr>
<tr>
<td>Fink, J. P.</td>
<td>The mechanical and structural characteristics of connective tissue.</td>
</tr>
<tr>
<td>Fink, J. P.</td>
<td>Relationship between system design, technician training and maintenance job performance on two autopilot subsystems.</td>
</tr>
<tr>
<td>Fink, J. P.</td>
<td>Effect of target-background luminance contrast on binocular depth discrimination at photopic levels of illumination.</td>
</tr>
<tr>
<td>Fink, J. P.</td>
<td>Development of miniature capacitance pressure transducers.</td>
</tr>
<tr>
<td>Fink, J. P.</td>
<td>Biocular depth perception without geometrical cues.</td>
</tr>
<tr>
<td>Fink, J. P.</td>
<td>The acute toxicity of brief exposures to HF, RbCl, NO2 and HCN singly and in combination with CO.</td>
</tr>
<tr>
<td>Fink, J. P.</td>
<td>Electrocardiogram transmission - The state of the art.</td>
</tr>
<tr>
<td>Fisch, C.</td>
<td>Cardiac arrhythmias observed during maximal treadmill exercise testing in clinically normal men.</td>
</tr>
<tr>
<td>Fisch, B.</td>
<td>Optical and neuronal principles of visual image transmission - A uniform mathematical treatment.</td>
</tr>
</tbody>
</table>
of the retinal image and the excitability of retinal ganglion cells using linear systems theory.

Threshold excitation, temporal summation, and impulse response function in the retina of the cat - Temporal receptive fields of retinal ganglion cells.

FISCHER, C. L.

Biochemical and physiological consequences of the Apollo flight diet.

Effects of the space flight environment on man's immune system, I - Serum proteins and immunoglobulins.

Quantitation of serum proteins on whole blood-electromassonifurcation technique applicable to capillary blood.

FISCHER, K. C.

The scoliosis of congenital heart disease.

Quantitation of serum proteins on whole blood-electromassonifurcation technique applicable to capillary blood.

FISCHER, N. A.

Modification of the Siegel-Wolf operator simulator model for on-line experimentation.

FISCHER, R. G.

On the locus of the divided-attention effects.

FISHER, T. E.

Experimental human exposure to carbon monoxide I to 1000 PPM.

FISHER, H.

Wide-angle optical model of the eye.

FISHER, D. P.

Short term memory: An annotated bibliography.

FISHER, T. E.

A review of adverse biomedical effects of sound in the military environment.

FISHER, R. P.

On the locus of the divided-attention effects.

FISHER, T. N.

Effects of rotating/backgrounds upon the perception of verticality.

FISHER, A. P.

Control of cerebral blood flow in the goat - Role of the carotid baroreceptors.

FISHER, B. W.

Role of efferent influences of thalamic-rhinephal cerebral structures in pre-adjusment alterations of spinal motor neuron excitability.

FITZGERALD, L. M.

Solutions of extremal problems by a biological control system.

FITZGERALD, J. M.

Flow patterns in models of small airway units of the lung.

FITZGERALD, J. W.

Visual examination apparatus

FITZGERALD, T. P.

Pilotage error in area navigation: Performance of instrument pilots using symbolic displays.

FITZPATRICK, R.

The development, test, and evaluation of three pilot performance reference scales.

FLANDAIRE, E.

The prediction of maximal oxygen intake in acute moderate hypoxia.

FLAX, L.

Electron tunneling as a basis for semiconduction in proteins.

FLAIG, A. J.

Automated detection of bacteria in urine.

FLEISHER, R. A.

Development of a taxonomy of human performance.

FLEISHER, R. N.

The biodynamics of air blast.

FLEISHER, J. L.

Conventional and high frequency hearing of naval aircrews as a function of noise exposure.

FLEISHER, J. B.

Studies in pilot training - The anatomy of transfer.

FLEISHER, J. B.

An instruction manual for using performance record sheets designed for primary pilot training.

FLEISHER, J. B.

Studies in pilot training: The anatomy of transfer.

FLEISHER, T. M.

Cell physiological problems in space medicine.

FLOOR, A.

Electron tunneling as a basis for semiconduction in proteins.

FLOOR, D. J.

Back-adaptation recovery after pulsed light.

FLOOR, R. E.

The present state of molecular paleontology.

FLOWERS, E. C.

A rapid assay of dipolar and extradipolar content in the human electrocardiogram.

FLOWERS, R. M.

The effectiveness of earplugs.

FLOWERS, J. H.

Toxicology of dichlorvos at operational aircraft cabin altitudes.

FLYNN, A.

Hair radioactivity as a measure of exposure to radiotopes.

FLYNN, T. J., JR.

Effect of nine four hour exposures to 100 percent oxygen at 11-13 feet of seawater.

FLYNN, T. J., JR.

Evaluation of the hazard from exposure to electron irradiation simulating that in the synchronous orbit.

FREEMAN, R.

Relaxation phenomena in the biological carbon cycle under conditions of variable atmospheric CO2-content.

FOGAL, G. L.

Uranium mapping and collection system.

FOGAL, G. L.

Pressure ramp programmer; IDRLMS Phase B4.

FOGAL, W. L.

Circaadian periodicity of plasma cortisol levels.

POLY, J. M.

The size-distance relation and intrinsic geometry of visual space - Implications for processing.
The nature of adaptation in distance perception

Adaptation in distance perception based on conduction velocity groups in the cat's optic nerve classified according to their retinal origin.

A new approach to clinical electrocardiography—The phase plane cardiogram.

Continuous propagation of microalgae. III.

The effects of added elastic loads on the respiratory response to CO2 in man.

A neural effect of partial visual deprivation in chimpanzees.

Chimpanzee sleep stages.

Response from arousal and thermal sweat areas during motion sickness.

Effect of environmental temperature on motion sickness sweating.

Response from arousal and thermal sweat areas during motion sickness.

Circadian variations in performance, psychological ratings, catecholamine excretion and urine flow during prolonged sleep deprivation.

Training to improve endurance in exhausting work of men wearing protective masks: A review and some preliminary experiments.

Method of studying the reactions of a human operator considered as an oscillatory system to harmonic and random vibrational action.

The state of adaptation in distance perception based on oculomotor cues.

The nature of adaptation in distance perception based on oculomotor cues.
PERSONAL AUTHOR INDEX

FROLOV, V. V.

p0491 A72-14038

Some methods for transporting liquid wastes of the vital functions of a crew and sanitary-waste water during space flights

p0681 A72-29057

FROLOV, T. V.

High-energy nucleon tissue doses. [CEH-71-16]

p0026 A72-12067

FROHNE, H.

Pulmonary-impedance power spectral analysis: A facile means of detecting radiation-induced gastrointestinal distress and performance decrement in man

p0208 A72-17632

FRONHAGEN, C.

Aeromedical transportation and general aviation.

p0076 A72-11298

FRÖST, J. D., JR.

Acquisition of electroencephalographic data in a large regional hospital - Brings the brain waves to the computer.

p0152 A72-19307

Modified and improved sleep monitoring display console

[NASA-CP-115573]

p0386 A72-24092

Compressible biomedical electrode

[NASA-CSP-65-19640]

p0402 A72-27103

Research program for experiment B133

[p0485 A72-29085

FROST, N.

Interhemispheric effects on choice reaction times to one-, two-, and three-letter displays.

p0279 A72-27075

FROSTELL, P. H.

A comparison of pilot describing function measurement techniques

[DOTAS-TH-167]

p0390 A72-24135

FURNESS, T. R.

Rod-cone interaction in human scotopic vision.

p0177 A72-21460

Spatial interaction with different-diameter stimuli matched on the basis of threshold, luminance, or total luminous flux.

p0489 A72-40152

FYTJ, R. J. M.

Analysis of survival and cause of death statistics for mice under single and duration-of-life gamma irradiation.

p0547 A72-43939

FYTJ, G. V.

The formation of a competitive motor response by operant conditioning.

p0095 A72-14706

FYTJ, T. B.

Use of implantable telemetry systems for study of cardiovascular phenomena.

p0545 A72-43996

FU, L.

Influence of inotropic alteration on the severity of myocardial ischemia after experimental coronary occlusion.

p0465 A72-38552

FUCHS, H. S.

Clinical causes for grounding

[AGARD-CP-89-71]

p0124 A72-14090

Improved and simplified methods for the clinical evaluation of aircrew, part 2

[AGARD-CP-95-PT-2]

p0396 A72-25048

FUJII, J.

Influence of inotropic alteration on the severity of myocardial ischemia after experimental coronary occlusion.

p0456 A72-38552

FUJIEI, S.

Effects of ischemia and reoxygenation on regional myocardial performance of the dog.

p0075 A72-15719

FUJIIWA, S.

Seasonal variation of hypothermia induced by hypoxia in rats.

p0004 A72-10214

FUJIIWA, T.

Design of vibration absorbers minimizing human discomfort.

p0501 A72-41231

FUJIIWA, E.

Growth and recovery of temporary threshold shift at 4 kHz due to a steady state noise and impulse noises.

p0267 A72-25873

FUJII, K.

Evaluation of the density of cosmic ray ray enters in human tissue from solar minima to maxima at the level of SST flight.

[CEH-71-16]

p0027 A72-12079

FUJII, K.

An electronic model of visual receptive fields.

p0462 A72-39271

FULCER, C. S. G.

Automatic control of liquid cooling Garment by cutaneous and external auditory measures

[NASA-CASE-RSC-13917-1]

p0142 A72-15098

FULGER, D. B.

Stabilized images - The search for pattern elements.

p0009 A72-10721

FULGOSI, J.

Practice and some methodological problems in dimensional information transmission.

p0079 A72-10718

FULLE, C. E.

Public health applications of remote sensing.

p0487 A72-29322

FULLE, T. W.

Depth-dose experiments with mono-directional 14 MeV neutrons in a low scatter environment.

[CEH-71-16]

p0027 A72-12068

Active dosimetry of cosmic radiation

p0431 A72-26047

FULG, T. C.


p0111 A72-17599

Pulmonary alveolar blood flow.

p0277 A72-26702

FURHONG, G. E.

Toxicology of dichlorvos at operational aircraft cabin altitudes.

p0342 A72-31082

High temperature and performance in a flight task simulator.

[FAA-M-72-17]

p0483 A72-29076

FURVERE, J. J.

Proparatory-response vs information-seeking interpretations of preference for signaled loud noise - Further limits on human informational cognitive control.

p0371 A72-32763

FURHIEL, E. L.

The influence of starvation upon hepatic drug metabolism in rats, mice, and guinea pigs.

p0218 A72-11262

Effects of pentobarbital on plasma glucose and free fatty acids in the rat.

p0175 A72-21187

A common modality of action of simulated space stressors on the oxidative metabolism of ethylmorphine, sulphone and p-nitroanisole by male rat liver.

p0368 A72-31700

FUSB, P. A.

Disorientation, fact and fancy.

p0392 A72-25035

FURB, D. E.

Physiological and psychological implications of syncope resulting from altitude-chamber training - A case report.

p0111 A72-17879

Aeromedical considerations in the management of paranasal sinus barotrauma.

p0292 A72-28276

Aeromedical considerations in the management of paranasal sinus barotrauma.

p0558 A72-45664

GABEL, R.

Excitability, polyphosphates and prescellular organization.

p0662 A72-14789

GABEL, R.

Comparison of three methods for quantitating respiratory response to hypoxia in man.

p0552 A72-44960

GABR, D.

Determination of systolic time intervals using the apex carodiogram and its first derivative.

p0457 A72-38517

B-50
On the inheritance of the enzymatic activities of
Intensity of phospholipid exchange in the rat
Listening levels preferred by flying personnel
Ear protection provided by several standard Air
Comparision of A weighted auditory risk criteria
Erythropoietic radiosensitivity of the rat during
Detection of acetyl derivatives of ethanolamine
Bioacoustic noise problems during operation of
Hearing of young airmen entering noise exposure
Aeromedical review: Personal ear protection
Effect of selenium on the formation of the
Data synthesis of biological samples collected for
Influence of space-flight factors and ethylenimine
Effects of space flight factors and of
deconditioning of space pilots during
Sustained linear acceleration
Guth, J. F.
Erythropoietic radiosensitivity of the rat during
altitude acclimatization.
GIBBS, B. J.  
Development in vivo simulation, and medical utility of a control system model for the mechanics of the human left ventricle.  
p0165 A72-20356

Measurements, modeling, control and simulation of an applied to the human left ventricle for purposes of physiological monitoring.  
p0228 A72-23924

A human left ventricular control system model for cardiac diagnosis.  
p0429 A72-37029

GIBBS, H. C.  
Effect of acetazolamide /Diamox/ at different dose levels on survival time of rats under acute hypoxia and on Na+/K+/ATP-ase activity of rat tissue microsomes.  
p0409 A72-34546

GIBSS, H. L.  
Medical aspects of ground and noneffectiveness in helicopter Air Force pilots.  
p0125 W72-14099

GIBSON, B. L.  
Aeromedical transportation and general aviation.  
p0016 A72-11298

GIBSON, W. D.  
The human, primate and rabbit ultraviolet action spectra   
[NASA-CR-115742]  
p0471 H72-28063

GIBBS, C. B.  
Sleep loss and information processing.  
p0276 A72-26680

GIBB, A.  
Description of an easy and simplified test for electrocardiographic diagnosis of latent spasmophilia in flight personnel.  
p0452 A72-37878

Place of tropical pathology in medical assessment of aircrew.  
p0452 A72-37882

Statistical analysis of unfitness of flying personnel in the French Air Force.  
p0125 W72-14099

GIBSON, G. L. M.  
Sleepy pilot evaluation - A simple, inexpensive method to measure alertness.  
p0290 A72-28323

GIBSON, R. J.  
Space and related biological and instrumentation studies   
[NASA-CR-125095]  
p0126 W72-14117

GIBSON, T.  
Dynamic and structural characteristics of human skin - A comparative study with chamois leather.  
p0370 A72-32606

The mechanical and structural characteristics of connective tissue.  
p0258 W72-19140

GIBSON, W. L.  
Microbial degradation of parathion   
[NASA-CR-127913]  
p0522 W72-30065

GIDDINGS, B. J.  
Alpha-numeric for raster displays.  
p0331 A72-29821

GIDDINGS, J. A.  
Clinicocardiographic correlations in angina pectoris with and without myocardial infarction.  
p0553 A72-65010

GIDWON, W. P.  
Electrophysiological changes in humans during perceptual isolation.  
p0283 A72-27484

GIEDEE, B.  
The influence of sleep-interruption and of sleep-deprivation on circadian rhythms in human performance.  
p0275 A72-26685

GIRKE, R. P.  
A cardiovascular system model for lower-body negative pressure response   
[NASA-CR-115243]  
p0080 H72-12015

GIRKE, R. C.  
Evidence on the effect of natural ionizing radiation on biological stimulation.  
p0311 H72-26050

GIFTED, B. C.  
Selected anthropometric dimensions of naval aviation personnel   
[AD-735101]  
p0315 W72-21067

GIGHOE, C.  
Permanent flight unfitness and attributability to air service.  
p0177 A72-21273

GILL, J.  
Visualization of extracellular lining layer of lung alveoli by freeze-etching.  
p0102 A72-16787

The influence of peripheral and central factors on the way stabilized images disappeared.  
p0030 A72-12469

GILBERT, R.  
Breathing pattern during CO2 inhalation obtained from motion of the chest and abdomen.  
p0103 A72-16790

Changes in tidal volume, frequency, and ventilation induced by their measurement.  
p0911 A72-40628

GILLETT, A. S.  
Reaction time to change in visual orientation.  
p0174 A72-20986

GILL, C.  
The effect of the space flight environment on man's immune system. I - Serum proteins and immunoglobulins.  
p0511 A72-42493

GILL, C. E.  
p0429 A72-36650

GILL, K. N.  
Visual half-field differences in the recognition of bilaterally presented single letters and vertically spelled words.  
p0247 A72-36908

GILLAR, P.  
A depth processing theory of the Poggendorff illusion.  
p0008 A72-10714

Perceived common rotary motion of ambiguous stimuli as a criterion of perceptual grouping.  
p0105 A72-17413

GILLAS, B. J.  
Visual temporal integration and simple reaction time.  
p0363 A72-31509

GILLES, R. J.  
Completely implantable three channel temperature biotelemetry system   
[BBW-55-4231]  
p0105 A72-31509

GILLY, C.  
In vitro study of the effect of gamma rays on human chromosomes   
[LAB-TRANS-369]  
p0546 A72-32122

GILBERT, B. A.  
The effect of chloridiazepoxide on visual field, extracranial muscle balance, colour matching ability and hand-eye co-ordination in man.  
p0419 A72-35915

GILBERT, J. F.  
Excitation-contraction correlates in true ischemia.  
p0542 A72-43810

GILDE, J. C.  
Health hazards of asbestos.  
p0265 A72-25508

GILDE, R. D.  
Lighting factors affecting the visibility of a moving display.  
p0056 A72-14445

Effects of alcohol ingestion on tracking performance during angular acceleration.  
p036 A72-18474

Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation.  
p040 A72-30554
Effects of alcohol ingestion on tracking performance during angular acceleration 
[AD-739679] p0044 A72-15111
Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation 
[AD-732446] p0243 A72-18096
Micturition responses during triangular waveforms of angular velocity about the T and Z axes 
[AD-731300] p0244 A72-18097
GINSBURG, A. P.
Isolation of a polyvalent bacteriophage for Escherichia coli, Klebsiella pneumoniae, and Aerobacter aerogenes. 
p0050 A72-37650
GINSBURG, G. X.
Psychological correlates of a model of the human visual system 
[AD-731197] p0140 A72-15090
GEOFFREY, S.
Lumbar-supporting biological system with lower and higher plants 
p0365 A72-31626
GITTER, S.
Impulse propagation from photosilchally discharged neurones in the visual system. 
p0217 A72-22663
GIUCCI, D.
Automatic recording of psychiatric data 
p0384 A72-24062
GIVEN, R. H.
EEG monitoring of a free-swimming diver at a working depth of 15 meters. 
p0282 A72-27478
GLATZER, R.
The acoustic impedance at the surface of the human body in relation to auscultation. 
p0014 A72-11195
GLAD, A.
Darkness enhancement in interisitent light - An experimental demonstration. 
p0106 A72-17605
GLADON, V. P.
Experiments in classification and formation of concepts 
p0390 A72-24130
GLASTON, B. W.
Technical evaluation of the Aerospace Medical Panel Specialists meeting on Linear Acceleration (Impact Type) 
p0255 A72-19120
GLASS, V. L.
Neurophysiological mechanisms of the action of barbiturates on projection systems of the brain 
p0376 A72-21195
Depolarization of axon terminals of retinal corticostriatal neurons 
p0324 A72-28762
GLASS, B. H.
Visual adaptation - A case of nonlinear summation. 
p0106 A72-17604
GLASER, G. H.
Bibliography of reported biological phenomena (effects) and clinical manifestations attributed to microwave and radio frequency radiation 
[AD-734391] p0316 A72-21071
GLASGOW, J. S.
Construction of a prototype flexible recompression chamber 
[AD-733701] p0263 A72-19170
Improvements to the control block of the Mark 6 Mod 2 SCUBA 
[AD-744235] p0574 A72-33133
GLASS, G. A.
Visual sensitivity in the region of chromatic borders. 
p0584 A72-84385
GLASSMAN, B.
Pitfalls in prediction of coronary arterial obstruction from patterns of anterior infarction on electrocardiogram and vectorcardiogram. 
p0160 A72-19994
GLASHUSEK, T. F.
Changes of blood coagulation during gravity effects on the basis of thromboelastographic data 
p0326 A72-29305
GLASER, G. C.
Radiation effects in man: Manifestations and therapeutic efforts 
[AD-732025] p0254 A72-19110
Radiation effects in man: Manifestations and therapeutic effort 
[AD-738205] p0307 A72-20091
GLASER, M. A.
Effect of carbon monoxide on oxygen transport during exercise. 
p0172 A72-20893
GLASS, P.
Blood serum lipids in young men in relation to stress and physical activity 
[AD-RJ-P-14075] p0197 A72-17030
GLASER, V. D.
Responses of the receptive fields of the cat's visual cortex to complex stimuli 
p0334 A72-30256
Problems of physiological optics. Volume 15: Physiology of vision under normal and extremal conditions 
p0132 A72-15026
GLASS, G. G.
Temporal organization of night workers' sleep. 
p0226 A72-23730
GLOD, G. D.
Pathophysiologic principles of air and space pharmacology 
p0288 A72-27926
Effect of psychotropic substances on human resistance to acceleration 
p092 A72-40443
The simultaneous action of stimulants and tranquilizers on the efficiency of a human operator 
p0548 A72-43923
Effect of psychotropic substances on man's tolerance to accelerations 
p0482 A72-29065
GLOSTER, J.
The effects of acute hyperoxia on lipid synthesis in the rat heart. 
p0113 A72-39079
GLOSTER, K. H.
Development of Skylab experiment 7020 employing a foot controlled maneuvering unit 
[AD-731391] p0261 A72-19169
GLAUSCHENKOF, T. S.
Proteinase activity in different regions of the brain during development and inhibition of a conditioned passive-avoidance reflex. 
p0457 A72-38927
GLAUSCHENKOF, R. H.
Methods for the evaluation of the piloting qualities of a crew 
p0166 A72-20375
GHEYTSEH, M. B.
Effect of solar activity on the earth's atmosphere and biosphere 
p0289 A72-28206
GOBEL, F. L.
Hemodynamic correlates of myocardial oxygen consumption during upright exercise. 
p0271 A72-26618
GOBEL, V.
Impulse propagation from photosilchally discharged neurones in the visual system. 
p0217 A72-22863
GODFREY, J. P.
The effect of temperature on the survival of microorganisms in a deep space reactor. 
p0215 A72-22641
GODFREY, S.
Reproducibility of indirect 

CO2/ Pick method for
GOLAIT, I. A.
Energetical continuity between present-day and praeval syntheses of biological compounds.

GOERECKE, K.
Archetypes of present-day processes of transamination, transacylation and peptide synthesis.

GODINOU, J.-C.
An objective test for evaluating the functional state of the oculomotor system during somnolence states.

GOEBEL, R. A.
Effects of real world radio chatter on mid-phase instrument ground trainer proficiency: A pilot study.

GOEBE, B.
Two pathways from pyruvate to acetyl-coenzyme A in yeast.

GOMBOS, B. F.
Psychological causes for grounding with special consideration of psychosomatic syndromes and fear of flying.

GOODHECE, K.
A rescue hoist for the light transport helicopter Bell UH-1D.

GOLDBEGR, I. C.
Mechanisms regulating physiological functions.

GOLD, T.
Mechanism of the biological action of a constant magnetic field.

GOLANT, Y. A.
Information display method in discrete-production automatic control systems.

GOLD, A. B.
Effects of altitude on cellular metabolism and terminal oxidation.

GOLD, E. B.
Effect of hypoxia on aircraft pilot performance.

GOODHAIS, B. B.
Human operator performance in hypoxic stress.

GOLD, A. J.
A forecasting technique for accumulated particulate contamination on spacecraft assemblies.

GOLDBEGR, B.
Local heat clearance probes with alternative heating and their application in the measuring of human muscle blood flow.

GOLDR, V. P.
The effect of transverse G forces on nerve elements of the rat's pharyngeal and esophageal nerve elements following preliminary exposure to a constant magnetic field.

GOLL, N.
A forecasting technique for accumulated particulate contamination on spacecraft assemblies.

GOLDBEGR, B.
Psychological preparation of aviators.

GOLDR, B.
Supraventricular tachycardia initiated by sinus beats.

GOLDSMITH, E. I.

GOLDSMITH, R. S.
Calcium metabolism under stress and in repose.

GOLDSMITH, B.
Psychological preparation of aviators.

GOLDR, F. S. C.

GOLDSMITH, R. F.
Terrain coefficients for energy cost prediction.

GOLDSMITH, B. S.
Comparison of physical, biophysical and physiological methods of evaluating the thermal stress associated with wearing protective clothing.

GOLDSMITH, B. S.
Energy cost of pushing loaded handcarts.

GOLDSMITH, B. S.
Supraventricular tachycardia initiated by sinus beats.

GOETZ, B.
Human operator performance in hypoxic stress.

GOLDENBERG, R. E.
The incidence of hypertension and associated factors - The Israel ischemic heart disease study.

GOLDEBERG, J.
Korotkohv sound processor.

PERSONAL AUTHOR INDEX

[NASA-CASE-SRC-13999-1]

GOLDSNIT, F. S. C.

GOLDSMITH, R. S.
Calcium metabolism under stress and in repose.

GOLDSMITH, B.
Psychological preparation of aviators.

GOLDSMITH, B. S.
Comparison of physical, biophysical and physiological methods of evaluating the thermal stress associated with wearing protective clothing.

GOLDSMITH, B. S.
Energy cost of pushing loaded handcarts.

GOLDSMITH, B. S.
Supraventricular tachycardia initiated by sinus beats.

GOLDSMITH, E. I.

GOLDSMITH, R. S.
Calcium metabolism under stress and in repose.

GOLDSMITH, B.
Psychological preparation of aviators.

GOLDSMITH, F. S. C.

GOLDSMITH, R. F.
Terrain coefficients for energy cost prediction.

GOLDSMITH, B. S.
Comparison of physical, biophysical and physiological methods of evaluating the thermal stress associated with wearing protective clothing.

GOLDSMITH, B. S.
Energy cost of pushing loaded handcarts.

GOLDSMITH, B. S.
Supraventricular tachycardia initiated by sinus beats.

GOLDSMITH, E. I.

GOLDSMITH, R. S.
Calcium metabolism under stress and in repose.

GOLDSMITH, B.
Psychological preparation of aviators.

GOLDSMITH, B. S.
Comparison of physical, biophysical and physiological methods of evaluating the thermal stress associated with wearing protective clothing.

GOLDSMITH, B. S.
Energy cost of pushing loaded handcarts.

GOLDSMITH, B. S.
Supraventricular tachycardia initiated by sinus beats.

GOLDSMITH, E. I.

GOLDSMITH, R. S.
Calcium metabolism under stress and in repose.

GOLDSMITH, B.
Psychological preparation of aviators.

Appendices B, C, and D


PERSONAL AUTHOR INDEX:

GODBOLD, G. M.
Toxicological evaluation of some synthetic materials used in sealed enclosures

GODBOLD, G. M.
Toxicological evaluation of some synthetic materials designed for airtight space equipment

GOEBNIESKI, W. G.
Determination of the elastic modulus of the left-ventricle myocardium with the aid of X-ray kymography

GODCIGEVEY, V. Y.
Working capacity, methods for its evaluation and pharmacological stimulation

GODCIGEVEY, V. Y.
Effect of hypodynamia on gas exchange in animals

GODDARD, C. C.
Effects of air pollution on indigenous animals and vegetation

GODDARD, S.
An approach to head impact analysis

GODDARD, S.
Observations on spectral sensitivities for the phasing of circadian temperature rhythms in Peromyscus maniculatus

GODDARD, S.
Non-linear effects in head impact and protection analysis

GODDARD, S.
Impact analysis of the skull-brain system

GODDARD, S.
Clinical response to nitroglycerin as a diagnostic test for coronary artery disease

GODDARD, S.
Platelet studies in patients with coronary artery disease and in their relatives

GODDARD, V. G.
Effective dose and several factors of its identification - Assessment of radiation hazard in space flights

GODDARD, V. G.
Non-uniform distribution of the absorbed dose and radiobiological effect Assessment of radiation hazard in space flights

GODDARD, W. A.
Stimulation of cardiovascular adaptability during prolonged space exposure

GODDARD, W. A.
Some data on the biological effect of and protection from laser radiations

GODDARD, W. A.
Rate of elimination of metabolites in a human subject wearing an isolation garment /with various physical loads and food rations

GODDARD, W. A.
Rate of elimination of metabolic products from man confined in insulating gear (for different physical loads and diets)

GODDARD, W. A.
Pathological-anatomistic characterization of changes induced by magnetic fields in experimental animals

GODDARD, W. A.
Effect of synthetic carbohydrates on lyomosomes of rat liver

GODDARD, W. A.
Effect of synthetic carbohydrates on rat liver lyomosomes

GODDARD, W. A.
Response of human subjects to reduced levels of water consumption under simulated civil defense shelter conditions

GOSCHWICK, I.
Reliability of electroencephalography

GOTT, B. E.
Photo-optical data acquisition in biomedical research

GOTT, B. L.
A teflon membrane for measurement of blood and intravascular gas tensions by mass spectrometry

GOTTLEB, S. F.
Effects of increased tensions of O2, N2, and He on the activity of a Na-K-ATPase of rat intestine

GOUHNS, M.
Effects of times of tolerance to hypoxia among puppy pilots in the course of their aeromedical instruction in a decompression chamber

GOUHNS, M.
Attempt to evaluate the operational effectiveness of military/aeronautical personnel in the course of night duty

GOUHNS, M.
Determination of muscular compliance in the course of movement

GOWLD, N.
Individual recognition between mother and infant bats (Myotis)

GOWLD, M.
Aviation Medicine Translations: Annotated bibliography of recently translated material

GOWLD, M.
Gravitation receptor: Evolution of the structural, cytochemical, and functional organization

GOWLD, J.
Wide-angle optical model of the eye

GOWULOV, V. A.
A study on the compression strength of human vertebrae

GOWULOV, V. A.
Reversibility of perceived motion - Selective adaptation of the human visual system to speed, size and orientation

GRAFF, F.
Further studies on the relation between mitochondria and glycolysis

GRAFF, F.
Evaluation of the lap belt, Air Force shoulder harness-lap belt and air bag plus lap belt restraints during impact with anthropomorphic dummies

GRAFF, F.
Human head linear and angular accelerations during impact

GRAF, C. D.
Spatial frequency channels in the human visual system - Effects of luminance and pattern drift rate

GRAN, D.
Analysis of survival and cause of death statistics for mice under single and duration-of-life gamma irradiation

GRAN, D.
The properties of carboxypeptidase C from orange leaves

GRAN, D.
Myorelaxation of animals through the injection of 3,5-diethyl-4-bromo pyrazol and the effect of extracardiac nerve stimulation on the heart under these conditions
Contributions of the space program to our knowledge of motion sickness.

The effect of vision on susceptibility to acute motion sickness studied under quantifiable stimulus-response conditions.

Behavioral responses to small doses of carbon monoxide.

The influence of vision on susceptibility to acute motion sickness studied under quantifiable stimulus-response conditions.

Effects of selective percutaneous coronary arteriography and their re-evaluation of material effects on microbial release from solids.

Calcium metabolism in astronautics

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Behavioral responses to small doses of carbon monoxide.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.

The role of weightlessness in wakefulness and voluntary motor activity.

Behavioral responses to small doses of carbon monoxide.

Calcium metabolism in astronautics.

Object code storage in the static portion of a computer system.

Calcium homeostasis in astronauts.
GERBEN, H. R.
Nocturnal bird migration in opaque clouds
p0396 A72-25073

GERHART, R. J.
Secondary task performance of helicopter pilots during low-level flight [ISR-70-54]
p0386 A72-26086

GERIKH, G. G.
Tolerance to external breathing resistance with particular reference to high inspiratory resistance
p0445 A72-27127

GERSTEIN, D. P.
Immobilization hypercalciuria - Treatment and a possible pathophysiologic mechanism
p0064 A72-14871

GERSTEIN, T. D.
Performance and thermal comfort
p0002 A72-10117

GERSTON, E. I.
The effect of space flight conditions and prolonged hypokinesia on the kidney function in man
p0508 A72-42068

GERSTON, I. O.
Effects of physical training and electric muscle stimulation on the metabolism
p0543 A72-43921

GERSTON, T. O.
Radiobiological effects after three-year gamma-irradiation of dogs
p0326 A72-29307

GERSTON, T. O.
Brief survey of the problems of space radiobiology and radiation safety in space flights
p0417 A72-35376

GERSTON, T. O.
Influence of Cosmos 368 space flight conditions on radiation effects in yeast, hydrogen bacteria and seeds of lettuce and pea
p0540 A72-43330

GERSTON, T. O.
Physiological and hematological effects of chronic irradiation
p0540 A72-43392

GERSTON, T. O.
Providing radiation flight safety for the Soyuz-9 spacecraft crew
p0075 A72-11995

GERSTON, T. O.
Conditions and principal results of radiobiological research
p0202 A72-17057

GERSTON, L. P.
Biomedical problems of space flight
p0562 A72-32107

GERSTON, L. P.
Investigation of the critical discreteness interval of the visual system
p0133 A72-15039

GERSTON, H. I.
Analysis of impulse conduction mechanisms during the relative refractory period made on a mathematical model of a myelinated nerve fiber
p0338 A72-30597

GERSTON, H.
Embryogenesis in 100% O2 at reduced pressure
p0215 A72-22642

GERSTON, G.
Insect gas effects on embryonic development
p0515 A72-42744

GERSTON, G.
Work capacity and physiologic responses to work
[FAA-AM-72-16]
p0521 A72-30060

GERSTON, N. H.
Index to FAA Office of Aviation Medicine reports 1961 through 1971 [FAA-AM-72-17]
p0400 A72-25103
oxygen delivery and consumption.

GOTTShIEN, B.
Allometric ratios, invariant numbers and the theory of biological similarities.

GyEBCIO, J. G.
Congruent and spurious motion in the learning and performance of a compensatory tracking task.

GOTHEIB, P.
Instantaneous measurement of metabolic needs of plants: Aerobic and possibly space applications.

GUBA, R. A.
"VI-like" and "AFP-like" leads for continuous electrocardiographic monitoring.

GUBA, S. K.
Design for positive pressure respirators.

GUSEN, D. B.
QRS-wave detector evaluation.

GUSEN, J. D.
Thermal balance in man during 24 hours in a controlled environment.

GUSEN, J. D.
Skin temperatures in warm environments and the control of sweat evaporation.

GUBSA, J. C.
Further study of combined heat, noise and vibration stress.

GOWLEK, H. P.
Study of times of tolerance to hypoxia among pilot pilots in the course of their aeromedical instruction in a decompression chamber.

GUIN, T.
Occurrence of Ventricular arrhythmias with exercise as compared to monitoring.

GUINIA, J. S.
Heart and lung function in swimmers and nonathletes during growth.

GULAA, N. R.
Problems of complex object modeling based on heuristic self-organization.

GULL, M. P.
Current state and prospects for development of research on Protein biosynthesis.

GULLEN, W. H.
Postexercise electrocardiograms, coronary heart disease, and airline pilots.

GUBLICK, S. A.
Evaluation of a total system - Optics plus operator.

GUNBAR, R. M.
Relationship of pulmonary artery to left ventricular diastolic pressures in acute myocardial infarction.

GUNNING, J. P.
Determination of cardiovascular velocities by dopplercardiometry. II - Detection of impaired left ventricular function.

GUTFHEK, E.
Psychological and physiological changes caused by desynchronisation following transatlantic air travel.

GUTFHEK, G.
Natural numbers in transclassic systems [AD-732299].

GUTFHEK, B. V.
Synaptic potentials of sensor and motor neurons of trigeminal nuclei during corticofugal stimulation.

GUTFHEK, E.
Post-synaptic potentials of motor neurons of the facial nerve nucleus evoked by afferent and corticofugal pulse stimulation.

GUTFHEK, B. H.
Eye movements as the basis of spatial vision and as a model of behavior.

GUTFHEK, E. I.
Effect of physical stress on hemodynamics in dogs with acute arterial hypertension.

GUTFHEK, E. I.
Significance of venous vessel tones for hemodynamic changes.

GUTFHEK, E. W.
Biocontrol systems in cardiological studies.

GUTFHEK, E. W.
Multilevel motion control.

GUTFHEK, E. W.
A supraspinal motion control mechanism.

GUTFHEK, G. P.
Determination of the differential capability of lungs by the method of delayed respiration.

GUTFHEK, A. V.
Influence of the polarizing current and of a sodium-free and calcium-free medium on the electrical and contractile activity of muscle cells of the vesna porta.

GUTFHEK, B. S.
The integrated cockpit procedure for identifying control and display requirements of aircraft in advanced time periods.

GUTFHEK, C. W.
Proton irradiation of stem cells: Radiation damage and chemical radioprotection.

GUTFHEK, E. W.
Some results of medical investigations performed during the flight of the research orbital station Salyut.

GUTFHEK, E. W.
Physiological problems of prolonged weightlessness.

GUTFHEK, E. W.
The utilization of the achievements of space medicine in the care of public health [NASA ST-F-1408].

GUTFHEK, E. W.
Catalytic oxidation of certain gaseous products of pyrolysis of human wastes.

GUTFHEK, E. W.
Catalytic oxidation of some gaseous products of pyrolysis of wastes of human vital functions.

GUTFHEK, S. G.
The effect of accelerator training on splenic reticular tissue.

GUTFHEK, E. W.
Handbook of aerosol behavior in saturation diving environments [AD-735960].

GUTFHEK, E. W.
A re-evaluation of material effects on microbial release from solids.

GUTFHEK, E. W.
Effects of aeolian erosion on microbial release from solids.

GUTFHEK, E. W.
The numerical presentation of the kinematics of human body motions.

GUTFHEK, J. R.
Investigation of the primate vestibular system function through analysis of the vestibulo-ocular reflex response to various input stimuli [AD-735845].

GUTFHEK, E. W.
Determining the detectability range of camouflaged targets.
**PERSONAL AUTHOR INDEX**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAGIS, W. V.</td>
<td>What's new on the training horizon</td>
<td>p0046 A72-11098</td>
</tr>
<tr>
<td></td>
<td>Assessment of two methods of sequencing ground trainer practice for undergraduate pilot training</td>
<td>p0087 A72-13301</td>
</tr>
<tr>
<td></td>
<td>Using a ground trainer in a job sample approach to predicting pilot performance</td>
<td>p0567 A72-32142</td>
</tr>
<tr>
<td>HAGSTROM, R. N.</td>
<td>Incidence of myocardial infarction and sudden death from coronary heart disease in Nashville, Tennessee.</td>
<td>p0017 A72-11425</td>
</tr>
<tr>
<td>HAY, P. N.</td>
<td>Electrocardiogram transmission - The state of the art</td>
<td>p0028 A72-12139</td>
</tr>
<tr>
<td></td>
<td>ECG monitoring of a free-swimming diver at a working depth of 15 meters</td>
<td>p0282 A72-27478</td>
</tr>
<tr>
<td>HENDY, R. D.</td>
<td>Isolation of a polyvalent bacteriophage for Escherichia coli, Klebsiella pneumoniae, and Aerobacter aerogenes.</td>
<td>p0450 A72-37650</td>
</tr>
<tr>
<td>HITSCHY, J.</td>
<td>Hypoxic hypoxia 'effects on blood coagulation and fibrinolysis</td>
<td>p0452 A72-37880</td>
</tr>
<tr>
<td>HERNES, B. F.</td>
<td>O2 tolerance after 14 days bed rest and the effects of rehydration</td>
<td>p0295 A72-28295</td>
</tr>
<tr>
<td></td>
<td>Effect of bedrest and positive radial acceleration upon peripheral visual response time</td>
<td>p0295 A72-28297</td>
</tr>
<tr>
<td></td>
<td>Human performance capabilities in a simulated space station-like environment. 1: Fixed beam luminance and location</td>
<td>p0294 A72-18102</td>
</tr>
<tr>
<td>HERTZ, H. F.</td>
<td>Visual examination apparatus</td>
<td>p0317 A72-21079</td>
</tr>
<tr>
<td>HESSELMANN, H.</td>
<td>Assessment of the exercise capacity of young men</td>
<td>p0002 A72-10116</td>
</tr>
<tr>
<td>HESS, R.</td>
<td>Energy cost of pushing loaded handcarts</td>
<td>p0490 A72-00419</td>
</tr>
<tr>
<td>HESSLY, J. C.</td>
<td>Myocardial contractility - General aspects</td>
<td>p0369 A72-32492</td>
</tr>
<tr>
<td>HESSNER, J.</td>
<td>A contribution to the parameter estimation of a certain class of dynamical systems</td>
<td>p0371 A72-32766</td>
</tr>
<tr>
<td>HESOROS, A.</td>
<td>Sensory psychological investigations regarding invariance formation in the visual system of man</td>
<td>p0477 A72-28101</td>
</tr>
<tr>
<td>HIBALDACH, C. R.</td>
<td>Evaluation of advanced component concepts for an integrated environmental control/life support, resistol control system</td>
<td>p0005 A72-10468</td>
</tr>
<tr>
<td>HIBALDACH, P.</td>
<td>Individual variation in circadian rhythms of sleep, EEG, temperature, and activity among workers - Implications for regulatory mechanism.</td>
<td>p056 A72-19528</td>
</tr>
<tr>
<td></td>
<td>Increased tolerance of leukemic mice to arabinosyl cytosine with schedule adjusted to circadian system.</td>
<td>p018 A72-35397</td>
</tr>
<tr>
<td>HICORB, C. G.</td>
<td>Team size and decision rule in the performance of simulated monitoring teams</td>
<td>p0499 A72-41016</td>
</tr>
<tr>
<td></td>
<td>Vigilance and motivation: A theoretical note</td>
<td>p0255 A72-19117</td>
</tr>
<tr>
<td></td>
<td>Monitoring performance across sense modes: An individual differences approach</td>
<td>p0400 A72-27089</td>
</tr>
<tr>
<td>HILD, R. B.</td>
<td>Physiologic stress during 50-hour double-crew missions in C-141 aircraft.</td>
<td>p0227 A72-23737</td>
</tr>
<tr>
<td>HILLIAGOS, C. A.</td>
<td>An improved transducer to measure left ventricular wall thickness in open-chest dogs.</td>
<td>p0470 A72-28057</td>
</tr>
</tbody>
</table>

**GUT, A. W.**

- Nonionizing electromagnetic wave effects in biological materials and systems. p0377 A72-33750
- Study of selectivity in adaptation to Coriolis and linear accelerations. p0075 A72-11997

**GYODE, F. I.**

- Changes in the coagulating and anticoagulating blood systems during parachute jumps. p0071 A72-15233
- Changes in individual physiological indexes of parachutists. p0278 A72-26988

**HAISSTEB, J. C.**

- The state of natural immunity of dogs during chronic gamma-irradiation under the influence of amitetravite. p0073 A72-15228
- Mechanism of pulmonary conversion of angiotensin II to angiotensin II in the dog. p0073 A72-15665
- Renin in differential diagnosis of hypertension. p0453 A72-38144

**HAIBER, J. P.**

- Parathyroid hormone - Secretion and metabolism in vivo. p0071 A72-15228

**HACHT, J. D.**

- Inhomogeneity effects on O2 and CO pulmonary diffusing capacity estimates by steady-state method - Theory. p0011 A72-10467

**HAEIBER, B. P.**

- Effects of weightlessness on the nutrition and growth of Polynya carolinensis. p0303 A72-20062
- The production and characterization of specific antibodies to aldosterone. p0453 A72-38175

**HAGEBT, B. D.**

- Cell proliferation in lungs of mice exposed to elevated concentrations of oxygen. p0409 A72-35398

**HAGEBT, B. W.**

- Sudden coronary death - The occurrence of platelet aggregates in the epicardial arteries of man. p0095 A72-16013
- Platelet aggregates in intramyocardial vessels of patients dying suddenly and unexpectedly of coronary artery disease. p0365 A72-31770

**HAGEBT, E.**

- Visual cycle energy system for implantable circulatory assist devices. p0318 A72-21086

**HAGEBT, E. B.**

- Maneuvers affecting sympathetic outflow in human skin nerves. p0229 A72-24241

**HAGEBT, E. G.**

- Survival of bacterial isolates exposed to simulated Jovian trapped radiation belt electrons and solar wind protons. p0366 A72-31993

**HAGEBT, E. G.**

- Search and rescue service in Denmark with special reference to accidental hypothermia. p0456 A72-38716

**HAGEBT, E. B.**

- The effect of temperature on the survival of microorganisms in a deep space vacuum. p0015 A72-22641
- Survival of bacterial isolates exposed to simulated Jovian trapped radiation belt electrons and solar wind protons. p0077 A72-13301
- Survival of bacterial isolates exposed to simulated Jovian trapped radiation belt electrons and solar wind protons. p0470 A72-28057
Further study of combined heat, noise and vibration stress. [AD-746083]
Combined effects of noise and vibration on mental performance. [AD-731146]
Effects of noise on serial search performance. [AD-731148]
Effects of acoustic stimuli on the vestibular system. [NASA-TP-71-59]
The effects of high intensity noise on human equilibrium. [AD-737826]

HARRIS, D. A.
Physiologic stress during 50-hour double-crew missions in C-141 aircraft. [AD-740992]

HARRIS, J. D.
Human exposure to Halon 1301/CBrF3/ during simulated aircraft cabin fires. [NASA-CR-115457]

HARRIS, J. L., SR.
Visual acuity and visibility, experiments 5008 and 5013 [REPT-5005]
The measurement of enzyme kinetic parameters of poorly soluble substrates. [AD-743176]

HARRIS, P.
The effects of acute hypoxia on lipid synthesis in the rat heart. [AD-743176]

HARRIS, W.
A study of recovery functions in man. [AD-743176]

HARRIS, D. C.
Circulatory responses to hypoxia in experimental myocardial infarction. [AD-743176]

HARRIS, G. A.
Muscle metabolism during isotonic exercise performed at constant force. [AD-743176]

HARRIS, N. H.
A study of recovery functions in man. [AD-743176]

HARRIS, N. R.
Circadian variation in rat serum 5-hydroxytryptamine and effects of stimulii on the rhythms. [AD-743176]

HARRIS, W. K.
Ballistocardiography and clinical studies; Ballistocardiograph Research Society, Annual Meeting, 14th, Atlantic City, N.J., May 2, 1970, Proceedings. [AD-743176]
Measurements of cranial blood flow using ballistocardiography. [AD-743176]
Computer simulation of human ballistocardiograms reading. [AD-743176]
PERSONAL AUTHOR INDEX

[HAY-CP-127069] p0475 N72-28092
HAUG, H.
On the inheritance of the enzymatic activities of lactate dehydrogenase and malate dehydrogenase in human erythrocytes [HAY-CP-110416] p0043 N72-11700
HADGHTON, V.
Peripheral venous scintillation angiocardiography in determination of left ventricular volumes in man. p0017 A72-11475
HAU, C. C.
Histological effects of long-term continuous animal exposure to carbon monoxide [AD-727504] p0034 N72-10080
Chronic exposure to low concentrations of monosodiumglutamate. p0035 N72-10083
Effect of 90-day continuous exposure to dichloromethane in man [HAY-CP-127056] p0030 N72-25102
Continuous animal exposure to dichloromethane [HAY-CP-127069] p0049 N72-28051
HAUS, E.
Increased tolerance of leukemic mice to arabinosyl cytosine with schedule adjusted to circadian system. p0018 A72-25397
HAUT, G. T.
Psychological correlates of physiological circadian periodicity. p0274 A72-26681
HAYES, G. R.
Vigilance effects for duration judgments with two levels of task demand. p0341 A72-30964
HAYES, J. E.
Hollis effect on cardiac mitochondria of mice. p0056 A72-38712
HAY, A. E.
The EEG and controlled hyperventilation. p0297 A72-28312
HAY, J. D.
Does head movement feedback calibrate the perceived direction of optical motion? p0009 A72-10719
Spatial parameters of eye-hand adaptation to optical distortion. p0022 A72-11897
HAJDEK, P.
Circadian periodicity of resistance to ionizing radiation in the pocket mouse. p0156 A72-19532
HAY, C.
Relative biological effectiveness of 3-GeV proton beams in producing cataracts in rabbits [HAY-CP-17502] p0037 A72-15072
HAYMANN, M.
Acute changes in the central nervous system of monkeys exposed to protons. p0331 A72-29833
Brain tumors in irradiated monkeys. p0049 A72-36439
Neuropathological evaluation of monkeys exposed to body-alone X-radiation. p0024 A72-36439
HAZUICH, M.
Short-term effects of ozone on the lung. p0024 A72-36439
BRADLEY, N. C.
Circadian investigation of an astronaut maneuvering scheme. p0029 A72-37026
HARRIS, N. P.
The effectiveness of a vibrotactile device under conditions of auditory and visual loading. p0080 A72-21569
HEATH, G. G.
The visual standards for the selection and retention of astronauts, Part 2 [HAY-CP-115763] p0052 N72-30115
HEBaT, T.
A model for the development of hypertonic blood pressure irregularities through improperly controlled learning p0169 A72-20659
Sex-specific differences in the formation and development of different experimental neurotic forms of hypertonia. p0170 A72-20650
Entropic effects on two-dimensional conditional-reflex decision situations and possibilities of their modeling. p0170 A72-20660
Correlations between operational algorithms of central-nervous processes in conditional-reflex two-dimensional decision situations. p0170 A72-20652
HECkA, 6. A.
Visual recognition from the nose versus side scanner stations of an aircraft [AD-729226] p0067 N72-13094
Lorborne visual recognition as a function of illumination level [AD-729629] p0012 A72-14122
Lorborne visual recognition with yellow sandblasters. p0130 A72-14132
HECI<TA, 6. E.
Methods of auditory display for aircraft collision avoidance systems. p0299 A72-28327
HEEB, 6. B.
Visual reconnaissance from the orange versus yellow scanner stations of an aircraft [AD-728629] p0012 A72-14122
Lorborne visual recognition with yellow sandblasters. p0130 A72-14132
HEESTRA, K. B.
The development of the choroid in man - Choroidal vascular system. p0049 A72-37398
HIEBACH, C. R.
Models of heat dissipation in a homogeneous solid [AD-738599] p0073 A72-28073
HIEBER, P. P.
Advanced extravehicular protective systems for shuttle, space station, lunar base and Mars missions. [AIAA PAPER 72-231] p0231 A72-24441
Advanced extravehicular protective systems p0043 A72-27113
HESTER, W. W.
Tracking performance with visual, auditory, or electrooculo gram displays. p0345 A72-31152
Effects of noise intensity on visual target-detection performance. p0345 A72-31152
HEITZ, L.
Microrheology and light transmission of blood. p0345 A72-31156
HEIBERG, P. A.
A biplane roentgen videometry system, for dynamic /60 per second/studies of the shape and size of circular functions, particularly the left ventricle. p0013 A72-11040
HEINE, P. A.
New concepts of aviation apprenticeship qualifications. [AD-729654] p0143 A72-15109
HEIBCAST, D. D.
Effect of carbon monoxide on reflex vasoconstriction in man.
HEIDEL, B.

Effect of posture on heat acclimatization in man.

HEIDEL, R.

Visually directed pointing as a function of target distance, direction, and available cues.

HELLMANN, R.

Temperature-sensitive neurons in the brain stem — Their responses to brain temperature at different ambient temperatures.

HELLMUT, R. P.

Chemoreflex ventilatory response to CO2 in man at low and high altitudes.

HENDRICKS, B.

Studies of the influence of theophylline on the vasodilating action of different medications on the cerebral and coronary circulation of man.

HENDRICKS, R. D.

Diagnosis and prediction: A study of daily behavior patterns in TETEEL 2.

HENBARD, R.

Sweat depression during controlled hyperthermia in man — Effects on the sweat rate and sweat electrolytes.

HENDRICKS, R. L.

Effects of physical exercise on spinal reflectivity in man.

HENDRICKS, R. H.

The relationships among time, distance, and intensity as determinants of motion discrimination.

HENDEY, W. I.

Biocidal properties of an anti-icing additive.

HENDRICKS, C. R.

Breathing metabolic simulator.

HENDRICKS, C. I.

Breathing metabolic simulator.

HENDRICKS, C. L.

Cardiorespiratory response to breathing dense gas at exercise with imposed mechanical airway resistance.

HENDRICKS, C. H.

Tran-cortical concentrations in human hair.

HENKEL, W. E.

Nineteen personnel selection study (70-750841).

HENKEL, A. V.

Studies of inflating restraint systems (PB-201264).

HENKEL, R. P.

High Z particle Apollo astronaut dosimetry with plastics.

HENKELL, R. R.

The effect of heat stress on reaction time to centrally and peripherally presented stimuli.

HENKEL, R. L.

Spinal mesenteric vascular reflexes — A contribution to the problem of the nutritional hepatic reflex of R. Reis.

HENRY, J. P.

Applicability of implantable telemetry systems in cardiovascular research.

HENSCH, R.

Sustained linear acceleration (AD-738070).

HENSCH, E.

The use of a scintillation counter to measure diagnostic X-ray tube kilovoltage, radiation exposure rates and contamination by low energy gamma emitters.

HENSCH, E.

Peripheral thermoregulation — Foot temperature in two arctic canines.

HENSCH, R.

Middle ear muscle contractions and their relation to pulse and echo evoked potentials in the bat.

HENSCH, G.

Middle ear muscle contractions and their relation to pulse and echo evoked potentials in the bat.

HERMAN, R. E.

Clinical response to nitroglycerin as a diagnostic test for coronary artery disease.

HERNANDO, L.

Acid-base balance after maximal exercise of short duration.

HERNANDO, T.

Blood and muscle pH after maximal exercise in man.

HERNANDEZ, F.

Respiratory and circulation response to added air flow resistance during exercise.

HERNANDO, T.

A radiographic method for demonstrating decompression sickness in hamsters.

HERNANDEZ, T.

Requirements impact on the shuttle ETC/155.

HERNANDEZ, A. A.

Experimental human exposure to carbon monoxide, 1 to 1000 ppm.

HERNANDEZ, G.

Methods for measuring the HF oscillation frequency in ultrasonic pulses of equipment for diagnostic ultrasonography.

HERSTEIN, J. R.

Biomechanics of trained animals.

HETTIG, R. A.

Steady state and transient temperature distributions in the human thigh covered with a cooling pad.

HETTIG, R. A.

Removal of metabolic heat from man working in a protective suit.

HETTIG, B. T.

Foot forces exerted at various aircraft brake-pedal angles.

HETTIG, B. T.

Effect of caffeine on athletic performance.

HETTIG, B. T.

Feasibility demonstration of a hyperfiltration technique to reclaim shower wastewater at elevated temperatures.

HETTINGER, L. A.

Fluorescence activated cell sorting.

HETTINGER, R. R.

Effects of weightlessness on astronauts — A summary.

HESSE, W.

A micromethod for rapid and specific serial determination of the protein content of intact microorganisms.

HESSETT, J. C.

Feasibility demonstration of a hyperfiltration technique to reclaim shower wastewater at elevated temperatures.

HETTINGER, D.

Examinations for determining muscle atrophy threshold.
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>HERSH, L. R.</td>
<td>Visual experience as a determinant of the response to severe exercise.</td>
<td>123.</td>
</tr>
<tr>
<td>HERSH, R. B.</td>
<td>Toxicology of dichlorvos at operational aircraft cabin altitudes.</td>
<td>124.</td>
</tr>
<tr>
<td>HERSH, R. B.</td>
<td>Combined effects of altitude and high temperature on complex behavior.</td>
<td>124.</td>
</tr>
<tr>
<td>HERSH, R. B.</td>
<td>The acute toxicity of brief exposures to SF, HC1, N02 and HCN singly and in combination with CO.</td>
<td>125.</td>
</tr>
<tr>
<td>HERSH, R. B.</td>
<td>High Temperature and Performance in a Flight Task.</td>
<td>126.</td>
</tr>
<tr>
<td>HERSH, R. B.</td>
<td>Role of Tachycardia in Mediating the Coronary Hemodynamic Response to Severe Exercise.</td>
<td>127.</td>
</tr>
<tr>
<td>HERSH, R. B.</td>
<td>An Investigation of the Effective Intensity of Flashing Lights.</td>
<td>128.</td>
</tr>
<tr>
<td>HERSHEY, J. A.</td>
<td>Test of an Inverse Electrocardiographic Solution Based on Accurately Determined Model Data.</td>
<td>129.</td>
</tr>
<tr>
<td>HILDEBRAND, M.</td>
<td>A Forecasting Technique for Accumulated Particulate Contamination on Spacecraft Assemblies.</td>
<td>131.</td>
</tr>
<tr>
<td>HILDEBRAND, G.</td>
<td>The Relation Between Diurnal Variations in Psychic and Physical Performance.</td>
<td>132.</td>
</tr>
<tr>
<td>HILL, J. C.</td>
<td>A Dynamic Model of the Human Postural Control System.</td>
<td>135.</td>
</tr>
<tr>
<td>HILL, J. R.</td>
<td>Influence of Workload Patterns During the Jetdown, Approach and Landing of a Boeing 707 on Nervous Activity of the Pilot.</td>
<td>136.</td>
</tr>
<tr>
<td>HILL, P. R.</td>
<td>Reactions of Pilots to Warning Systems for Visual Collision Avoidance.</td>
<td>137.</td>
</tr>
<tr>
<td>HILL, R. J.</td>
<td>Aural Responsivity of a Pilot Following Endolymphatic Shunt Surgery.</td>
<td>139.</td>
</tr>
<tr>
<td>HILL, R. W.</td>
<td>Determination of Oxygen Consumption by Use of the Paramagnetic Oxygen Analyzer.</td>
<td>140.</td>
</tr>
<tr>
<td>HILL, J. W.</td>
<td>Data Synthesis of Biological Samples Collected for Research in Nitrogen Metabolism in the Sea.</td>
<td>141.</td>
</tr>
<tr>
<td>HILL, B. R.</td>
<td>Gas-Induced Osmosis in the Lung.</td>
<td>142.</td>
</tr>
<tr>
<td>HILL, B. R.</td>
<td>Neurologic Oxygen Toxicity - Effects of Switch of Inert Gas and Change of Pressure.</td>
<td>143.</td>
</tr>
<tr>
<td>HILTON, S. A.</td>
<td>Language and Speech Capacity of the Right Hemisphere.</td>
<td>144.</td>
</tr>
<tr>
<td>HILL, B. R.</td>
<td>Thrombolytic Tissue Phosphate Isomerase in a Psychosurphobic Clandestine.</td>
<td>145.</td>
</tr>
<tr>
<td>HINBERGER, U.</td>
<td>Myocardial Protein Synthesis in Acute Myocardial Hypoxia and Ischemia.</td>
<td>146.</td>
</tr>
<tr>
<td>HIPPSTEIN, J. R.</td>
<td>Thyroidal Influence on Myocardial Changes Induced by Simulated High Altitude.</td>
<td>147.</td>
</tr>
<tr>
<td>HIRADO, T.</td>
<td>Metabolism of the Yeast Cell Envelope.</td>
<td>148.</td>
</tr>
<tr>
<td>HIRSCH, A. E.</td>
<td>Protection of the Brain from Injury During Impact: Experimental Studies in the Biomechanics of Head Injury.</td>
<td>149.</td>
</tr>
<tr>
<td>HIRSCH, C.</td>
<td>Bio mechanics in Motor Skeletal Structures.</td>
<td>150.</td>
</tr>
<tr>
<td>HIRSCH, F. G.</td>
<td>Absence of Electromagnetic Pulse Effects on Monkeys and Dogs.</td>
<td>151.</td>
</tr>
<tr>
<td>HIRSCH, R. V. B.</td>
<td>Visual Experience as a Determinant of the Response to Severe Exercise.</td>
<td>152.</td>
</tr>
</tbody>
</table>
Control parameters of the blood-pressure regulatory system. I - Heart rate sensitivity. p0516 A72-42777

HOPF, J. B.
Inhibition of vertebrate retinal lactate dehydrogenase during exposure to normobaric oxygen. p0226 A72-23729

HOPFLE, G. W.
Korotkov sound processor [NASA-CASE-MSC-13999-1] p0045 W72-25142

HOPPEN, B. A.
Anti-bijacking efforts and cardiac pacemakers - Report of a clinical study. p0226 A72-23740

HOPPEN, A. E.
Microbial burden prediction model for unmanned planetary spacecraft [NASA-CR-127467] p0469 W72-28048

HOPPEN, I.
Tissue enzyme studies in Macaca nemestrina monkeys. p0281 A72-27473

HOPPEN, B. E.
The visibility range when observing an aircraft with and without field-glasses. p0496 A72-40750

HOPPEN, K.
Gastric motility during rest and physical exercise [NASA-TR-182077] p0305 W72-20074

HOPPEN, S. E.
Effect of a general aviation simulator on the performance of flight training. p0291 A72-28261

HOPPEN, K.
Effect of a general aviation simulator on the performance of flight training. p0291 A72-28261

HOPPEN, B. A.
Effect of a general aviation simulator on the performance of flight training. p0291 A72-28261

HOPPEN, E. A.
Safety of INH chemoprophylaxis in aviation personnel. p0064 A72-18872

HOPPEN, B. E.
The technology of respiration and pulse rate measurements involving pilots. p0280 A72-27417

HOPPEN, B. E.
Mechanical impedance of supine humans under sustained acceleration. p0292 A72-28270

HOLCOMB, W. G.
Development of the WMBL telemetry system [DAD-730111] p0360 W72-23092

HOLDER, F. E.
Analysis of five selected factors in pursuit tracking performance of men during acceleration. p0290 A72-28320

HOLDER, B. J.
Human operator performance in hypoxic stress [DAD-780066] p0504 W72-29078

HOLDER, R. J.
Toxicological control and chemical analysis of outgassing products from macOS evaluated for use within the LM crew compartment. p0009 A72-10771

HISADA, M.
Characteristics of cortical receptive fields in the primary visual cortex of the cat. p0850 A72-41461

HISADA, M.
Biological cycling of atmospheric trace gases (NASA-CR-126663) p0381 W72-24057

HITCHCOCK, R. B.
Automatic real-time pair feeding system for animals [NASA-CASE-ARC-10302-1] p0313 W72-21052

HITZON, W. C.
Orientation error accidents in Army aviation aircraft p0392 W72-25034

HISTAL, H. P.
A model of fluctuating alveolar gas exchange during the respiratory cycle. p0425 A72-36571

HOGG, J. F.
Response to daily lower body negative pressure (-70mm Hg) with emphasis on plasma renin activity, sodium and potassium excretion. p0557 A72-45658

HOCHE, J. P.
Comparison of calcium and phosphorus excretion in experimental hypertension. p0473 A72-39498

HOCHE, J. P.
Isolation of carbohydrate-metabolizing, extremely halophilic bacteria. p0630 A72-32729

HOCHE, G. R. J.
Effects of noise on human efficiency and some individual differences. p0186 A72-22137

HODGE, D. C.
A review of impulse-noise research at the Human Engineering Laboratories [AD-731185] p0145 W72-15118

HODGE, D. C.
Improved weapon noise exposure criteria [AD-738135] p0405 W72-25145

HODGE, D. J.
Respiratory cartridge efficiency studies. 1: Experimental design [UCRL-73166] p0045 W72-11090

HODGSON, G. W.
Embryology of porphyria. p0097 A72-16130

HODGSON, V. E.
Breaking strength of the human skull vs impact surface curvature [PB-208289] p0199 W72-17041

HOODY, G. L.
Combined skin temperature and direct heat flow measurement in a thermally stressful environment. p0300 A72-28338

HOELING, A. J.
An electrode system with rounded edges for direct ventricular defibrillation. p0272 A72-26628

HOF, E. D.
Effect of non-target stimuli upon length of voluntary saccades. p0341 A72-30966

HOPF, D. G.
Effect of circadian rhythms on CNS oxygen toxicity. p0064 A72-14067

HOPF, V.
Reliability and normal variations of computer analysis of Frank electrocardiogram by Smith-Byde program /1966 version/. p0221 A72-23274

HOFF, R. E.
Cardiovascular and respiratory responses to intra-arterial injection of E/4 and Na/4. p0162 A72-20177

HOFF, R. E.
Control parameters of the blood-pressure regulatory system. I - Heart rate sensitivity. p0516 A72-42777

HOPF, J. B.
Changes of intracellular myocardial electrolytes Orientation error accidents in Army aviation aircraft Combined skin temperature and direct heat flow Response to daily lower body negative pressure A nodel of fluctuating alveolar gas exchange Automatic real-time pair feeding system for animals Biological cycling of atmospheric trace gases Control parameters of the blood-pressure regulatory system. II - Open-loop gain, reference pressure and basal heart rate. Anti-bijacking efforts and cardiac pacemakers - Report of a clinical study. Microbial burden prediction model for unmanned planetary spacecraft Tissue enzyme studies in Macaca nemestrina monkeys. The visibility range when observing an aircraft with and without field-glasses. Gastric motility during rest and physical exercise Effect of a general aviation simulator on the performance of flight training. High temperature and performance in a flight task simulator Safety of INH chemoprophylaxis in aviation personnel. Tracking performance with visual, auditory, or electrotactile displays. Static comparison of vertical tape and vertical light emitting diode displays Visional return survey Effect of levamisole on performance 2 The technology of respiration and pulse rate measurements involving pilots. Mechanical impedance of supine humans under sustained acceleration. Development of the WMBL telemetry system Analysis of five selected factors in pursuit tracking performance of men during acceleration. Human operator performance in hypoxic stress Toxicological control and chemical analysis of outgassing products from macOS evaluated for use within the LM crew compartment.
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holden, R. L.</td>
<td>Effects of exposure at 80,000 feet at different decompression rates.</td>
</tr>
<tr>
<td>Holland, P.</td>
<td>The effects of added elastic loads on the respiratory response to CO2 in man.</td>
</tr>
<tr>
<td>Holland, E. M.</td>
<td>Effect of continuous gamma-ray exposure on performance of learned tasks and effect of subsequent fractionated exposures on blood-forming tissue.</td>
</tr>
<tr>
<td>Holland, S. G.</td>
<td>An automatic measuring and recording system for clinical electro-oculography.</td>
</tr>
<tr>
<td>Holland, B. J.</td>
<td>A study of laser eye protection by direct initiation of thin explosive wafers.</td>
</tr>
<tr>
<td>Holland, V. H.</td>
<td>Deep-body temperature changes in rats exposed to chronic centrifugation.</td>
</tr>
<tr>
<td>Hollander, A. P.</td>
<td>Cardiac acceleration elicited by voluntary muscle contractions of minimal duration.</td>
</tr>
<tr>
<td>Hollander, R.</td>
<td>Optic nerve axon diameters measured in the cat retina - Some functional considerations.</td>
</tr>
<tr>
<td>Hollar, S.</td>
<td>Brightness contrast at low luminances.</td>
</tr>
<tr>
<td>Hollis, W. C.</td>
<td>Optimal selection of stability augmentation system parameters to reduce the pilot ratings for the pitch tracking task.</td>
</tr>
<tr>
<td>Hollar, J. B.</td>
<td>Tonic vibration reflex in human and monkey subjects.</td>
</tr>
<tr>
<td>Holloszy, J. O.</td>
<td>Respiratory capacity of white, red, and intermediate muscle - Adaptive response to exercise.</td>
</tr>
<tr>
<td>Holm, A. P.</td>
<td>A study of human performance in a rotating environment.</td>
</tr>
<tr>
<td>Holm, A. B.</td>
<td>Conceptual design study of a six-man solid electrolyte system for oxygen reclamation.</td>
</tr>
<tr>
<td>Holberg, L.</td>
<td>Application of the xenon-133 method in exercise.</td>
</tr>
<tr>
<td>Holmes, R. P.</td>
<td>Bosch CO2 reduction unit research and development.</td>
</tr>
<tr>
<td>Holquist, C. O.</td>
<td>The Navy and the challenge of deep diving.</td>
</tr>
<tr>
<td>Holquist, E.</td>
<td>Theoretical foundations for a quantitative approach to paleoqenetics. I, II.</td>
</tr>
<tr>
<td>Evolutionary clock - Nonconstancy of rate in different species.</td>
<td></td>
</tr>
<tr>
<td>Empirical support for a stochastic model of evolution.</td>
<td></td>
</tr>
<tr>
<td>Recently published protein sequences. I.</td>
<td></td>
</tr>
<tr>
<td>Holt, D.</td>
<td>Experienced attraction between two parallel bars.</td>
</tr>
<tr>
<td>Holt, P. D.</td>
<td>A calculation of the L.E.T. distribution from negative pi mesons in tissue.</td>
</tr>
<tr>
<td>Hopper, W. R.</td>
<td>Abnormal electrocardiograms in healthy man.</td>
</tr>
<tr>
<td>Hopper, B. J.</td>
<td>Visual tracking by light offset.</td>
</tr>
<tr>
<td>Hopper, M.</td>
<td>Multi-parameter vision tester apparatus.</td>
</tr>
<tr>
<td>Horns, J.</td>
<td>Abnormal electrocardiograms in human and monkey subjects.</td>
</tr>
<tr>
<td>Horse, Y.</td>
<td>Oxygen intake and cardiac output during maximal treadmill and bicycle exercise.</td>
</tr>
<tr>
<td>Horse, N.</td>
<td>Oxygen intake and cardiac output during maximal treadmill and bicycle exercise.</td>
</tr>
<tr>
<td>Horse, M.</td>
<td>Increased ventilatory response to CO2 by rebreathing in consecutive daily trials.</td>
</tr>
<tr>
<td>Horse, G.</td>
<td>Maneuvers affecting sympathetic outflow in human skin nerves.</td>
</tr>
<tr>
<td>Hoods, C.</td>
<td>Anti-hijacking efforts and cardiac pacemakers - Report of a clinical study.</td>
</tr>
<tr>
<td>Hoods, W.</td>
<td>Comparison of calcium and phosphorus excretion with bone density changes during restraint in immature Macaca nemestrina primates.</td>
</tr>
<tr>
<td>Hoods, W. F., Jr.</td>
<td>Evaluation of left ventricular function by echocardiography.</td>
</tr>
<tr>
<td>Hoods, L. J. C.</td>
<td>Cardiac output, arterial and mixed-venous O2 saturation, and blood O2 dissociation curve in growing rats adapted to a simulated altitude of 3500 m.</td>
</tr>
<tr>
<td>Hoff, S.</td>
<td>An ultra-broadband probe for RF radiation measurements.</td>
</tr>
<tr>
<td>Hopkins, V.</td>
<td>Conflicting criteria in evaluating air traffic control systems.</td>
</tr>
<tr>
<td>Hopkins, B.</td>
<td>Measures of manual workload.</td>
</tr>
<tr>
<td>Hopkins, R.</td>
<td>Influence of respiration and respiratory sinus arrhythmia on aortic refraction.</td>
</tr>
<tr>
<td>Hopkins, C. E.</td>
<td>Analysis of the factors governing the scheduling of flight controllers in support of long duration manned spaceflight missions.</td>
</tr>
</tbody>
</table>
HOSKIN, L. G.

A rapid assay of dipolar and extradiol content in the human electrocardiogram.  p0542 72-43811

HOSKIN, A. N.

Problem solving and learning by man-machine teams  p0007 72-13089

HORAB, G.

Receptive fields of units in the visual cortex of the cat in the presence and absence of bodily tilt.  p0455 72-38646

HORSEY, B. A.

An hypothesis concerning the mechanism of the sodium-potassium pump /Brief note/.  p0024 72-36841

HORVAT, G.

Effects of simulated space vacuum on bacterial cells.  p0041 72-43395

HORNAV, B. M.

The development, test, and evaluation of three pilot performance reference scales  p0004 72-10126

HORVITZ, N. H.

The search for life on Mars – Where we stand today.  p0024 72-27262

HORST, R. A.

Effects of externally imposed mechanical resistance on breathing dense gas at exercise – Mechanics of breathing.  p0511 72-42489

HOTAY, H.

Serum cortisol, plasma free fatty acids, and urinary catecholamines as indicators of complications in acute myocardial infarction.  p0278 72-25787

HOTLH, S. H.

Comparisons between bicycle ergometry and treadmill walking maximum capacity tests.  p0029 72-26095

HOTZ, J. A.

Thermal equilibrium studies on men breathing helium-oxygen mixtures  p0037 72-10099

HOTZ, H.

Radiation effects in man: Manifestations and therapeutic effects  p0025 72-19110

HOTZ, L. D.

Effects of altered autonomic control on left ventricular function in conscious dogs.  p0307 72-20091

Clinical response to nitrovasodilator as a diagnostic test for coronary artery disease.  p0160 72-19993

Left ventricular pressure-dimension relationships in the conscious dog.  p0277 72-26773

HOTZ, W.

Reliability of electroencephalography.  p0174 72-21000

HOSENFELD, J. M.

Physiologic stress during 50-hour double-crew missions in C-141 aircraft.  p0540 72-25753

HOSINTAY, T.

Effect of a 30-day isolation stress on calcium, phosphorus and other excretory products in an unrestrained chimp.  p0163 72-20179

Harrison, A.  

Hothc, 5.

Conditioning patterns of an unrestrained chimpanzee under entrained and free running conditions.  p0163 72-20180

Sleep-wake cycle of an unrestrained isolated chimpanzee under entrained and free running conditions.  p0163 72-20181

Urinary excretion values in 2-day food-deprived, unrestrained chimpanzees.  p0234 72-24822

HOSICE, R. C.

Neurophysiological effects of different anesthetics in conscious man.  p0070 72-15220

HOSKO, N. J.

Experimental human exposure to carbon smoke  p0070 72-15220

to 1000 ppm  p0035 72-10087

HOUSSARI, T.

Action of beta-adrenergic inhibitors on the coronary output of man  p0179 72-21549

Skin temperatures in warm environments and the control of sweat evaporation.  p0421 72-35959

HOVES, J. E.

Self-paced ergometer performance – Effects of pedal resistance, motivational contingency and inspired oxygen concentration.  p0277 72-36911

A comparison of two methods of gating /AD-753185/.  p0533 72-31111

HOUSZAK, J.

Description of an easy and simplified test for electrographic diagnosis of latent spasmophilia in flight personnel.  p0452 72-37879

HOUZTON, C.

Urino- and plasma proteins in men at 5,400 m.  p0232 72-24882

HOUZGATT, T.

Psychophysical evidence for lateral inhibition in hearing.  p0378 72-33970

HOYERLAND, A. S.

Comparative studies of the respiratory functions of mammalian blood.  p0498 72-40919

HOYR, R. J.

Research and development of an ocular laser protective filter /AD-735709/.  p0317 72-21083

HOYAR, J.

Radiological physics characteristics of the extracted heavy ion beams of the bevatron.  p0054 72-13693

HOYAR, P.

Effect of local cooling of the legs on tolerance to positive acceleration.  p0068 72-15210

HOYAR, R. B.

Complete assimilation of briefly presented lines.  p0546 72-44150

HOYART, S. I.

The accuracy of aiming at a target – Some further evidence for a theory of intermittent control.  p0511 72-42546

HOWELL, J. B.

Model evaluation of pilot assurance derived from an airborne traffic situation display  p0566 72-32137

HU, P. T.

Simulation of a steady-state integrated human thermal system.  p0217 72-22821

HURACK, N.

Changes in serum enzyme activity after a physical load /NASA-CC-141187/.  p0253 72-19101

HURRAB, A. R.

A hybrid-computer model of the cochlear partition.  p0378 72-33971

HURRAB, W. W.

Tissue enzyme studies in Macaca nemestrina monkeys.  p0332 72-29861

Survey of techniques used to preserve biological materials /NASA-CR-114422/.  p0241 72-18080

HURRAC, C.

Visual evoked responses during exposure to strong colored lights.  p0223 72-23500

Evidence for the role of the transient neural "off-response" in perception of light decrement – A psychophysical test derived from neuronal data in the cat.  p0412 72-34844

HURRAC, C. S.

Apollo 14 food system.  p0019 72-11706

Modification of the physical properties of freeze-dried rice /NASA-CR-552-13540-1/.  p0570 72-33096

HUCHING, R. D.

Effects of pressure suits on speech and psychosensor
developing measures to reveal individual styles in

the role of skin temperature in human
thermoregulation.

integrated water vapor electrolysis oxygen
generator and hydrogen depolarized carbon
oxide concentrator development.

[ ASME PAPER 72-ERAV-7] p0462 A72-39170

HODGLSTON, J. H. F.
developing measures to reveal individual styles in
the use of an acceleration control.

HODSON, F. E.
a monoclonal microcircuit command receiver.

HODLSTSBER, D. P.
stimulation of embryonic rat cells in culture by a
protein fraction isolated from fetal calf serum.

1: Electrophysiological measurements at the
cell surface membranes.

[HASA-77-P-14006] p0382 A72-24071

HUFFMAN, P. H.
vapor cycle energy system for implantable
circulatory assist devices.

[P-205478] p0318 A72-21086

HURGINS, R. A.
cardiovascular and respiratory responses to
intraarterial injection of K+/ and Na+/.

[HASA-72-P-24071] p0162 A72-20177

HUGHES, P. C.
effects of rotation/backgrounds upon the
perception of verticality.

[HASA-72-P-24071] p0179 A72-20987

HUGHES, R. A.
Crashworthy personal restraint systems for
general aviation.

[HASA-72-P-24071] p0180 A72-21578

Crashworthy personal restraint systems for
general aviation.

[HASA-72-P-24071] p0324 A72-28726

HUGON, J. S.
ultrastructural localization of the alkaline
phosphatase activity in the intercalated cells of
the tailed amphibian Triturus cristatus.

[HASA-77-P-14577] p0561 A72-32108

HU, S.
dynamic characteristics of human
operator using pseudo-random binary signals.

[HASA-72-P-24071] p0031 A72-12660

HUIKE, R. H.
effect of endurance training on the urinary
excretion of noradrenaline and adrenaline during
ground and flying activity.

[HASA-72-P-24071] p0064 A72-14686

HULLEY, R. B.
fluorescence activated cell sorting.

[HASA-72-P-24071] p0222 A72-23403

HULIN, C. L.
two explanations of temporal changes in
ability-skill relationships - a literature
review and theoretical analysis.

[HASA-72-P-24071] p0499 A72-91015

effects of the man on the task in complex
man-machine systems.

[AD-732613] p0246 A72-10115

an evaluation of three possible explanations of
the temporal decay in predicting pilot proficiency
[AD-731191] p0247 A72-10122

three explanations of temporal changes in
ability-skill relationships: literature review and
temporal analysis.

[AD-732612] p0246 A72-16126

HULL, A. F.
standards, statistics and Storaglass: Guilt by
association.

[HUL-16255] p0354 A72-22100

HULTGREEN, R. H.
abnormal circulatory responses to high altitude in
subjects with a previous history of
high-altitude pulmonary edema.

[HULA-72-P-24071] p0016 A72-11422

HULTMAN, R.
muscle metabolism during isometric exercise

performed at constant force.

[HULY, A. F.

HURDEE, J. E.
automatic real-time pair feeding system for animals.

[HASA-CASE-ARC-10302-1] p0313 A72-21052

HURDEEKS, J. W., JR.
bioastronautic aspects of Apollo biomedical
operations.

p0366 A72-31827

HURDEEKS, R. H.
factors involved in the antinatriuretic effects of
acute constriction of the thoracic and abdominal
inferior vena cava.

[HASA-72-P-24071] p0018 A72-11660

role of cardiac output and the autonomic nervous
system in the antinatriuretic response to acute
constriction of the thoracic superior vena cava.

[HASA-72-P-24071] p0018 A72-11661

role of distal reabsorption and peritubular
equilibrium in efferent arteriolar balance.

p075 A72-21084

capillary circulation as a regulator of sodium
reabsorption and excretion.

p0585 A72-43995

HURSAW, G.
changes of intracellular myocardial electrolytes
in experimental hypertension.

p0413 A72-36984

HUTT, D. P.
controller output transformations.

p0502 A72-41411

HUTT, D. P.
multi-parameter vision testing apparatus.

[HASA-CASE-ARC-13001-71] p0045 A72-11088

HUTTLE, E. S., JR.
task complexity and serial performance under
steadily increasing input rates.

p0235 A72-25115

HUTTLE, T. L.
potable water bactericide agent development.

[HASA-CH-115595] p0047 A72-28108

HUSTIN, P. H.
adaptation to speed stress in an immediate memory
task.

[p0107 A72-17716

HUSTIO, L.
The influence of high altitude on physiology.

p0152 A72-42584

HUSELER, P. A.
practical considerations concerning exercise ECG
telemetry equipment.

p0099 A72-16610

HUSTON, R. L.
on the dynamics of a human body model.

p0001 A72-10110

HUSTON, S. W.
electrocardiograms transmission - the state of the
art.

[p0028 A72-12139

HUTCHISON, R. R.
basis of behavioral influence of chlorpromazine.

[HASAA-AP-72-18975

SCHEDULE-INDEPENDENT FACTORS CONTRIBUTING TO SCHEDULE-INDUCED PHENOMENA. HUTCHISON, W. D.
manually actuated heat lamps.

[HASA-CASE-HPO-10077] p0044 A72-11084

HUTTO, G. L.
sound booms and sleep: effect change as a
function of age.

[HASS-72-24] p0564 A72-32121

HUTTO, G. B.
vestibular control accelerations measured on an
operational jet transport aircraft.

[HASA-72-69214] p0194 A72-16053

HUTTO, L.
vestibular function in healthy subjects.

p0172 A72-20891

HUTTLEY, A. F.
proposed mechanism of force generation in striated
muscle.

p0001 A72-10017
**PERSONAL AUTHOR INDEX**

IAPETSOV, P. F.  
Combined effects of altitude and high temperature on complex performance.  
High temperature and performance in a flight tank simulator  
([PA-AR-72-17])  
p0035 A72-31155

IARCHEL, G. T.  
Interaction of evoked responses in the cerebellar cortex when stimulating the hypothalamus and peripheral nerves  
p0338 A72-30669

IARV, N. I.  
Experimental studies on the alkali-acid equilirnum in the blood gases under the chronic action of low concentrations of lead.  
p0551 A72-40826

IBOVSKAI, B. I.  
Comparative study of the biological action of various types of radiation - 600 MeV protons, X rays, and gamma rays  
p0106 A72-17675

IBOVSKII, E. S.  
Postnatal potentials of auditory cortex neurons in the cat  
p0020 A72-11757

IBOVSKII, N. S.  
Responses of auditory-cortex neurons to electrical stimulation of the medial geniculate body  
Reactions of auditory cortex neurons to efferent cortical fiber stimulation  
Clinical observations on a research method in physiology  
Regulation of the blood system  
Comparative study of regional hemodynamics during tilt test and lower body negative pressure exposure  
p0558 A72-45131

IBOVSKII, V. T.  
Biocontrol systems in cardiological studies  
P0269 A72-26455

IBOVSKII, I. I.  
Supercellular regulators of the triggering mechanism of the regenerative reaction in erythropoietic tissue  
P0322 A72-28636

IESTREPOV, R. L.  
The role of negative and positive emotional states in variations of the blood cholesterol content and the arterial pressure level [Experimental investigation]  
p0219 A72-22498

IBBE, J.  
Formaldehyde and ammonia as precursors to prebiotic amino acids.  
P0032 A72-12846

IBBEALL, A.  
To develop a spectral analyzer for physiological and medical use  
P0089 A72-12045

IBBEALL, A. S.  
Physiological control - A physical view: Life and the biochemical oscillator.  
P0024 A72-12039

IBBAGHOV, I. I.  
Effects of free amino acid doses and of amino acid metabolism cofactors on the distribution of regional free amino acid resources in the brain and blood of animals  
P0663 A72-39324

IBBAN, L. N. H.  
Acute changes in the central nervous system of monkeys exposed to protons.  
P0331 A72-29833

IBCHY, K. N.  
Ultrastructure of the capillaries of the spinal cord upon hypothermy.  
p0280 A72-27304

**Huang, C. L.**

Huang, C. L.  
Simulation of a steady-state integrated human thermal system.  
p0217 A72-222821

Huang, D. S.  
Increased tolerance of leukemic mice to arabinosyl cytosine with schedule adjusted to circadian system.  
p0418 A72-35397

Huang, W. H. C.  
A review of the formulas for the hydraulic transmission line equations as applied to circulatory systems.  
p0239 A72-24811

Huang, R. C.  
Respirator efficiency measurement using quantitative DOP man tests  
([IA-DC-1195])  
p0137 A72-15071

Huang, T. H.  
Peripheral venous scintillation angiography in determination of left ventricular volume in man.  
p0017 A72-11475

Huang, H. E.  
Induction of hemodynamic deterioration by the hypoglycemic state - An evaluation of mechanisms.  
p0558 A72-45199

Huang, H. H.  
Effect of increased lung recoil pressure on expiratory airflow in normal subjects.  
p0231 A72-24878

Huang, B. L.  
Interhemispheric effects on choice reaction times to one-, two-, and three-letter displays.  
p0279 A72-27075

Huang, B. W.  
A digital simulation of the human cardiovascular system.  
p0178 A72-21475

Hysell, D. K.  
Millisecond exposure of porcine skin to simulated CO2 laser radiation  
([AD-73S71U]  
p0358 A72-23070

IABKOT, T. I.  
Sleep - Neurophysiological, vegetative, psychophysiological, and pathophysiological aspects.  
p0213 A72-22223

IABKHEVO, L. V.  
Biocontrol systems in cardiological studies  
p0269 A72-26455

IABKHEVO, N. H.  
Increased heart production by muscular contractions due to noradrenalin  
p0104 A72-17215

IABKHEVO, V. A.  
Recognition of figures during voluntary saccadic eye movements.  
p0280 A72-27310

IABKHEV, N. H.  
Significance of the characteristics of the functional state of the organism for the estimation of mental working capacity  
p0058 A72-13721

IABKHEV, G. H.  
Recording of blood content variations and the possibility of determining the total volume of blood in the organism by measuring the electrical resistance of the human body  
p0111 A72-17594

IABKHEV, N. N.  
Energy metabolism characteristics during muscular activity as a function of the degree of the organism's adaptation to the activity  
p0323 A72-28640

IABKHEVA, Y. I. A.  
Investigation of otochiraryolgyological organ reactions in man under hypokinesia  
p0543 A72-63917

IABKHOVIC, T. G.  
Effect of vibration on the permeability of the blood-brain barrier  
p0508 A72-42070

IABKSEVA, L. V.  
Determination of a hemisphere dominance by dichotic speech audition
Environmental microbiology as related to planetary quarantine

Method for processing muscle biopotentials for input into an electronic computer

Functional organization of the periphery effect in retinal ganglion cells.

Comparative study of several endurance indices as input into an electronic computer.

Effect of hypoxia on the skeletal muscles of rats.

The change of some aspects of the oxygen regime in the human organism during prolonged stays under extreme conditions.

Effect of hypodynamia on gas exchange in animals.

Muscles in rats under hypokinesia.

Human engineering assessment of TFB cabs.

Psychophysical features of low-altitude flights.

Evolution of the endogenous metabolism of Baker's yeast (Saccharomyces cerevisiae) as a function of the nature of the oxidized exogenous substrate (acetate, ethanol or glucose).

Wakefulness, sleep and coma.

Study of electroluminescence of the blood.

Ultra-sensitive magnetic field measurements in the presence of high ambient noise levels - application to magnetocardiography.

Magnetic recording of the heart's electrical activity with a cryogenic magnetometer.

On-line measurement of microvascular dimensions by television microscopy.

Changes in the hemostatic system and in blood and urine chemistry of human subjects following decompression from a hyperbaric environment.
Investigations regarding the sufficient heart in the case of continuous, postextrasystolic potentiation

JACOBASCH, G.
A method for the determination of 1,3-dihydroxyacetone in red blood cells.

JACOB, C. E.
The ultimate strength and failure mechanism of mammalian knee joints.

JACOB, G. J.
Animal orientation and navigation.

JACOB, R. E.
Apparent viscosities of whole blood systems at moderate pressure.

JACOBSON, F. E.
Hypothermia in cats during physical restraint.

JACOB, T. J.
Safety margins in the implementation of planetary quarantine requirements.

JACK, G. J.

JACOBER, C.
The ventilation mechanism in weightlessness.

JACOBE, J. A.
Hemoglobin facilitated diffusion of oxygen - interfacial and thickness effects.

JAFFE, J.
Determination of cardiovascular velocities by doppler cardiometry. I - The normal tracing and effects of age.

JAFFE, B. Y.
A computer simulation of the human arterial system.

JAGOU, R. B.
Development of a space craft wet oxidation waste processing system.

JAIN, V. R.
Design for positive pressure respirators.

JANSKY, P.
The effect of dazzle on electronic display visibility in modern high performance aircraft cockpits, a summary.

JAMES, G. W.
Precision digital heart rate meter.

JAMES, T. H.
Sudden death related to myocardial infarction.

JAKOVIC, J. P.
Effects of continuous exposure to high gravity on gravity preference in rats.

JANSEN, C.
Non-auditory effects of noise.

JANSEN, G.
Compensation of alcohol effects by caffeine and morphea in a psychomotor performance.

JANSEN, P. J.
A study of the absorption and scattering factors of light in whole blood.

JANSSSEN, W. H.
Signal detection, criterion variability and the number of response categories.

JENSEN, J. N.
A test of Luce's two state theory of psychophysical detection.

JABOZ, R. L.
Apollo space-suit materials.

JABOZ, T. H.
Respiratory effects of hypoxemic alkalosis and potassium depletion in the dog.

JAYNES, R.
On the complex organization of new work in the environmental thermal control system.

JEFFERSON, L. A.
Biochemical changes in the pyrimidine bases of nucleic acids.

JEFFERSON, D.
Biological effects of laser radiation.

JEFFERSON, B.
Lateral oculomotor unit activity and eye movements - Saccade locked changes in dark and in light.

JEFFERSON, C. T.
The formation of a competitive motor response by operant conditioning.

JEFFERSON, G. G.
Training device employment materials.

JEFFERSON, D.
In vivo hemolysis due to hyperoxia - Role of H2O2 accumulation.

JEFFERSON, B. T.
Foam flotation system for personnel wearing body armor.

JENKINS, D.
Tissue enzyme studies in Macaca semiranea bonkows.

JENNINGS, M. E.
Multiple task performance as a predictor of the potential of air traffic controller trainees.

JENNINGS, B. H.
Training device employment materials.

JENNINGS, J. I.
Ventilation in man at onset of work employing different standardized starting orders.

JENSEN, B. S.
Pilot error in area navigation: Performance of instrument pilots using symbolic displays.

JENSEN, W. R.
Contribution of space programs to our knowledge of hematology.

JENKINS, B. C.
ERG for late somatic effects in mice irradiated with 60 MeV protons relative to X-rays.

JENNETT, B. A.
Seizures, 82O formation, and lipid peroxides in brain during exposure to oxygen under high pressure.

JENKINS, K.
Search and rescue service in Denmark with special reference to accidental hypothermia.

JENSEN, J. B.
Radiation carcinogenesis and acute radiation mortality in the rat as produced by 2.2 GeV
Effects of bedrest and centrifugation of humans on serum thyroid function tests.

Red cell mass plasma volume changes found in selected Apollo missions.

Johnson, P. E.

Analysis of vegetable seedlings grown in contact with Apollo 14 lunar surface fines.

Johnson, R. E.

Production of gaseous nitrogen in human steady-state conditions.

Regression analysis for steady state O2 inequality in O2 consumption calculations.

Myth of nitrogen equality in respiration - Its history and implications.

Nitrogen excretion as a measure of protein metabolism in man under different conditions of renal function.

Johnson, R. F. Q.

A human factors evaluation of cold weather face masks.

Johnson, S. L.

What moves, the airplane or the world.

Johnson, S. P.

Bioclimatic changes in the endopodia of wheat seedlings in the weightless state.

The liminal angle of a plagiogeotropic organ under weightlessness.

Johnson, W. A.

Development of a category 2 approach system model.

Johnson, W. P.

In vivo hemolysis due to hyperoxia - Role of H2O2 accumulation.

Johnson, C. I.

Metabolism of angiotensin II in sodium depletion and hypertension in humans.

Johnson, J.

Applications of aerospace technology in the public sector.

Johnson, J. E.

Health physics and medical division.

Johnson, W.

Echocardiographic determination of left ventricular dimensions, volumes and performance.

Johnson, W. L.

The effectiveness of a vibrotactile device under conditions of auditory and visual loading.

Body orientation under vertical sinusoidal vibration.

Jojola, B., III

The effects of exhaustive exercise on rats at various times following blast exposure.

Jokz, J. A.

Pulmonary edema and plasma volume changes in dysbarism.

Joly, R.

Biological effects of CHF electromagnetic radiation.

Jonas, Y.

Human operator performance in hypoxic stress.

Jones, A. R.

Electroretinographic evidence for a photopic system in the rat.
JONES, A. J.
Equal comfort contours for whole body vertical, pulsed sinusoidal vibration.

JONES, C. E.
Life support system requirements. Volume 3: Section 3: Environment description

JONES, D. E.
Target acquisition studies: (1) transition from direct to TV mediated viewing. (2) Target acquisition performance: Color vs monochrome TV displays

JONES, E.
Effects of viscosity and constraints on the dispersion and dissipation of waves in large blood vessels. I.

JONES, G.
Changes in aird venous gas tensions at start of exercise in man.

JONES, G. B.
Sensory integration of auditory and visual information.

JONES, G. M.
Bioscience grinder

JONES, G. L.
Four in-depth studies of a flight training skill: Trial and error versus prompted learning evaluated on efficiency, transfer and stress

JONES, G. M.
Vestibulo-ocular responses in man during sleep.

JONES, K. W.
Effects of simulated sonic booms on tracking performance and autonomic response.

JONES, P. C.
Self-estimates of distractibility as related to lapses of attention during perceptual-motor performance.

JORDAN, E. B.
The color-word interference test and its relation to performance impairment under auditory distraction

JORDAN, E. L.
Aviation medicine translations: Annotated bibliography of recently translated material, 7

JORDAN, E. M.
Intensity, frequency, and duration effects in the measurement of nonverbal perstimulatory loudness adaptation.

JORDAN, L. B.
Engineering performance evaluation of Array fluidic volume-cycled respirator, model 4

JORDAN, M. L.
Effect of carbon dioxide pressure level on alveolar-arterial carbon dioxide pressure difference during rebreathing.

JORDAN, M.
Venous eye movements in pairs of disparity stimuli with shape selection cues.

JORDAN, N. K.
Comparative effects of hyperoxia and hyperbaric pressure in treatment of primary blast injury

The biodynamics of aortic valve

The biodynamics of air blast

The effects of exhaustive exercise on rats at various times following blast exposure

JORDAN, W. L.
Advanced research to qualify man for long term weightlessness.
Reticulospinal and vestibulospinal synaptic effects on loaster motoneurons in monkeys

KASATINA, B. I.

Evolution of the pigment system and primary processes of phototransduction

KARASIK, R.

Signal detection analysis of meridional variations to vertical and horizontal orientations

KAZENKAY, A. I.

Cerebral formation and cortico-visceral interrelations

KARAKASHEV, A. N.

Nervous-emotional stress as a problem of modern urology

KARANJAN, O. A.

Reticulospinal and vestibulospinal synaptic effects on loaster motoneurons in monkeys

KARPETJAN, N. V.

Evolution of the pigment system and primary processes of phototransduction

KAREK, B.

Signal detection analysis of meridional variations to vertical and horizontal orientations

KARIEV, B. N.

Voluntary respiration control in an altered gas environment

KARIN, B. A.

A study of female pilot control force capabilities for general aviation aircraft

KAR IV, I.

Cardiac amyloidosis - A review of 11 families

KARLEN, J. S.

Hemodynamic effects of angiographic contrast material in a beat-by-beat analysis

KARLSUN, C. G.

Circadian variations in performance, psychological ratings, catecholamine excretion and urine flow during prolonged sleep deprivation

KARLSTON, J.

Muscle lactate, ATP, and CP levels during exercise after physical training in man

KARUNIJOV, V. A.

Oxidoreductases and the stability of coenzyme drops.

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KARPOVA, R. I.

Catalytic oxidation of certain gaseous products of pyrolysis of human wastes

KARPOVA, T. L.

Catalytic oxidation of some gaseous products of pyrolysis of wastes of human vital functions

KARTSEV, V. I.

Effect of high brightnesses on the rate of eye adaptation to darkness

KASHIAN, I. L.

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KASKIN, B.

Problems regarding the psychological selection procedure concerning personnel for flight crews in civil aviation

KASS, R. G.

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Annotated bibliography of reports: Supplement no. 3, 1 July 1970 - 30 June 1971

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Development of thermally durable coated fabrics for use in flight gloves

KASYOVSKII, D. S.

Cardiac output and gas exchange variations at bed rest during hypoxia

KATZ, K.

Influence of isotropic alteration on the severity of myocardial ischemia after experimental coronary occlusion

KATOLLA, V. A.

Possibility of the development of disbacteriosis in guinea pigs and rats under the action of a magnetic field

KATUSENKO, L. L.

Device for eliminating the artifact of electrical stimulation when recording evoked pulse activity of neurons

KATS, J. L.

On the anisotropic elastic properties of hydrocortisone

KAYA, U.

Patterns recognition: Perception of binary sequences

KAYESBROOK, P. S.

Pharmacological effects on the central adrenergic regulation mechanisms of blood circulation

KAYAUS, H. G.

Dynamics of the electrical activity of various
Recent results of acoustic data processing

KERR-MARKUS, I. B.
The methods of metrology in the fields of mixed radiation.

KERR, C. R.
The testing of thermal protective clothing in a reproducible fuel fire environment, a feasibility study

KELBAUCH, B. H.
Engineering test of lightweight underwear of the winter flying clothing system: Thermal protection

KELBAUCH, B. H.
Automated detection of bacteria in urine

KELBET, B. P.
Analysis of inflight sleep, experiment 808

KELBER, G. R.
Operational testing of system for automatic sleep analysis

KELLER, J. W.
Bosch CO2 reduction unit research and development.

KELLETT, C. B.
Phototype sleep analysis equipment

KELLETT, C. B.
Involuntary head movements, and helmet motions during centrifuge runs of up to 6 Gz.

KELLETT, C. B.
Quantitative angiocardiography in ischemic heart disease - The spectrum of abnormal left ventricular function and the role of abnormally contracting segments.

KELLETT, C. B.
Manual vs automatic control.

KELLETT, C. B.
Display layout.

KELLETT, G. P.
Adaptive displays

KELLEM, E. C., JR.
Visual sensitivity in the region of chromatic borders.

KELLEM, E. C., JR.
The central division of radiation protection

KELLES, H.
Displays.

KELLES, H.
The visual system and 'neuronal specificity.'

KELLES, H.
The effect of graded hypoxia with and without exercise on ventilatory acclimatization

KELLES, H.
Dynamic and structural characteristics of human skin - A comparative study with chamois leather.

KELLES, H.
The mechanical and structural characteristics of connective tissue

KELLES, H.
The mechanical characteristics of skin and other soft tissue and their modelling

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KELLOGG, R. E.
The effect of graded hypoxia with and without exercise on ventilatory acclimatization

KELLEDY, K. V.
Recent results of acoustic data processing

KELLEDY, K. V.
The methods of metrology in the fields of mixed radiation.

KELLEDY, K. V.
The testing of thermal protective clothing in a reproducible fuel fire environment, a feasibility study

KELLEDY, K. V.
Engineering test of lightweight underwear of the winter flying clothing system: Thermal protection
Development of techniques for measuring pilot performance.

Action of beta-adrenergic inhibitors on the cardiovascular system.

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Reaction time to the second of two shortly spaced auditory signals both varying in intensity.

Energy metabolism of human muscle.

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[AD-72-27481]  
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KING, A.  
[AD-73-25644]  
Reliability of electroencephalography.  
KIPF, J. A. S.  
[AD-72-25115]  
Techniques for analyzing differences in VERs: Colored and patterned stimuli.  
KIRBY, A.  
[AD-72-25116]  
Acute toxicity in rats and mice resulting from exposure to HCl gas and HCl aerosol for 5 and 30 minutes.  
KIRKHOF, H. W.  
[AD-73-25051]  
Tammar.  
KIRKBY, J. H.  
[AD-72-25052]  
Use of longterm ECG in aviation medicine.  
KIRKBY, J. H.  
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The automatic analysis of the ECG at rest, during and after exercise with two different computer systems.  
KIRKBY, J. H.  
[AD-72-25054]  
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[AD-72-28299]  
Cardiac rhythm disturbances in firing personnel.  
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[AD-73-21304]  
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[AD-72-31826]  
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KISILICHMA, A. V.

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Future of science

KIRILLOV, O. I.

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KISSEN, A. T.

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Factors limiting the increase in stroke volume obtained by positive isotropy - Investigations regarding the sufficient heart in the case of continued postextrasystolic potentiation

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Potentiation in response to the combined effect of simultaneous and successive contractions of the cold and heat receptors.

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Input and output in the system of thermoregulation during rest and exercise. IV - In analog model of thermoregulation during rest and exercise

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- KOCHEBA, V. S. Determination of a hemisphere dominance by dichotic speech audition. p0073 A72-15584

- KOCHEBA, A. L. Some metabolic indices in subjects relative to nutrition in a one-year experiment. p0054 A72-45128

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- KOEPCHEN, H.-P. Respiration control. p0551 A72-44600

- KOEPFER, T. Mechanism of pulmonary conversion of angiotensin I to angiotensin II in the dog. p0073 A72-15465

- KOSHEEVA, G. A. Apparatus for programmed oral administration of drugs to mice preisated in altered environments. p0428 A72-36521

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- KOGAN, Y. I. Mechanism of the biological action of a constant magnetic field. p0015 A72-35005

- KOGAN, Y. I. Effect of a polarizing current on the activity of neurons of the respiratory center. p0515 A72-30725

- KOGAN, Y. I. Glycolysis in adenovirus infected rat cell cultures and in adenovirus type 12 induced hamster sarcoma cells [NASA-TR-P-14061]. p0087 A72-13062

- KOLBRG, R. C. Regional variation of RNA in human leucocytes. p0426 A72-36624

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- KOK, R. P. Determination of a hemisphere dominance by dichotic speech audition. p0073 A72-15584

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- KOKOSCHE, A. M. A conditioned artificial and natural/unconditioned reflex system. p0073 A72-15582

- KOLACZKOSKA, B. Serine peptidases in myocardial infarction. p0266 A72-25851

- KOLANOFF, S. G. Seasonal rhythms of the functioning of the endocrine system in hibernating mammals. p0373 A72-33100

- KOLBNER, O. L. Increase in skeletal muscle performance during emotional stress in man. p0812 A72-34942

- KOLBNI, P. A. Aspects of motion perception. p0506 A72-41531

- KOLYR, V. M. One-dimensional and multidimensional data analysis. p0515 A72-12725

- KOLKHOVA, B. The role of certain deep cerebral formations on sleep process control in man. p0073 A72-15585

- KOLIBABA, L. G. Certain glycosidases of the human placenta. p0029 A72-12294

- KOLLEB, J. History and clinical findings related to selective coronary angiography. p0052 A72-13177

- KOLLEB, J. Exercise electrocardiogram and selective coronary arteriography. p0052 A72-13178

- KOLQUE, F. A. Biochemical aspects of the biological effect of a low frequency pulsed electromagnetic field [JP85-56583]. p0471 A72-20861

- KOLVEVSKY, R. L. Histopathologic substrate of atherosclerosis transpiring without symptoms in young people. p0024 A72-17073

- KOLOSHOVA, I. V. The problem of decontaminating and preserving drinking water in spacecraft water supply systems. p0073 A72-15585

- KOLSOV, I. A. Trailing of astronauts on laboratory aircraft under conditions of weightlessness for labor activity in space [JP85-54649]. p0007 A72-13076

- KOLSOV, I. A. Coordination structure of walking of Soyuz-9 crew members before and after flight. p0203 A72-17069

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Dosage, wide-variable field television radiograph for biodynamic analysis

Kobilov, A. W.
Ultrasound Doppler-cardiography in medical monitoring
p0336 H72-30384

Kobilov, B. V.
Cerebral hemodynamics during 120-day clinostatic hypokinesia
p0568 H72-43922

Kobilov, V. A.
Biological effects of space flight on the lysogenic bacteria E. coli K-12 /&abla/ and on human cells in culture.
p0004 H72-10365

Kobilovski, S.
Effect of immobilization on urinary catecholamine excretion and blood-thyroxine levels in rats.
p0216 H72-22608

Physiological effects of hypokinesia
p0568 H72-33078

Korobova, N. G.
Study of the dynamic acuity of vision
p0533 H72-31115

Korobova, R. G.
Study of dynamic visual acuity
p0135 H72-15055

Korobova, R. G.
Study of dynamic visual acuity
p0142 H72-15104

Kraft, J. W.
Crew interface definition study, phase 1
p0087 H72-13080

Kraft, J. W.
Some results of the development and investigation of devices for checking the cardiovascular system
p0269 H72-26004

Kraft, A. L.
Spatial interaction with different-diameter stimuli matched on the basis of threshold, luminance, or total luminous flux.
p0489 H72-40752

Kraiss, K. F.
Displacement/resistance characteristic of the control stick
p0191 H72-16024

Kraiss, K. P.
A model for analyzing the coordination of manual movements.
p0503 H72-41413

Kranz, H.
The influence of varying parameters upon the electrophysiology recorded with surface electrodes. I - The influence of electrode localization upon the electrical activity recorded from limb muscles
p0367 H72-32489

The influence of varying parameters upon the electrophysiology recorded with surface electrodes. II - The influence of distance, surface area and pressure of the electrodes against the skin upon recordable electrical muscular activity
p0368 H72-32490

Kranz, K.
Energy metabolizability
p0268 H72-26072

Energy conversion in human muscles during exercise activity
p0268 H72-26075

Kranz, L. W.
Investigations of bonding, structure, and quantitative analysis in biological systems by means of X-ray photoelectron spectroscopy
p0136 H72-31091

Kranz, L. W.
Pollution against the chronic effects of hyperbaric oxygen toxicity by succinate and reduced glutathione.
p1344 H72-31091

Kranz, V.
Changes in serum enzyme activity after a physical load
p0253 H72-19101

Kranz, D. H.
The Poggendorff illusion - Amutations, rotations.
p0008 H72-10717

Krasavina, I. A.
Study of the effect of flight factors on a road-3 automatic station on a culture of yeasts and algae bacteria
p0203 H72-17067

Krasna, T.
Coronary flow determination in experimental conditions with the use of radioactive xenon.
p0050 H72-37475

Krasnoschekov, V. V.
Synthesis of oxidation-reduction polymers and their use in eliminating organic impurities from aqueous solutions
p0101 H72-16645

Sanitary-hygienic evaluation of the extraction method for water recovering in atmospheric moisture condensates
p0091 H72-40635

Synthesis of redox polymers and their use for purifying aqueous solutins from organic impurities
p0123 H72-14083

Possibility of using a condensate of atmospheric moisture in a system for functioning of higher plants
p0204 H72-17078

Sanitary-hygienic evaluation of the extraction method for regenerating water from a condensate of atmospheric moisture
p0341 H72-20565

Krasnovskii, A. A.
A biogenic formation of porphin, chlorin, and bacteriochlorin
p0187 H72-22185

Krauss, D.
Threshold excitation, temporal summation, and impulse response function in the retina of the cat - Temporal receptive fields of retinal ganglion cells
p0055 H72-38648

Krauss, H.
Mechanical impedance of supine humans under sustained acceleration.
p0292 H72-28070

Krauss, H. E.
The transverse response of the lumbar spine under longitudinal loads
p0526 H72-30099

Kraussman, D. T.
A note on providing an on-line analogue display of beat-by-beat cardiac output.
p0230 H72-24375

Krauss, G.
The imaging properties of the positron camera
p0423 H72-36624

Krauss, H. W.
A study of pHphosphorology in controlled environments
p0487 H72-128269

Kryuchov, L. A.
Somatic and toxic effect of barbaryl in mice subjected to 33 day hypokinesia and isolation
p1001 H72-16650

Soporific and toxic effect of amobarbital sodium during 33-day hypokinesia and isolation of mice
p0123 H72-14088

Krauslov, V. V.
Use of an electrical thermosensor for recording external respiration
p0031 H72-12518

Krausbechel, C. F.
Evaluation of the thermosensor technique for measuring coronary sinus blood flow.
p0113 H72-18197

Krausbechel, C. F.
Left ventricular dynamics during handgrip.
p0495 H72-37243

Kreisler, B.
Familial cardiomyopathy - A review of 17 families.
p0026 H72-14443

Kress, D.
Study directed at development of an implantable biotelemetry ion detector
p0008 H72-10717
Displacements of a helmet-attached reticle under involuntary head movements, and helmet motions

Incorporation of methionine-35 into the proteins: Investigating the language and intellect of dolphins

Cardiac hypertrophy, capillary and muscle fiber density, muscle fiber diameter, capillary radius and diffusion distance in the myocardium of growing rats adapted to a simulated altitude of 3500 m.

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KUDINA, L. P.
Rhythmic patterns of automoteors in man during voluntary muscle contraction
p0177 A72-21572

KUDRIAVTSEVA, E. N.
Intercellular relations in the brains of animals in various poses and during certain forms of motor activity
p0071 A72-15231

KUDRIAVTSEVA, F. F.
Influence of rhythmic photostimulation on lower-order monkeys with hyperkinesia of pre-encephalitic origin
p0657 A72-38930

KUDRING, D. H.
Psychological, physiological, and methodological foundations of the interpretation of aerial photographs - Education and training of interpreters
p0221 A72-23290

KUCHEL, G.
The influence of varying parameters upon the electroencephalograms recorded with surface electrodes. I - The influence of electrodes localization upon the electrical activity recorded from limb muscles p0367 A72-32898
The influence of varying parameters upon the electroencephalograms recorded with surface electrodes. II - The influence of distance, surface area and pressure of the electrodes against the skin upon recordable electrical muscular activity p0368 A72-32940

KUDEL, J. P. W.
Increased tolerance of leukemic mice to arabinosyl cytosine with schedule adjusted to circadian rhythm.

KUERSCHNER, D.
Optosurgical causes for miosis: A 10 years report
p0126 N72-14108

KUHNER, R.
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KUIKSHEV, S. P.
Certain regularities of changes of the heart rate during inverted circadian rhythm of an isolated man
p0327 A72-29317

KULBARA, G. I.
Certain problems involving procedures and objective evaluation of rhesencephalogram /REG/ parameters
p0209 A72-28218

KULAY, I. S.
Inorganic polyphosphates in evolution of phosphorus metabolism.

KUŁACZ, A. K.
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KULAK, L. L.
Effect of hypoxia on aircraft pilot performance. [ANGEL-TF-71-97] p0164 A72-22010
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Human operator performance in hypoxic stress
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Some principles of the design of remotely controlled master-slave manipulators
p0571 A72-33103

KULES, F.
Preparatory-response vs information-seeking interpretations of preference for signaled loud noise - Further limits on human information cognitive control.
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KURAN, I. G.
Possible role of supraspinal formations in the fixation of trace alterations at the sequential apparatus level of the spinal cord
p0894 A72-40592
KUNETS, P. I.

KUNETS, P. I.  
Labyrinth reactions in dogs during lasting chronic irradiation  
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chronic irradiation  
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work physiology  
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system  
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conditions with the use of radioactive zones.  
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formation and elimination of gassous wastes in  
albino rats  
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monoxide on the development of hypokinetic  
disturbances in albino rats  
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atmosphere of closed ecological systems  
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experimental ischemia of the myocardium.  
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feedback.  
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processes and of hematopoietic system recovery  
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recovery processes in the hematopoietic system  
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flight simulators  
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moisture condensates  
20097 A72-40435
  Sanitary-hygienic evaluation of the extraction  
method for regenerating water from a condensate  
of atmospheric moisture  
20081 A72-29056
  Kuznetsova, L. P.  
On the mechanism of visual adaptation.  
20107 A72-17720
  Kuznetsova, E. S.  
Radiocrespirometry in the case of work and sports  
activities  
20508 A72-42071
  Kuznetsov, A. P.  
Increase in skeletal muscle performance during  
emotional stress in man.  
20412 A72-34942
  Kverduli, V. N.  
Effect of a magnetic field on experimental tumors  
/direct and via nervous system/  
20415 A72-35011
  Kvetnsov, K. A.  
Distribution and significance of carbon compounds  
on the moon.  
20104 A72-22013
  Kvetnsova, L. V.  
Conditioned reflex, evoked on the basis of  
hippocamal stimulation, before and after  
isolation of the neoocortex  
20159 A72-19859
  Kvaratskheli, R. E.  
Effect of hypoxia on the diurnal mitotic activity  
rhythm of the marrow erythropoiesis system  
20099 A72-16631
  Selected problems concerning biological rhythms  
20058 A72-41985
  Some new achievements of radiobiology and  
experimental hematology in aerospace medicine  
20058 A72-41986
  Kvaratskheli, K.  
Effect of hypoxia on the diurnal rhythm of mitotic  
activity in the bone marrow erythropoietic system  
20121 A72-14069
  Kybod, G. H.  
Physiologic responses to short duration Gs.  
20558 A72-45660
  Kyan, E. A.  
Changes in the responses of visual cortex neurons  
to light flashes in the presence of hypothalamic  
and reticular stimulation  
20021 A72-11758
  Kyckel, J.  
Increased fluid turnover and the activity of the  
regenerative system under various experimental  
conditions.  
20545 A72-43997
  L'toya, T. S.  
Effect of lunar ground on radiation damage in mice  
20417 A72-35214
  L'vov, L. J.  
Dry incineration of wastes for aerospace waste  
management systems.  
20662 A72-39175
  Design and fabrication of a prototype for an  
avtomatich automatic transport system for transferring  
human and other wastes to an incinerator unit  
onboard spacecraft, phase A  
[ASME PAPER 72-28472]  
20127 A72-14113
Mechanisms of deterioration of intermediate moisture food systems

The prediction of maximal oxygen intake in acute moderate hypoxia.

Permanant flight unfitness and attributability to air service

The difficulties of the psychiatrist in a civil reversible follow-up systems

Mechanical and physiological response to the human pancreas

Temporal measurement of venous diameter by a combined photoelectric-photoqraphic and plethysmographic technique.

Utilization of anthropometric data in resolving pilot/aircraft incompatibility.

Permanent flight unfitness and attributability to air service

Continuous measurement of venous diameter by a combined photoelectric-photoqraphic and plethysmographic technique.

Spatial parameters of eye-hand adaptation to optical distortion.

Relationship of pulmonary artery to left ventricular diastolic pressures in acute myocardial infarction.

Rheumatic valvular disease in the process of urination and defecation

The effect of vibration on blood flow and pressure in the major arteries of dogs

Pattern recognition: Perception of binary sequences

Acquired complete right bundle branch block without overt cardiac disease - Clinical and hemodynamic study of 37 patients.

The effect of respiration on heart rate in an averse classical conditioning situation.

Calcium and nitrogen balance, experiment 8007

Continuous measurement of venous diameter by a combined photoelectric-photoqraphic and plethysmographic technique.

Continuous measurement of venous diameter by a combined photoelectric-photoqraphic and plethysmographic technique.

Continuous measurement of venous diameter by a combined photoelectric-photoqraphic and plethysmographic technique.
The human operator in air traffic control systems.

Evaluation of stress factors by analysis of radio-telecommunication in ATC.

Software problems in analyzing physiological and work study data.

Changes in the pulse frequency rhythms in relation to the workload [NASA-TM-X-15062]

LATA, A. D.
Respiration changes in the presence of diencephalic syndromes

LAURHES, J.
Permanent flight unfitness and attribotability to air service

LAVIN, E. P.
A model of threshold detection for photopic vision.

LAVINIKOV, A. A.
Fundamentals of aviation medicine [NASA-TT-J-7111]

LEVETS, G. A.
Methods of separating biologically important units from the organic matter in soils [TB-690]

LEVRAV, E. A.
Comparative study of the biological action of various types of radiation - 600 MeV protons, X-rays, and gamma rays

LAURENSBERG, B. G.
Visual perception

LAWTON, B. W.
Effects of noise on the performance of a memory

LEVRAV, E. A.
The relationship between chronological age and ant嵴 test measures of advanced level air traffic control-trainees [FAA-A-71-26]

LEZABE, D. I.
Recommendations for drawing up provisional safety rules for working with lasers.

LE FAYEUR, C.
Ventricular volume measurement by the isotope-method

LE PORT, L.
Energetical continuity between present-day and praeval syntheses of biological compounds.

Archetypes of present-day processes of transphosphorylation, transacylation and peptide synthesis.

LEE, R. L.
Analysis of survival and cause of death statistics for mice under single and duration-of-life gamma irradiation.

LEACH, C. S.
Bioclimatical and physiological consequences of the Apollo flight diet.

Effects of bedrest and centrifugation on oxygen and serum thyroid functions tests.

LEARY, G. A.
Light induced alterations in growth pattern of the avian eye.

LEAVITT, G. A.
Spectral response of the eye.

LEBEBD, A. A.
Some results of medical investigations performed during the flight of the research orbital station Salut.

LEBEBD, K. A.
An immunological problems of closed environments and ontobiology [JPHS-54331]

LEFRANCOIS, R.

LEFRANCOIS, R.

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LEFRANCOIS, R.

LEFRANCOIS, R.

LEFRANCOIS, R.

LEFRANCOIS, R.
LEOBAT, G.

LEOBAT, G.
Relative biological effectiveness of 3-GeV proton beams in producing cataracts in rabbits
[CEA-CNRS-1762] p0137 NW-15072

LEOBAT, G.
Hyperventilation: Its relations with spasmophilia - Approach of a test of induced hyperventilation
p0166 NW-20384

Evolution of asthenics in armed forces operating aircr
p0176 NW-21270

LEOBAT, P.
Penal polycystomas - Incidence among flight personnel
p0052 NW-37977

LEOFTIC, R.
Economic procedures for simulating the effects of linear collisions in view of studies of restraining devices for the protection of automobile occupants
p0256 NW-19112

LEOBAT, D.
Multichannel topography of human alpha EEG fields.
LEOBAT, D.
Alpha rhythms and uniform visual field in man.
LEOBAT, J.
Alpha rhythms and uniform visual field in man.

LEOBAT, J.
The effect of membrane parameters on the properties of the nerve impulse.
p0507 NW-41936

LEOBAT, R. H.
The effect of heat stress on reaction time to centrally and peripherally presented stimuli.
p0345 NW-31158

LEOBAT, J. P.
Peripheral motion detection and refractive error.
p0545 NW-43970

LEOBAT, J. L.
The effect of modifying response and performance feedback parameters on the CVF in humans
[NASA-TM-R-52097] p0142 NW-15099

LEOBAT-WHITE, R. C.
Airline pilot incarcitation in flight.
p0410 NW-34555

LEOBAT, B. F.
Idiopathic subvalvar aortic stenosis - a case report in a pilot.
p0164 NW-20189

LEOBAT, J. T.
Response of mouse epidermal cells to single doses of heavy-particles
p0210 NW-17688

LEOBAT, J. T.
Visual phenomena induced by cosmic rays and accelerated particles
[NASA-TM-R-68860] p0432 NW-26051

LEOBAT, T. A.
Influence of a high oxygen content on the rate of formation and elimination of gaseous wastes in albino rats
p0542 NW-43906

LEOBAT-WHITE, J. B.
Collagen in human myocardium as a function of age.
p054a NW-43935

LEOBAT, R. I.
Energy metabolism characteristics during muscular activity as a function of the degree of the organism's adaptation to the activity
p0323 NW-28460

LEOBAT, J. B.
Tolerance of physically fit young men to exercise and graded levels of inspired PCO2 up to 40 mm Hg.
p0297 NW-28311

LEOBAT, G. N.
Age-related changes in vascularization of the rat's skeletal muscles as related to nature of exercise
p0251 NW-19092

LEOBAT, J. N.
Steady state and transient temperature distributions in the human thigh covered with a cooling pad
[NASA-CR-127523] p0439 NW-27084

LEOBAT, N. A.
Short term response of insulin, glucose, growth hormone, and corticosterone to acute vibration in rats.
p0014 NW-11289
Investigations to improve carbon dioxide control 
with inanimate and molecular sieve type sorbents.

FASHE PAPER 72-39166

Regional lung function in man during immersion
with the head above water.

Pulmonary air-trapping induced by water immersion.

Oxygen consumption in liquid breathing mice.

Simulation of the human cardiovascular system - A
model with normal responses to change of
posture, blood loss, transfusion, and automatic
blockade.

Bemodynamic changes in man during immersion with
the head above water.

Auditory loss and recuperation of guinea pigs
after exposure to a sonic boom. Sonic boom
produced by the IASL generator.

Auditory loss and recuperation of guinea pigs
after exposure to shock waves with rectangular
profile.

Pulmonary-impedance power spectral analysis: A
baltifactorial analysis of human blood cell
responses to clinical total body irradiation.

Predicted levels of human radiation tolerance
extrapolated from clinical studies of radiation
effects.

Dosimetry for radiobiological studies of the human
hematopoietic system.

Calcium and nitrogen balance, experiment B007

Relative biological effectiveness of X-rays
delivered at very high dose rates to radish
seeds /Raphanus sativus/.

Echocardiography in the diagnosis of congenital
mitral stenosis and in evaluation of the results
of mitral valvotomy.

The susceptibility of the chinchilla ear to damage
from impulse noise.

Cochlear pathology in monkeys exposed to impulse
noise of 70 GeV protons.

Postflight notability and state of the sex factor
in E coli K-12

The role of skin temperature in human
thermoregulation.

Postflight suitability and state of the sex factor
in B cell K-12

The role of noncovalent interactions in the
process of membrane stabilization of Micrococcus
lysoideiticaus

Investigation of the interrelationship between the
brain's bioelectric and its oxygen demand under
vibration effects

The susceptibility of the chinchilla ear to damage
from impulse noise

Auditory loss and recuperation of guinea pigs
after exposure to shock waves with rectangular
profile

Mathematical methods for improving the
significance of scintigrams

Effects of acoustic noises on the sleep of women

Simulated indoor sonic booms judged relative to
noise from subsonic aircraft

Respiratory properties of hypochloric alkalosis and
potassium depletion in the dog.

The role of visual evoked responses in objective
refraction.

Chronic potassium deficiency and excitability of
muscle cells. Measurements with individual
human muscle cells in situ

Tests of chemical cold sterilization of some
nutrient media

Diurnal periodicity of the respiration rate of men

Longitudinal study on physical performance of ten
pilots over a ten-year period.

Respiratory effects of hypochloremic alkalosis and
potassium depletion in the dog.

Voice and language

Sympathetic patterns in the superficial layers of the
superior colliculus of the monkey, Macaca mulatta.

Development of a desiccant CO2 adsorbent tailored
for shuttle application.

The use of visual evoked responses in objective
refraction.

Regional lung function in man during immersion
with the head above water.

Pulmonary air-trapping induced by water immersion.

Oxygen consumption in liquid breathing mice.

Experimental verification of the ability of guail
embryos to assimilate atmospheric nitrogen
Continuous animal exposure to dichloromethane

Toxic Hazards Research Division,

Quantity of bone marrow which must be protected in

لاله، ب. "Comparison of calcium and phosphorous excretion with bone density changes during restraint in immature Macaca nemestrina primates." p0287 A72-20056

Lyne, J. T.

Radiological physics characteristics of the extracted heavy ion beams of the bevatron.

p0054 A72-13693

Lyne, J. T.

Visual perception of accelerated nitrogen nuclei interacting with the human retina.

p0565 A72-43940

Lyne, J. T.

Light flash phenomenon seen by astronauts.

p0192 A72-16034

Lyne, J. T.

Light flash phenomenon seen by astronauts.

p0383 A72-20076

Lyons, C. J.

Growth physiology of the wheat seedling in space.

p0146 A72-15117

Lyons, C. T.

Display size and the distribution of search times.

p0549 A72-44558

Lyons, J. P.

Display design for electronic countermeasures applications. Scope size and threat density.

p0711 A72-17092

Lyons, J. P.

Display design for electronic countermeasures applications. Scope size and threat density.

p0146 A72-15117

LYTEZ, W. I.

Changes in the coagulation and anticoagulation blood systems during parachute jumps.

p0071 A72-15233

Macak, J.

Quantity of bone marrow which must be protected in order to ensure the survival of pigs irradiated with a lethal dose.

p0305 A72-20078

Macarec, J. B.

Effects of physical exercise on spinal reflectivity in man.

p0505 A72-41524

Macarec, B. D.

Radiological physics characteristics of the extracted heavy ion beams of the bevatron.

p0054 A72-13693

Macchi, A.

Plasma volume and corpuscle mass determined with serum albumin with I-131 and with red corpuscles marked with Cr-51.

p0081 A72-12021

Macdougall, J. D.

Muscular exercise, 2,3-DPG and oxy-hemoglobin affinity.

p0064 A72-14989

Macelhot, B. D.

Lactate dehydrogenase from an extremely thermophilic bacillus.

p0549 A72-44450

Mackey, J. D.

Hematological effects of long-term continuous animal exposure to carbon monoxide.

p0036 A72-10080

Mackey, J. D.

Effects of inhalation of Pmc 113 on laboratory animals.

p0087 A72-13050

Tonic Hazards Research Unit.

p0087 A72-13050

Mackey, J. D.

Effect of 20-day continuous exposure to methylimidazole on dogs, monkeys and rats.

p0400 A72-25102

Mackey, J. D.

Continuous animal exposure to dichloromethane.

p0689 A72-20051

Mackey, B. J.

Image resolution in infrared thermography.

p0430 A72-37196

Macklin, T. G.

Results of post-test psychological examinations of the crewsmen from the 90-day manned test of an advanced regenerative life support system.

p0248 A72-15117

Macklin, L. A.

Verification and extension of display scanning and remnant models using aircraft lateral and longitudinal dynamics as controlled elements.

p0139 A72-15083

Macklin, L. A.

The pulmonary protodiastolic click studied by intracardiac phonocardiography.

p0002 A72-10121

Mack, P. J.

Comparison of calcium and phosphorous excretion with bone density changes during restraint in immature Macaca nemestrina primates.

p0287 A72-27473

Mackey, D. B.

The human touch.

p0005 A72-10464

Mackey, S.

An assessment of active and passive restraints in serious injury European car occupant collisions.

p0256 A72-19130

Mackieson, F. P.

Hematological effects of long-term continuous animal exposure to carbon monoxide.

p0036 A72-10080

Mackieson, F. P.

Pathology in animals exposed to high concentrations of carbon monoxide for six months.

p0034 A72-10081

Macrides, P.

Offactory bulb units - Activity correlated with insolation cycles and odor quality.

p0098 A72-16162

Maddox, D. M.

Homing orientation in salamanders: A mechanism involving chemical cues.

p0399 A72-25092

Maffei, L.

Binocular depth perception without geometrical cues.

p0029 A72-12466

Maggiore, G. E.

Display format effects on precision tracking performance, describing functions, and remnant.

p0248 A72-18125

Mages, R.

Human tryptophan and tyrosine metabolism - Effects of acute exposure to cold stress.

p0490 A72-40417

Machin, S.

Darkness enhancement in intermittent light - An experimental demonstration.

p0106 A72-17605

Magle, G.

Relative luminous efficiencies of the eye for near-IR and UV laser light.

p0363 A72-31380

Mahan, J. T.

Effect of posture on heat acclimatization in man.

p0420 A72-35963

Mahnberg, P.

Origin and development of plasma membrane derived invaginations in Vitrea roses i.

p0095 A72-15610

Further observations on the phenomenon of secondary vacuolation in living cells.

p0367 A72-12350

Mahnk, F. J.

Investigation of methods for improving the frictional properties of rubber compounds used in footwear.

p0267 A72-17092

MAMURO, D. F.

New phonocardiographic transducers utilizing the hot-wire anemometer principle.

p0230 A72-24374

Mansel, K.

Water-soluble filters and their use in bacterial counts.

p0562 A72-32111

Maurin, E. E.

Effect of hypoxiaemia on gas exchange in animals.
The Integration of the orbiting primate experiment
Effects pins Gy acceleration on blood oxygen
Photoproducts of retinal photopigments and visual
Comparative characteristics of basic forms of
External respiration, gas metabolism, and energy
Reliability of electroencephalography

Quantitative evaluation of the kinetics of
Biological effects of space flight on the
Bardiman 1 prototype for machine augmentation of
Besearch and development prototype for machine
Modeling of cockpit depressurization conditions on
Higher nervous activity in dogs reanimated after
Thermal stability of blood serum proteins during
Cryolysis of ribonuclease preliminarily irradiated
Bicrointerval analysis of the development of
Analysis of intracavitary electrocardiograms

Hypoxic conditions
Free-radical processes in animal organs under
Hypothalaoic structures
Protein after electrical stimulation of various
Lysogenic bacteria E. coli K-12 /lambda/
Diencephalic syndromes

Mechanisms of adaptation to hypoxic hypoxia
Mechanisms of adaptation to hypoxic hypoxia

Catalyzed sodium chlorate candles

Two specific kinds of disorientation incidents: Jet upset and giant hand

The pain sensitivity of cardiac membranes under
Two specific kinds of disorientation incidents: Jet upset and giant hand

The mechanism of the Bainbridge effect
The mechanism of the Bainbridge effect

The palm sensitivity of cardiac membranes under the

The palm sensitivity of cardiac membranes under the

Catheterized sodium chlorate candles

Aut and cross-correlational analysis of neuron
Reactions in the vasomotorial center to an

Reactions in the vasomotorial center to an

Primary prevention of atherosclerotic cardiovascular disease among the SABENA flying

Personnel.

cardiovascular disease among the SABENA flying personnel.

Type of fibers mediating impulses during
Effect of acute carbon monoxide exposure

Type of fibers mediating impulses during
Effect of acute carbon monoxide exposure

Primary prevention of atherosclerotic cardiovascular disease among the SABENA flying personnel.

Personnel.
through a saline bridge in the diagnosis of cardiac arrhythmias.

HIBISULOV, G. V.

Response to stretching in human antagonistic muscles.

BABASSALISOV, G. V.

Method of information presentation to operators of automatic control systems and informative value estimates for such methods.

BABOTTOF, Y. Y.

Some results of work in the field of space hydrobiology at Dnepropetrovsk University (1961-1970).

BABDOBI, B. I.

The stability of coacervate drops.

BABDOOS, A.

Visual phenomena induced by cosmic rays and accelerated particles.

BANDERCHER, J. H.

A quantitative relationship between the H-I slope of the head-foot BCG and the initial acceleration of flow in man.

BONEF, B.

Advance techniques for monitoring human tolerance to G6 accelerations.

BASODEREBIN, I. KH.

Experimental studies on the alkali-sodium equilibrium in the blood gases under the chronic action of low concentrations of lead.

BANGELL, A. J.

Urinary excretion values in 2-day food-deprived, unrestrained chimpanzees.

BANGFOEDE, P. D.

Uneven ventilation as a continuous distribution function of alveolar dilution.

BANGELSDORF, D.

Prototype cold weather face mask.

BANGILANDY, J. K.

Urinary sample and collection system.

BANE, G.

Effect of neohomoologes phospholipids associated with other substances on experimental intoxication by asymmetrical dimethyldiazine. II - Biochemical aspects of the pyridine-phospholipid association.

BANE, H.

The effects of a cumulative sleep deficit, duration of preceding sleep period and body-temperature on multiple choice reaction time.

BANISCH, B.

Containment threats to critical surfaces from handling and storage practices.

BANOVE, M.

Diastolic and systolic blood pressure during exercise on a bicycle ergometer.

BANOSCH, B.

Design and fabrication of a prototype for an automatic transport system for transferring human and other wastes to an incinerator unit on board spacecraft, phase A.

BANOSCH, R.

Mechanism of hemodynamic changes during muscle activity.

BANOSCH, T.

Effect of physical stress on hemodynamics in dogs with acute arterial hypertension.

BARTH, J.

Short-term effects of ozone on the lung.

BARYSH, B. N.

Effect of preadaptation to hypoxia on the noradrenalin content in rats with experimental vitus cordis.

BARCEL, P. V.

Elastic analysis of a skull.

BARDE, G.

Analysis of the activity evolved in the cerebellar cortex by stimulation of the visual pathways.

BARCOS, A. L.

Experimental space worker's garment and helmet assembly.

BARCOS, A.

Urinary excretion values in 2-day food-deprived, unrestrained chimpanzees.

BARCOS, P.

Some effects of radiant heating of the head on body temperature measurement at the ear.

BARCOS, I.

Heat acclimatization by exercise-induced elevation of body temperature.

BARECHAL, G.

The immediate energy sources of muscular contraction.

BARECHAL, R.

Muscle blood flow during submaximal and maximum exercise on a bicycle ergometer.

BAREETA, R.

Studies concerning measurements of oxidability of reclaimed water.

BARGAIA, B.

Utilization of muscle elasticity in exercise.

BARGUL, L.

Microbial evolution on the early earth.

BAREX, A.

Early cellular evolution.

BAREX, A.

On a long-term temporal aspect of stereoscopic depth sensation.

BARG, M.

Synergic control of computer-manipulators.

BAREZMIN, K. N.

Radiobiologic studies of Tradescantia plants orbited in Biosatellite 2.

BAREZMIN, V. L.

Stress in flight.

BAREX, S.

A universal vestibulometric swing.

BAREKLOV, B. A.

Radiobiological effects after three-year gamma-irradiation of dogs.

BAREKLOV, V. V.

The methods of remetry in the fields of mixed irradiation.
Results of the integrated radiation dose measurements on the Soyuz spacecrafts. (CEH-71-16) p0027 A72-12075

HARZ, V. S. Computation of the shape and velocity of a nerve pulse p0059 A72-52156

HARZ, A. P. A method for monitoring systolic and diastolic blood pressures on a beat by beat basis (AD-74003) p0536 W72-31137

HARBIDIAN, B. A. Ion ratio changes in plasma and the electrokinetic potential of thrombocytes p0322 A72-28635

HARKOV, V. S. Use of automatic volume control in systems for registering physiological functions p0078 W72-12007

HARROTT, J. Optical flash rate and duty cycle for flashing, visual indicators. p0007 A72-10565

HARKS, L. E. Visual brightness - Some applications of a model. p0426 A72-36611

HAROTTI, S. P. Adrenergocortical steroids during acute exposure to environmental stressors. I - Disappearance of infused cortisol. II - Uptake and release of infused cortisol by the hind limb of dogs. p0110 A72-17874

HARRAZ, A. S. Aerospace stress and human reliability (AD-740666) p0523 W72-30081

HARBOC, H. T. Responses of monkey optic tract fibers to monochromatic lights. p0362 A72-31369

MAINTAINED activity of monkey optic tract fibers and lateral geniculate nucleus cells. p0362 A72-31370


RESTRAINT torso for a pressurized suit [NASA-CASE-MSC-12397-1] p0402 W72-25119

HARKER, C. D. Servo action in human voluntary movement. p0429 A72-36999

HARR, J. T. Receptor and neural responses in auditory masking of low frequency tones. p0072 A72-15251

HARTIANOY, V. A. Nature of motor neuron reflex response in human arm muscles. p0075 A72-15567

HARTMANN, P. D. Prevention of fainting in flying personnel. p0054 A72-13722

HART, A. S. Static comparison of vertical tape and vertical light emitting diode displays (AD-730316) p0131 W72-14139

ENGINEERING test of lightweight underwear of the winter flight clothing system: Thermal protection p0206 W72-17091

VIETNAM return survey (AD-742655) p0535 W72-31131

HART, C. J. Captive pattern of lung compartments in normal man. p0339 A72-30703

HART, D. V. Comparison of physical, biophysical and physiological methods of evaluating the thermal stress associated with wearing protective clothing. p0465 A72-39808

HART, P. H. A chlorate candle/lithium hydroxide personal breathing apparatus p0483 W72-27112

HART, R. Magnetic effect on dancing bees p0399 W72-25096

HART, J. D. FM/PM telemetry of physiological and force data during military parachuting and during high speed aerial tow. p0028 A72-12138


HARTIS, J. P. Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report (PB-200876) p0065 W72-11092

HARTIS, J. P. Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 3: Test procedures and instrumentation (PB-200879) p0046 W72-11095

HARTIS, J. L. Apparent viscosities of whole blood systems at moderate pressure (AD-740853) p0531 W72-31099

HARTIS, L. G. Thyroidal influence on myocardial changes induced by simulated high altitude. p0411 A72-34730

HARTIS, R. B. Color perception tester (NASA-CASE-MSC-10276) p0190 W72-15905

HARTIS, W. B. Patter recognition of EKG to determine level of alertness (AD-726210) p0082 W72-12035

HARTMUTH, W. H. Compilation of published information on elemental concentrations in human organs in both normal and diseased states. 1: raw data ordered by atomic number, subordered by organ and suborgan, listing method of analysis, geographical source, age, sex, number of individuals (NASA-CR-5013-PT2-1-B59-1) p0306 W72-20081

HARTMUTH, J. P. Resistance and capacitance vessels of the skin in permanent and temporary residents at high altitude. p0513 A72-42595

HARTTOE, J. L., JR. Effects of selected illumination levels on circadian periodicity in the Rhesus monkey /Macaca mulatta/. p0331 A72-29844

HAPPASS, B. L. Study of the effects of ultrasonic waves on the reproductive integrity of mammalian cells cultured in vitro [NASA-CR-128356] p0567 W72-33073

HARTEN, T. Handbook of human engineering design data for reduced gravity conditions (NASA-CR-1726) p0084 W72-12048

HARTOP, J. A. A rocket propelled handler's suit for protection from chlorine trifluoride and elemental fluorine (AD-741556) p0340 W72-20115

HARTZ, B. L. Peripheral venous return activity during 70 deg tilt and lower body negative pressure. p0355 A72-38703

HARTZ, B. N. A Teflon membrane for measurement of blood and intravascular gas tensions by mass spectroscopy (AD-749756) p0173 A72-20901

HASE, A. Significance of ventricular volume measurements obtained by dilution methods (PB-200879) p0369 A72-32996

HASSELY, A. L. Study of the effect of flight factors on the 80th automatic station on a culture of yeasts and algal bacteria p0203 W72-17067

HASLENZIBOLOVA, L. S. Parameters of the oxygen metabolite in the skeletal muscles of adrenalectoized rats after physical strain p0056 A72-13991

HASLOVA, L. N. Effect of 5-oxytryptophan on the hypothalamic-neurohypophyseal-adrenal complex under conditions of complete deaidentification of the medial-basal hypothalamus p0333 A72-30016
NASOW, J. E.
Histo-pathological responses to deceleration

BASS, N. L.
Visual sampling on a simulated PPI display

HASSANOVIC, A. G.
Neurotropic effect of deep hypercapnia

HASSER, C. C.
Crew radiation dose from the plume of a high-impulse gaseous nuclear rocket during a Mars mission.

HASSING, G. K.
Acquired complete right bundle branch block without overt cardiac disease - Clinical and hemodynamic study of 37 patients.

HASSOFF, B. W.
Electroretinographic evidence for a photopic system in the rat.

HAUSER, N. V.
Cytocinethetical analysis of corneal and intestinal epithelial damage after irradiation with high energy protons.

HAUSEP, R. H.
Changes in the pituitary-thyroid and in the pituitary-gonadal systems under conditions of functional loading and of physiological immobilization.

HATH, W. G.
An investigation of visual, aural, motion and control movement cues

HATH, J. G.
A proposed new test for improved aptitude screening of applicants for air traffic control training.

HATH, J. J.
A proposed new test for aptitude screening of air traffic control applicants

HATH, R. H.
Threshold excitation, temporal summation, and impulse response function in the retina of the cat - Temporal receptive fields of retinal ganglion cells.

HATH, N.
Metacochreast and saccadic suppression.

HATLOFF, J. M.
Effects of ischemia and reoxygenation on regional myocardial performance of the dog.

HATTEN, E. I.
Prolonged action of medium intensity noise on the functional condition of an organism.

HATTEN, D. S.
Shoulder harness and lap belt restraint system

HATTEN, T.
Auditory evoked response - Meaningfulness of stimuli and intero-oesophageal asymmetry.

HATSUZO, J. T.
Biomedical responses of humans to 110 through 175 knot /AS/ aerial tow.

HATSUZAKI, T.
Calibrated low frequency acceleration vibrocardiography - Its hemodynamic determinants and clinical application.

HATTERSLEY, C. T.
Sensitization by angular surrounds - Sensitization and masking.

HATTEN, R. H.
Perceptual latency as a function of stimulus onset and offset and retinal location.

HATTEN, C. H.
The origin of proteins: Heteropolypeptides from hydrogen cyanide and water.

HATTEN, P. L.
Stressors, strains, and surface pressures in the lung caused by its weight.

HATTEN, C. E.
Hybrid water immersion simulation of manual IVA performance in weightlessness

HATTEN, E. H.
Induction of lymphocytic bacteria in the space environment

HATTEN, A. D.
Relationship between the thresholds of cupular endolymphatic system response and mass tolerance to motion sickness

HATTEN, A. V.
Certain psychophysical principles of color perception described by a nonlinear model.

HATTEN, R. A.
Experiments on space worker's garments and helmet assembly

HATTEN, W. J.
Laser eye effects: The subinvasive retinal lesion

HATLE, A. S.
Behavioural characteristics of men in the performance of some decision-making task components.

HAY, C. L.
A space maintenance experiment aboard the Ben Franklin submersible during the 30-day Gulf Stream drift mission.

HAY, D. E.
Sonic boom startling - A field study in Hoppen, West Germany.

HAY, E.
Mechanical impedance of supine humans under sustained acceleration.

HAY, R. D.
Threshold excitation, temporal summation, and impulse response function in the retina of the cat - Temporal receptive fields of retinal ganglion cells

HAY, J. G.
Chromatic adaptation of orientation- and size-specific visual processes in man.

HAY, R. C.
Dilatant suspensions for impact protection.

HAY, B. J.
Anaesthesia for electrical stimulation in the brain of the rat.

HAYES, G. P.
Parathyroid hormone - Secretion and metabolism in vivo.

HAYES, J. A.
The effects of exercise training and desensitization on the morphology of intrafusal muscle fibers.
BATS, D. H.

BATT, J. A.

BCLA, B. O.

HCC0, C. J.

BCCS, S. J.

HCCET, L. E.

BAZO, B. A.

IBCAAB, G. B.

BAZOB, B. I.

BAZOB, B. I.

BAZOB, B. I.

BAZBB, B. B.

H&ZOOE, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.

H&Z00, B.

HAZIB, A.

BAZBB, B. S.
Physiological evaluation of a modified jet transport passenger oxygen mask

Human factors in relation to the development of pressurized cabins: The Harry O. Armstrong Lecture

Auditory effects on spatial orientation

Research in electrocardiography and magnetocardiography.

Psychological aspects of transatlantic flying.

Airborne visual reconnaissance as a function of illumination level

Visual half-field differences in the recognition of bilaterally presented single letters and vertically spelled words.

Adaptation to speed stress in an immediate memory task.


Development of techniques for measuring pilot workload

Psychological aspects of transatlantic flying.

Effect of a 30-day isolation stress on calcium* phosphorus and other excretory products in an unrestrained chimpanzee

Relation of the electrocardiogram to hemodynamic alterations in pulmonary embolism.

Techniques for analysing differences in VEBs: Colored and patterned stimuli.

The visual evoked response as a measure of nitrogen narcosis in Navy divers

The visual evoked cortical response as a measure of stress in naval environments: Methodology and analysis. 1: Slow flash rates

Techniques for analysing differences in VEBs: Colored and patterned stimuli.

Airborne visual reconnaissance with yellow sunglasses

Radiographic and pathologic studies for asetopic bone necrosis in dogs incurring decompression sickness.

Visual half-field differences in the recognition of bilaterally presented single letters and vertically spelled words.

Adaptation to speed stress in an immediate memory task.


Development of techniques for measuring pilot workload

Psychological aspects of transatlantic flying.

Effect of a 30-day isolation stress on calcium* phosphorus and other excretory products in an unrestrained chimpanzee

Relation of the electrocardiogram to hemodynamic alterations in pulmonary embolism.

Techniques for analysing differences in VEBs: Colored and patterned stimuli.

The visual evoked response as a measure of nitrogen narcosis in Navy divers

The visual evoked cortical response as a measure of stress in naval environments: Methodology and analysis. 1: Slow flash rates

Techniques for analysing differences in VEBs: Colored and patterned stimuli.

Airborne visual reconnaissance with yellow sunglasses

Radiographic and pathologic studies for asetopic bone necrosis in dogs incurring decompression sickness.

Visual half-field differences in the recognition of bilaterally presented single letters and vertically spelled words.

Adaptation to speed stress in an immediate memory task.


Development of techniques for measuring pilot workload

Psychological aspects of transatlantic flying.

Effect of a 30-day isolation stress on calcium* phosphorus and other excretory products in an unrestrained chimpanzee

Relation of the electrocardiogram to hemodynamic alterations in pulmonary embolism.

Techniques for analysing differences in VEBs: Colored and patterned stimuli.

The visual evoked response as a measure of nitrogen narcosis in Navy divers

The visual evoked cortical response as a measure of stress in naval environments: Methodology and analysis. 1: Slow flash rates

Techniques for analysing differences in VEBs: Colored and patterned stimuli.

Airborne visual reconnaissance with yellow sunglasses

Radiographic and pathologic studies for asetopic bone necrosis in dogs incurring decompression sickness.
PERSONAL AUTHOR INDEX

Pelletier, J.


The vocal adaptive controller-human pilot dynamics and opinion. [AD-762642] p0537 A72-31139

PEAD, J.

Control of ventilation during speech. p0070 A72-15218

Comparative sensitivity of four methods for measuring changes in respiratory flow resistance in man. p0070 A72-15222

PEAD, P. G.

Hand steadiness during unrestricted linear arm movements. p0235 A72-25113

MEDAL, J. E.

The incidence of hyperglycemia and associated factors - The Israel ischemic heart disease study. p0845 A72-37870

MEDER, H. G.

Mathematical methods for improving the significance of scintigrams. p0623 A72-36425

MEDFORD, J. E.

Multi-cycle plasma arc evaluation of oxidation inhibited carbon-carbon material for shuttle leading edges. [NASA PAPER 72-EBK-26] p0660 A72-39151

MEDICK, J. S.

Frequency response studies of human and avian respiratory regulation. p0643 A72-38229

MEDIKOV, B. M.

The origin of ribosomes and the evolution of rRNA. p0176 A72-21269

MEDVEDF, R.

Information and teaching - Little knows tasks of civil aviation physicians. p0214 A72-12140

MEZAM, J. P.

Applicability of implantable teleoscopy systems in cardiovascular research. p0028 A72-12140

Thermal relationship between tympanic membrane and hypothalamus in conscious cat and monkey. p0408 A72-36344

MEZSION, P. Z.

Effect of pred adaptation to hypoxia on the avocaridius noradrenaline content in rats with experimental vitius cordis. p0284 A72-27648

Physiological evaluation of the capacity of the diastole mechanism. p0324 A72-28521

Increase in the rate of formation and degree of retention of conditioned reflexes in animals adapted to high-altitude hypoxia. p0325 A72-28770

Role of the synthesis of nucleic acids and proteins in the adaptation of the organism to altitude hypoxia. p0619 A72-34950

NEEFFBY, R.

Lipid peroxidation on the human skin surface following cryothermic UV irradiation. p0253 A72-38087

NEHEL, W. E.

Idea of a new anatomy of the thalamus. p0165 A72-20274

NEBEL, O.

Effects of a multi-hour immersion on trained and untrained subjects. I - Renal function and plasma volume. p0227 A72-23738

Effects of a multi-hour immersion on trained and untrained subjects. II - Blood protein and electrolyte concentrations. p0282 A72-27480

NEZANDAN, G.

Study of optimal speed on bicycle ergometer. [AD-729031] p0205 A72-17084

NEZILA, J. S.

A monolithic microcontroller command receiver. p0270 A72-26564

NEZMEE, G.

Pulsopharyngal blood flow of human subjects in different body positions. p0294 A72-28286

BREES, W. S.

Structural languages and biomedical signal analysis using interactive graphics. [AD-739256] p0464 A72-27135

BRENNER, H. P.

The Bosch process. [JABS PAPER 72-EBK-9] p0611 A72-39168

BRENNER, A. W.

Intelligent, frequency, and duration effects in the measurement of monaural perstimulatory loudness adaptation. p0182 A72-21896

BRIEST, D.

Human factors: Theory and practice. p0040 A72-13023

Development of a human performance reliability data system. [AD-730910] p0119 A72-14052

Comparative analysis of human reliability. [AD-734932] p0263 A72-19180


Relationship between system design, technician training and maintenance job performance on two autopi lot subsystems. [AD-735953] p0408 A72-28111

BRIEX, A. H.

The influence of increased atmospheric pressure on the blood circulation. p0225 A72-23597

BRIEXKOV, L. E.

Diurnal and seasonal rhythm simulation within spacecraft. p0328 A72-29322

BRIKEXKVA, A. E.

Problem of biological dosimetry in the acute irradiation of man. p0056 A72-14606

BRIKENG, W. S.

Man in control of highly automated systems. [AD-727658] p0045 A72-11091

BRIKEXSHY, A. M.

Ergonomic control system synthesis. p0556 A72-45508

BRIKEXHO, G. L.

Absorption of mineral substances from the nutrient medium by chlorella cells with respect to age. p0327 A72-29311

Dynamics of the carbon monoxide content in the chlorella reclaimed atmosphere. p0335 A72-30377

Dynamics of the content of carbon monoxide in an atmosphere regenerated by Chlorella. p0387 A72-24098

BRIKEXYON, D. S.

Operator analysis of electroretinograms. p0132 A72-15033

BRIKEXYUSD, B.

Fluid transfer between blood and tissues during exercise. p0425 A72-36560

BRIKON, D. S.

Applications of analog computing circuits to cardiovascular research. p0173 A72-20899

BRIKEXKOV, G. B.


BRIKENG, G. E.

Effect of a general aviation simulator on the stress of flight training. p0294 A72-28261

High temperature and performance in a flight task simulator. [FAA-AM-72-17] p0481 A72-29074

BRIEX, J. M.

Perfor or ignore. p0203 A72-27516

BRIEXH, A. I.

Space ergonomics. p0489 A72-40300

BRIEXK, H.

Biochronometry; Proceedings of the Symposium, Friday Harbor, Wash., September 4-6, 1969.
HENDELSON, F. A. O.

Metabolism of angiotensin II in sodium depletion and hypertension in humans. p0155 A72-19526

HENDELSON, F. A. O.

The effect of acute and chronic hypercapnia upon the lactate, pyruvate, alpha-keto-glutarate, glutamate and phosphocreatine contents of the rat brain. p0054 A72-13677

HENZIES, A. A.

Biochemistry of submarine and diving stress. 4: Responses of blood lactate-pyruvate and red cell state to chronic exposure to 3 percent CO2 [AD-73412] p0374 A72-21059

HENZIES, C.

Blink reflexes during sleep and waterlessness in man. p0072 A72-15250

HENZER, R.

Biological effects of laser radiation. p0059 A72-14610

Laser beams and vascularization. p0332 A72-23067

HETCALPS, J.

Clinically suspect ischemic heart disease not corroborated by demonstrable coronary artery disease - Physiologic investigations and clinical course. p0160 A72-19995

Comparative studies of the respiratory functions of mammalian blood. p0049 A72-05919

HETGES, J.

Radiological study of spinal injuries to pilots undergoing sudden ejection. p0259 A72-31948

Radiological examination of the spine and the combat pilot's capability for duty. p0395 A72-25056

HETLIX, W.

Display size and the distribution of search times. p0049 A72-44558

HETGES, C. A.

Sterility of water recovered from human waste during extended missions is attainable without post-treatment: An engineering approach [AD-727040] p0037 A72-10096

HETGERS, E.

Effect of short periods of hypoxia, hyperoxia, and hypercapnia on brain 02 supply. p0023 A72-11957

HETTINS, J.

Visual experience as a determinant of the response characteristics of cortical receptive fields in cats. p0505 A72-41661

HETZER-SEELEHNER, J. D.

The autonomic analysis of the ECG at rest, during and after exercise with two different computer systems. p0395 A72-25052

HETZERS, E. H.

The use of visual evoked responses in objective refraction. p0265 A72-25389

HETZERSON, F.

Role of mitochondrial biogenesis in adaptation of the organism to altitude hypoxia [NASA-TT-F-14524] p0521 A72-30059

HETZERS, M.

Relation of tilt tolerance to aerobic capacity and physical characteristics. p0227 A72-23733

HETZUS, V. Y.

Some problems in neurobiolitics. p0389 A72-24127

Structure and modeling of robots. p0390 A72-24132

MICHAEL, R. D.

Thermal equilibrium studies on men breathing helium-oxygen mixtures [AD-726753] p0037 A72-10099

MICHAELS, B.

Data processing in biological sensors. p0283 A72-27577

Engineering modeling of data encoding in biological sensors. p0284 A72-27578

MICHAELSSON, E. D.

An ear-oximeter for use on the human centrifuge. p0291 A72-28278

Blood oxygenation in man during high, sustained g's. p0294 A72-28287
HILSON, J. E.

Personal Author Index

Kinks, B. Latencies and correlation in single units and visual evoked potentials in the cat striate cortex following monocular and binocular stimulations.

p0277 A72-26771

KIRK, W. V. Micronuclei particles in the tissues of normal and gamma-irradiated Drosophila melanogaster.

p0176 A72-21198

KIRK, W. V. Acute changes in the central nervous system of monkeys exposed to protons.

p0331 A72-29833

KIRK, W. V. Brain tumors in irradiated monkeys.

p0418 A72-35647

KIRK, W. V. Natural aging and radiation-induced life shortening in Drosophila melanogaster.

p0555 A72-45279

KIRK, W. V. Prognostic value of an electrocardiographic sign in acute myocardial infarction.

p0452 A72-37871

KIRKLAND, E. E. Physiologic stress during 50-hour double-crew missions in C-141 aircraft.

p0227 A72-23737

KIRSHBART, P. B. Auditory display in a dual-axis-tracking task.

p0378 A72-33866

KINGOROSE, V. V. Supranuclear effects in the activity of preganglionic sympathetic neurons delivering axons to the cervical sympathetic nerve.

p0494 A72-40599

KIRKHOV, K. M. Thecovision and disease diagnostics.

p0015 A72-11293

KIRKHOV, K. M. Brain and muscle state during stepwise adaptation to high mountain conditions.

p0106 A72-22005

KIRKHOV, K. M. Conservation time scale of heightened organism resistance under various altitude acclimatization conditions.

p0542 A72-43908

KIRKHOV, K. M. General index for the assessment of cardiac function.

p0553 A72-45011

KIRKHOV, K. M. Mechanism of the Bainbridge effect.

p0031 A72-12518

KIRKHO, E. N. Experimental verification of the ability of quail embryos to assimilate atmospheric nitrogen.

p0382 A72-24069

KIRKHO, E. N. Review of the work of the laboratory of R. I. Volokh on the assimilation of atmospheric nitrogen by higher organisms.

p0383 A72-24075

KIRKHO, E. N. An automated instrument for monitoring the quality of recovered water.

p0464 A72-39161

KIRKHO, E. N. A cardiovascular system model for lower-body negative pressure response.

p0080 A72-12015

KIRKHO, E. N. Calorimetric analysis of the effect of drinking saline solution on whole-body sweating. I - An attempt to measure average body temperature.

p0223 A72-23440

KIRKHO, E. N. Calorimetric analysis of the effect of drinking saline solution on whole-body sweating. II - Response to different volumes, salinities and temperatures.

p0223 A72-23441

KIRKHO, E. N. A neural effect of partial visual deprivation in humans.

p0230 A72-29308

KIRKHO, E. N. Surveys 3: Bacterium isolated from laser...
BOLTON, P. H.

experimental conditions.

p0545 A72-43997

HOPFAT, C. A.

Analytical and experimental investigations of human spine flexure.

[ASME PAPER 71-WA/BEF-7]

p0096 A72-15947

HORODZON, A.

Determination of cardiovascular velocities by dopplercardiometry. II - Detection of impaired left ventricular function.

p0098 A72-16155

HOHLER, S. F.

Psychosocial reconstruction inventory - A postdictional instrument in aircraft accident investigation.

p0348 A72-31095

Intoxicating liquor and the general aviation pilot in 1971.

p0558 A72-45662

HOBON, R. E.

Vision tests using laser speckle

[AD-742792]

p0532 A72-31107

HOHA, G.

Engineering modeling of data encoding in biological sensors

p0284 A72-27578

HOIBERG, E. P.

Investigating the dose field of an electron beam

[AD-739207]

p0523 A72-30079

HOIBERG, L. W.

A model of selective accumulation of carbohydrates diffusing through artificial polymer membranes.

p0662 A72-14780

HOIBERG, R. I.

The role of certain deep cerebral formations on sleep process control in man

p0073 A72-15585

Correlation between biopotentials of the deep brain structures during sleep development in man

p0322 A72-28634

HOIBERG, R. M.

Mechanism of adaptation to hypoxic hypoxia

p0542 A72-43907

HOLCHANOV, W. S.

A special vitamin complex for prophylaxis of atherosclerosis in aviation personnel

p0546 A72-44153

HOLZ, P. A.

Respiratory capacity of white, red, and intermediate muscle - Adaptative response to exercise.

p0175 A72-21083

HOLZ, R. H.

Measurement of momentary velocity in a study of human gait.

p0367 A72-32200

HOLZ, R. H.

Response from arousal and thermal sweat areas during motion sickness.

p0163 A72-20185

Response from arousal and thermal sweat areas during motion sickness

[AD-731995]

p0200 A72-17048

HOLZ, R. H.

A sweat sensor for qualitative measurements

[AD-736922]

p0359 A72-23091

HOLZ, R. H.

A component analysis of the electroretinogram.

p0548 A72-44382

HOLZ, R. H.

On the dynamics of various rhythms in the electroencephalogram of a cat asleep and awake

[AD-71-WT-14060]

p0081 A72-12022

Spectral analysis of an electroencephalogram during sleep and wakefulness.

[AD-71-WT-14172]

p0245 A72-18110

HOLZ, R. H.

Frontal cerebral region and elementary mental activity

p0423 A72-36400

HOLZ, R. H.

Survival of common terrestrial microorganisms under simulated Jovian conditions.

p0851 A72-37721

HOLZ, R. H.

Exobiology, Jupiter and life.

B-113

i
BOOBE, J. B.

HOBAS, J. B.

BOORTBABEBS, B.

HOOBE, T. B.

HOOB-JAHKOBSKI, J.

BOOHEY, V.

HOBiH, B. P.

BOBAH, B. B., JB.

BOOBE-BOBIHSOB, B.

BOOB, H. B.

BOODY, F. H.

BOHTOOB, J. L.

HOITI, P. H.

BOBTEII., A. C.

BOHTELSOIE, P. I., JB.

BOHEI. K. B.

HOBET, K. B.

HOBBOT, A.

HOBJ&S, A. I.

TAD-7381311 P0172 H72-28067

nnfitness of flying personnel in the Belgiam Air

r&Dr7275051 . . , P003U B72-10081

Coronary blood flow and myocardial metabolism in

man at high altitude.

BOBIDCHI, S.

BORISOD, I. B.

p0275 A72-26688

Proton irradiation of stem cells: Radiation damage and chemical radiosensitivity

p0209 N72-17686

Radiation carcinogenesis and acute radiation mortality in the rat as produced by 2.2 Gev protons

p0209 N72-17687

Lymphatic involution and early mortality in the young chicken produced by 2.2 Gev neutrons

p0210 N72-17689

Evaluation of the hazard from exposure to electronic irradiation simulating that in the synchronosan orbit

p0210 N72-17690

Using the man to test unmanned vehicles.

p0102 A72-16665

Moody, V.

Orthopedic applications of biocarbon implants.

p0288 A72-28095

MOOR-JARNOFSKI, J.


p0505 A72-13068

MOOR, H.

Development and results of freeze-etching techniques

p0426 A72-36629

MOORE-RHODGER, H.

Preliminary results of the vigilance tests from "Protect Pegasus."

p0276 A72-26695

MOORE, J. B.

The biological response of the spinal canal and its contents to surgical trauma of the axial skeleton: comments on infraspinous experimention and biostatistics in clinical orthopedics

FD-740475

p0528 N72-30110

MOORE, T. J.

Measurement of specific mechanical impedance of the skin - Effects of static force, site of stimulation, area of probe, and presence of a surround.

p0809 A72-402347

MOOTHYERS, R.

Analytical study of the causes of medical unfitness of flying personnel in the Belgian Air Force

p0124 N72-14093

MORE, W. H.

The effect of changing gravity and weightlessness of vasopressin control systems

[NASA-CR-126395]

p0356 N72-23070

MORAN, W. H., JB.

CPPB and vasopressin secretion.

p0420 A72-35517

MORE, W. P.

Simulation - The only safe way.

p0148 A72-18839

Visual simulation - A proven training method.

p0465 A72-39709

MOREY, J.

Acute hypoxia of the myocardium - Ultrastructural changes.

p0413 A72-34982

MOREA, H.

Reflections on the medico-psychological surveillance of aircrew in fighter pilot school - The time in pilot training

p0056 A72-14569

MORERA, M. N.

Noise annoyance susceptibility.

p0371 A72-32987

MORET, P.

Cardiocirculatory adaptation to chronic hypoxia.

p0369 A72-32989

Coronary blood flow and myocardial metabolism in man at high altitude.

p0513 A72-42593

MORDET. A.

Principles of the control of machines and living organisms by means of the bioenergetics of the muscles

p0572 A72-33113

MORFAE, R. B., JB.

Trends in problem-solving research - Twelve recently described tasks.

p0013 A72-11192

Acquisition and performance of a problem-solving skill.

p0013 A72-11193

Effects on sustained performance of time-sharing a three-phase code transformation task /3P-COTHAB/.

p0123 A72-11198

MORFE, K. E.

Proper use of information on organ and body burdens of radioactive material

p0198 H72-17036

MORFE, R. S.

Lice in Entamoeba invadens.

p0365 A72-31725

MORHAPP, J. H.

Temperature transmission from biopotential radiotelemetry transmitters.

p0515 A72-42745

MORI, L. H.

Cytologic aspect of EF radiation in the monkey.

p0436 A72-38709

MORIN, P.

Study of the resistance to infection of pregnant women by the lymphoblastic transformation test

[NASA-TT-F-145911]

p0562 N72-32106

Lymphoblastic transformation in vitro of blood lymphocytes in conjunction with the study of repeated spontaneous abortions

[NASA-TT-F-14602]

p0577 N72-33074

MORISON, W. B.

Breathing metabolic simulator.

p0114 A72-18618

Breathing metabolic simulator

p0465 A72-27129

MOROSKI, R. E.

Effects of hydrostatic pressure and temperature on the uptake and respiration of amino acids by a facultatively psychrophilic marine bacterium

p0004 A72-10322

MOSCHUK, S.

New method of dose evaluation by spectrum dose conversion operator and determination of the operator

[JeBR1-129]

p0305 N72-20076

MORSE, W. P.

Stimulation of antroposometric data in resolving pilot/Aircraft incompatibility.

p0298 A72-28232
Selected anthropometric dimensions of naval aviation personnel
[AD-725-101] p0315 A72-21067

MOORE, P.
The difficulties of the psychiatrist in a civil aeronautics environment - Reflections concerning 3000 consultations
[AD-724-192] p0151 A72-19243

MOOREY, V. P.
Repetition rate of targeting signals of dolphins as a function of distance to target [JPR-55729] p0382 A72-24066

MOOSON, E. B.
Some results of experiments with plant objects exposed aboard the Sond-5 probe p0366 A72-31828

MOBBILL, C. G.
The effect of graded hypoxia with and without exercise on ventilatory acclimatization. p0285 A72-27727

MOBIUS, C. R., III
Integration of an automated onboard data management system with a manned spacecraft environmental thermal control and life support system. [ASME PAPER 72-ENV-6] p0462 A72-39771

MOBERG, D. W.
Cooperative evaluation of environmental control and life support systems for the space shuttle orbiter. [ASME PAPER 72-ENV-19] p0461 A72-39758

MOBIUS, F. K.
Progress in regenerative life support systems for a lunar laboratory. p0559 A72-45164

MOBIUS, J. P.

MOBIUS, J. P.
Conceptual design study of a six-man solid electrolyte oxygen reclamation system for oxygen reclamation [NASA-CR-112003] p0485 A72-29083

MORISON, J.
Reverse flow personal ventilation [FFMC/PBGM-19] p0353 A72-22097

MORSE, A. L.
Ultrasensitive magnetic field measurements in the presence of high ambient noise levels - Application to magnetocardiography. p0279 A72-27288

MORSE, A. L.
Magnetic recording of the heart's electrical activity with a cryogenic magnetometer p0196 A72-16061

MORSE, J. T.
Exercise capacity in a population of domestic fowl - Effects of selection and training. p0410 A72-34726

MORSE, S. R.
Characteristics of the collimator constructed for the Inchass whole body monitor [VARBE-92] p0039 A72-10110

MORSEY, A. E.
Effects of work/rest schedules on monitoring performance in the heat [AD-725029] p0143 A72-15105

MONTON, R. B.
Servo action in human voluntary movements. p0299 A72-36999

MOUSE, G.
Functional significance and neural mechanisms of sleep. p0376 A72-33557

MOUSA, E. A.
The influence of the modulation transfer function of the dioptric apparatus on the acuity and contrast of the retinal image in Rana esculenta. p0412 A72-36883

MOUSE, J.
Sleep stages and performance. p0270 A72-26682

MOUSE, V. R.
Functional asymmetry of the large cerebral hemispheres of man p0018 A72-11544

MOUSE, R.
Method of making a perspiration resistant biopotential electrode [NASA-CASE-MSC-90513-2] p0402 A72-25120

MOSKALENO, G. E.
Intracranial blood circulation under conditions of accelerations and weightlessness. p0418 A72-35460

MOSKOL, J. D.
The susceptibility of the chinchilla ear to damage from impulse noise [AD-726333] p0037 A72-10998

MOSKOWITZ, G. D.
An approach to head impact analysis [AD-704661] p0527 A72-30102

MOSKOWITZ, G. D.

MOSKOWITZ, G. D.
Non-linear effects in head impact and protection analysis. p0369 A72-32602

MOSHER, P. E.
Influence of the sympathetic nervous system on the presynaptic inhibition of the dorsal surface potential of the spinal cord. p0550 A72-44589

MOSETH, H. S.

MOULLE, J.
The types of acid phosphatase of red cells. Study of 134 families [NASA-TT-F-14015] p0033 A72-10067

MOULE, G.

MOUSE, K. S.
Changes in the coagulability and anticoagulability blood systems during parachute jumps p0701 A72-15233

MOUSSEY, W.
Hibernation and the hypothalamus. p0003 A72-10169

MOUSEBOPF, E.
Studies on the central chemosensitive mechanism of respiration. I p0273 A72-26660

MOUSES, K. E.
Clinical causes for permanent grounding of aircrew within the German armed forces p0125 A72-14097

MOUSE, E.
A micromethod for rapid and specific series determination of the protein content of intact microorganisms [NASA-TT-F-14253] p0312 A72-21082

MOUSE, D. C. F.
Tolerance to external breathing resistance with particular reference to high inspiratory resistance p0455 A72-27117

MOUSE, L. R.
Extraterrestrial-life study - Problem of its origin and evolution. p0664 A72-14806

MOUSE, D. C. F.
Current position on CETI from the viewpoint of biology. p0553 A72-45127

MOUSE, D. C. F.
Possibility of synthesis of precursors of complex organic compounds in regions of submarine volcanism. p0204 A72-17077

MOUSE-BERNHAS VAN DER, K.
Heart rate variability in a binary choice reaction task - An evaluation of some scoring methods. p0512 A72-42550

MOUSE, G.
Heart rate variability in a binary choice reaction task - An evaluation of some scoring methods. p0512 A72-42550

MOUSE, E.
Portable life support for instrumentation of an offshore platform p0444 A72-27123

MOUSE, J. B.
Measurement of specific mechanical impedance of
the skin - Effects of static force, site of stimulation, area of probe, and presence of a surround.

MUND, E. Non-invasive assessment of prosthetic aortal paravalvar and intravalvalr rerquilatation.

MUND, E. Recent research applicable to the design of electronic displays.

MUNNS, R. Ways to alarm pilots.

MUNNS, E. P. Frugal leaning of titanium from rock.


MURAKHOVSII, K. I. Acceleration tolerance of man after a lasting exposure to conditions of simulated weightlessness.

MURAKHOVSII, K. I. Man's tolerance to accelerations after prolonged exposure to conditions simulating weightlessness.

MURAN, D. Behavioral properties of somatosensory-motor interhemispheric transfer.

MURDOCH, W. H. Hemodynamic effects of oxygen at 1 and 2 ata pressure in healthy subjects.

MURDOCH, Y. Design of vibration absorbers minimizing human discomfort.

MURPHY, J. V. The integrated cockpit procedure for identifying control and display requirements of aircraft in advanced time periods.

MURPHY, R. E. Circadian rhythms of visual accommodation responses and physiological correlations.


MURPHY, D. B. Applications of aerospace technology in industry. A technology transfer profile: Food technology.

MURPHY, J. A. Quantitative angiocardiography in inechic heart disease - The spectrum of abnormal left ventricular function and the role of abnormally contracting segments.


MURRAY, E. B. Domestic applications for aerospace waste and water management technologies.

MURRAY, T. N. Parathyroid hormone - Secretion and metabolism in vivo.

MURRY, T. Speech intelligibility during exercise at normal and increased atmospheric pressures.
Effect of 5-oxytryptophan on the Origin of a cortical aftereffect in response to investigating the dose field of an electron beam visual pattern analysis in machines and animals. Continuous recording of His bundle electrogram statistical analysis of unfitness of flying speed of size scaling in human vision. metabolic and hormonal effects of prolonged hypovolemia. localization of the human visual evoked response. the effect of hypoxia on the coronary blood flow in reserpinized dogs. a system for the mass examination of electrocardiograms. a system for the mass examination of electrocardiograms. localization of the human visual evoked response. regulatory mechanisms for fatty acid biosynthesis. metabolic and hormonal effects of prolonged hypo-dynamics. long line detectors in the human visual system evidence from selective adaptation. continuous recording of His bundle electrograms during selective coronary cineangiography in man. visual pattern analysis in machines and animals. reliability of electroencephalography. origin of a cortical aftereffect in response to perihemal stimulation. investigating the dose field of an electron beam. speed of size scaling in human vision. a model describing vestibular detection of body sway motion. statistical analysis of unfitness of flying personnel in the French Air force. effect of 5-oxytryptophan on the hypothalamic-hypophyseal-adrenal complex under conditions of complete deafferentation of the medial-basal hypothalamus.
Effect of illumination on the radiation effect in leaf cabbage after irradiation by protons and gamma rays.

Change in growth processes in irradiated lettuce seeds.

Light flash phenomenon seen by astronauts (NASA CR-125953).

Light flash phenomenon seen by astronauts (NASA TR-1-66119).

Speech intelligibility during exercise at normal and increased atmospheric pressures.

Respiratory cartridge efficiency studies. 1: Experimental design.

Experimental system, and its evaluation for the control of surgically induced infections (NASA CR-127949).

Evaluation of cardiopulmonary function and work performance in man during caloric restriction.

Life support system definition for a low cost shuttle launched space station.

Preparatory-response vs information-seeking interpretations of preference for signaled loud sounds. Further limits on human informational, cognitive control.

Experimental human exposure to carbon monoxide 1 to 1000 PPM.

Psychosocial reconstruction inventory - A postictal instrument in aircraft accident investigation.

Effect of flight factors on dormant lettuce seeds.

Effect of fasting on tolerance to moderate hypoxia.

Protocol analysis as a task for artificial intelligence.

Visual angle and apparent size of objects in peripheral vision.

Experimental human exposure to carbon monoxide 1 to 1000 PPM.

Radiation dosimetry for heavy /Z not less than 2/.

Threshold levels for damage of the cornea following irradiation by a continuous wave carbon dioxide laser.

Duty hours and sleep patterns in aircrew operating world-wide routes.

Influence of workload patterns during the letdown, approach and landing of a Boeing 707 on nervous activity of the pilot.

Analysis of pilot assessment of workload.

The reliability of man in space.

Radiation dosimetry for heavy /Z not less than 2/ particles with the aid of a nuclear emulsion and solid detectors of tracks (CEBN-71-16).

High-frequency pulsatile discharge of human sweat glands - Hyoepithelial mechanism.

Therocoequlation during positive and negative work at different environmental temperatures.
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>MESEL, R.</td>
<td>The control of body temperature in muscular work</td>
<td>p0305 A72-20072</td>
</tr>
<tr>
<td>MESEL, S. L.</td>
<td>Thermoregulation during positive and negative work at different environmental temperatures</td>
<td>p0425 A72-36559</td>
</tr>
<tr>
<td>MESEL, T. W.</td>
<td>Unconjugated urinary corticosterone excretion in laboratory rats exposed to high pressure helium-oxygen environments</td>
<td>p0557 A72-86556</td>
</tr>
<tr>
<td>NITTO, E.</td>
<td>Effects of acceleration - A contribution to the study of experiment animals' tolerance to prolonged acceleration</td>
<td>p0012 A72-10934</td>
</tr>
<tr>
<td>NITTO, M. S.</td>
<td>Effects of acceleration - A contribution to the study of experiment animals' tolerance to prolonged acceleration</td>
<td>p0012 A72-10934</td>
</tr>
<tr>
<td>NITTO, S. D.</td>
<td>Reactivity of the organism under extreme effects</td>
<td>p0557 A72-85213</td>
</tr>
<tr>
<td>NITTO, I. V.</td>
<td>Change in growth processes in irradiated lettuce seeds</td>
<td>p0075 A72-11995</td>
</tr>
<tr>
<td>NIKOLAYEV, T. I.</td>
<td>A model of a visual analyzer and the problem of pattern recognition</td>
<td>p0196 A72-16062</td>
</tr>
<tr>
<td>NIKOLATY, V. V.</td>
<td>Engineering psychology in radar (JPS-55522)</td>
<td>p0252 A72-19172</td>
</tr>
<tr>
<td>NIKOJIO, A. V.</td>
<td>Features of a speech signal during cumulative action of Coriolis accelerations</td>
<td>p0547 A72-84150</td>
</tr>
<tr>
<td>NINOSKAI, R. T.</td>
<td>Possibility of using a condensate of atmospheric moisture in a system for functioning of higher plants</td>
<td>p0202 A72-17062</td>
</tr>
<tr>
<td>NISSE, E.</td>
<td>Numerical analysis of pressure and flow pulsations in a segment of the arterial tree</td>
<td>p0294 A72-17078</td>
</tr>
<tr>
<td>NISSE, E.</td>
<td>Relative biological effectiveness of X-rays delivered at very high dose rates to radish seeds /Raphanus sativus/</td>
<td>p0214 A72-22524</td>
</tr>
<tr>
<td>NISSE, L. F.</td>
<td>Rebarization, material transfer, and ideal tracer theory</td>
<td>p0198 A72-17034</td>
</tr>
<tr>
<td>NISSE, I.</td>
<td>Hypothalamic stimulation and baroreceptor reflex interaction on renal nerve activity</td>
<td>p0075 A72-15722</td>
</tr>
<tr>
<td>NISSE, E. H.</td>
<td>Psychophysiological and environmental factors affecting disorientation in naval aviation accidents</td>
<td>p0180 A72-21570</td>
</tr>
<tr>
<td>NISSE, E. H.</td>
<td>Review of high performance aircraft take off and landing accidents</td>
<td>p0276 A72-23732</td>
</tr>
<tr>
<td>NISSE, E. H.</td>
<td>The man-machine interface - A study of injuries incurred during ejection from U.S. Navy aircraft</td>
<td>p0292 A72-28273</td>
</tr>
<tr>
<td>NISSE, E. H.</td>
<td>Psychophysiological and environmental factors affecting disorientation in naval aviation accidents</td>
<td>p0392 A72-25036</td>
</tr>
<tr>
<td>NISSEMAR, R.</td>
<td>Vectorcardiographic and electrocardiographic differentiation between cor pulmonale and anterior wall myocardial infarction</td>
<td>p0497 A72-40769</td>
</tr>
<tr>
<td>NIVEN, J. I.</td>
<td>Orientation error accidents in Army aviation aircraft</td>
<td>p0392 A72-25034</td>
</tr>
<tr>
<td>NIVEN, J. I.</td>
<td>Change of voice characteristics in urgent situation. II - Vibration space analysis on voice under some psychological stresses</td>
<td>p0004 A72-10213</td>
</tr>
<tr>
<td>NIKOS, C. W.</td>
<td>Human response to sonic boom in the laboratory and the community</td>
<td>p0183 A72-21910</td>
</tr>
<tr>
<td>NIKOS, J. N.</td>
<td>Factors discriminating men with coronary heart disease from healthy controls</td>
<td>p0361 A72-31282</td>
</tr>
<tr>
<td>NODER, P.</td>
<td>Acute changes in the central nervous system of monkeys exposed to protom</td>
<td>p0331 A72-29833</td>
</tr>
<tr>
<td>NODER, C.</td>
<td>Some considerations on the difficulties of dosimetric evaluation and cosmic radiation injuries</td>
<td>p0831 A72-26049</td>
</tr>
<tr>
<td>NOLI, G. T.</td>
<td>Action of acetylcholinesterase on experimental myocardial infarction</td>
<td>p0175 A72-21082</td>
</tr>
<tr>
<td>NOORDEN, E.</td>
<td>Congruate and disjunctive optokinetic eye movements in the rabbit, evoked by rotatory and translatory motion</td>
<td>p0547 A72-42423</td>
</tr>
<tr>
<td>NOREDJO, L.-O.</td>
<td>Muscle lactate, ATP, and CP levels during exercise after physical training in man</td>
<td>p0090 A72-40621</td>
</tr>
<tr>
<td>NOREDJO, L.-O.</td>
<td>Muscle metabolism during isometric exercise performed at constant force</td>
<td>p0690 A72-40625</td>
</tr>
<tr>
<td>NOKIBMA, L. E.</td>
<td>Higher nervous activity of monkeys two years after the extirpation of the dorsolateral frontal cortex</td>
<td>p0480 A72-40003</td>
</tr>
<tr>
<td>NOHRN, D. A.</td>
<td>Adaptive training of manual control. 1: Comparison of three adaptive variables and logic schemes</td>
<td>p0360 A72-23097</td>
</tr>
<tr>
<td>NOHRN, D. G.</td>
<td>Handbook of human engineering design data for reduced gravity conditions (NASA-Ch-1726)</td>
<td>p0084 A72-12048</td>
</tr>
<tr>
<td>NOHRN, R. A.</td>
<td>Gain control and contrast sensitivity in the vertebrate retina</td>
<td>p0409 A72-34418</td>
</tr>
<tr>
<td>NOHRN, K. S.</td>
<td>A theory for the function of the spermatocritic organ of the sperm whale (Physaster catodon L.) (CONFRER-74)</td>
<td>p0398 A72-25087</td>
</tr>
<tr>
<td>NOHRN, B. F.</td>
<td>Hand environment control and life support systems (JSPS-EBAY-203)</td>
<td>p0660 A72-39157</td>
</tr>
<tr>
<td>NOHRN, J. F.</td>
<td>Dynamic and structural characteristics of human skin - A comparative study with chamois leather</td>
<td>p0370 A72-32606</td>
</tr>
<tr>
<td>NOHRN, J. F.</td>
<td>The mechanical and structural characteristics of connective tissue</td>
<td>p0258 A72-19140</td>
</tr>
<tr>
<td>NOHRN, J. C.</td>
<td>Effect of set size, age, and mode of stimulus presentation on information-processing speed</td>
<td>p0429 A72-36922</td>
</tr>
<tr>
<td>NOHRN, E. J. H.</td>
<td>Trace-metal concentrations in human hair</td>
<td>p0264 A72-19389</td>
</tr>
</tbody>
</table>
O'HALLAN, J. D.
O'HAIK, J. C.
O'COBH, P. J.
O'BIE, D. B...
HOMIIL, A. T.
BOTIKOVA, E. B.
BOVIKOV, A. A.
BITAKOBSKI, T.
BOOBHATOV, A. I.
BOOAILLB-DEGOBBCB, J.
BOSSABAB, B. O.
O'BIE, B. C.
BOT, C.
BOBBBLBT, S. A.
SOSAD, H.
HOSLIS, D. P.
IO70KHATSKIY, A. S.
BOVIKSOBI, 10. I.
BOSOV, B. B.
HOSOV, V. B.
BOVIKOVA, S. P.

The EEC and controlled hyperventilation.

• The retina receptors.

• Histocompatibility systems.

• Longitudinal study on physical performance of ten rodents.

• Influence of oxygen and carbon monoxide.

• Optical modulation by the isolated retina and retinal receptors.

• Influence of oxygen and carbon monoxide concentrations on blood carboxyhemoglobin saturation.

O'QUIGLEY, S.
Report of a rapid decompression of a Boeing 707.

O'BARR, T.
Influence of X-ray irradiation in 25- and 250-r doses on the transplant immunity in mice differing by weak and strong histocompatibility systems.

O'BRED, A. I.
Effects of retinal stimulation and hyperoxia on baedynamics and coronary circulation.

OBOLESKAYA, V. L.
...
On the constancy of the evolutionary rate of cistrons.

OTZU, H.

Optical modulation by the isolated retina and retinal receptors.

OKADA, A.

Growth and recovery of temporary threshold shift at 4 kHz due to a steady state noise and impulse noises.

OKUDSKAIA, V. P.

Models and characteristics of olfactory receptors.

OLAYDJOV, J. G. H.

A life-supporting biological system with lower and higher plants.

OKOPOBIVZ, T. A.

Techniques and procedure for differential ballistocardiography of extremities.

OKUBO, T.

A method for micropipette display of functional residual capacity and other lung volumes.

OL'AKA, J. A.

Effect of solar activity on the earth's atmosphere and biosphere.

OL'VIANSKAIA, R. P.

Cortical metabolism regulation and effector systems of the adaptation process.

OLCOTT, T. H.

Development of a sorber trace contaminant control system including pre- and post-sorbers for a catalytic oxidizer.

OLDER, H. J.

Human factors aspects of air traffic control.

OLER, B. J.

The effects of variations in the sleep-wakefulness cycle during a "time-isolation" experiment on reaction time and spontaneous tempo.

OLIVER, C.

Development in vivo simulation, and medical utility of a control system model for the mechanics of the human left ventricle.

OLIVER, H. F.

Induction of ventricular arrhythmias by elevation of arterial free fatty acids in experimental myocardial infarction.

OLIVER, R.

Image resolution in infrared thermography.

OLSEN, D. E.

Electrocardiogram transmission - The state of the art.

OLSEN, G. A.

The interaction of the components of the human back.

OLSON, C. E., Jr.

Remote sensing of changes in morphology and physiology of trees under stress.

OLSON, K.

Origin and development of plasma membrane derived invasions in Vinca rosea L.

OLSON, R. E.

Changes in energy stores in the hypoxic heart.

OLSON, R. L.

A re-evaluation of material effects on microbial release from solids.

PCERBIE, L. E.

Effects of aeolian phosphorylation on microbial release from solids.

OLSON, B. H.

A nondestructive technique to measure the wall displacement in the thoracic aorta.

OLSHAY, A. N.

Protection of the brain from injury during impact: Experimental studies in the biomechanics of head injury.

OLSHAY, A. N.

Lethal effects on man of underwater detonation of a firecracker.

OLSHAY, S. N.

Dynamics of the electrical activity of various regions of the neocortex during the sleep-wakefulness cycle.

OLSHAY, S. N.

On the dynamics of various rhythms in the electrocorticograms of a cat at sleep and wake (NASA-TT-F-14068).

OLSHAY, S. N.

Spectral analysis of an electroencephalogram during sleep and wakefulness (NASA-TT-F-14172).

OLSHAY, S. N.

Investigation of the mechanism of the phrenic nerve cross phenomenon.

OLSHAY, S. N.

Myocardial protein synthesis in acute myocardial hypoxia and ischemia.

OLSHAY, S. N.

Apparent movement and change in perceived location of a stimulus produced by a change in accommodative vergence.

OLSHAY, S. N.

The influence of vision on susceptibility to acute motion sickness studied under quantifiable stimulus-response conditions.

OLSHAY, S. N.

Influence of vision on susceptibility to acute motion sickness studied under quantifiable stimulus-response conditions.

OLSHAY, S. N.

Influence of vision on susceptibility to acute motion sickness studied under quantifiable stimulus-response conditions.

OLSHAY, S. N.

Mechanism of pulmonary conversion of angiotensin I to angiotensin II in the dog.

OLSHAY, S. N.

Resis in differential diagnosis of hypertension.

OLSHAY, S. N.

Comparative characteristics of nucleotide DNA blocks in radiation injury and leukosis.

OLSHAY, S. N.

Problem of the origin of life - Present state and prospects.

OLSHAY, S. N.

The appearance of life in the universe.

OLSHAY, S. N.

Substrate utilization and glycolysis in the heart.

OLSHAY, S. N.

Clinical significance of the coronary arteriograms.

OLSHAY, S. N.

Biological changes in blood and urine indicating radiation damage: A literature review, part I.

OLSHAY, S. N.

Exhalation with oxygen in NASA operations.

OLSHAY, S. N.

Prebiotic phosphorylation of thymidine at 65 C in simulated desert conditions.
OLOV, R. S.

Basic questions concerning the mechanism of excitation-contraction coupling in the myocardium. p0213 A72-22222

OBLOV, L. B.

Influence of parenterally introduced protein hydrolysates on the external secretory activity of the human pancreas. p0224 A72-23595

OSTROGOV, P. B.

Development of staphylococcal infection in human subjects under the influence of some spaceflight factors. p0204 A72-17072

OSTROGOV, L. E.

Effect of ATP during prolonged irradiation. p0099 A72-16636

Effect of ATP during prolonged irradiation. p0121 A72-14074

OSTROSKII, D. R.

A possible pathway of biological membrane evolution. p0052 A72-14786

OSTROVSKIY, E. A.

Photoactivity of the pigmented epithelium of the eye. p0134 A72-15048

OSTROVSKII, G. B.

Histochemical heterogeneity of retinal neurons exemplified by distribution of acid phosphatase activity. p0136 A72-15059

OSWALD, H.

Two safer aircraft instruments. p0054 A72-13696

OSTROCHUKOV, V. A.

Extra-terrestrial-life study - Problems of its origin and evolution. p0068 A72-14806

OTTO, D. A.


OG, L. C.

Supraventricular influences on hypoxic ventilatory control. p0513 A72-82590

OVCHAROV, O. P.

Vortex formation in the hydrodynamic wake of fish during propulsion. p0246 A72-18069

OVER, R.

Color adaptation of spatial frequency detectors in the human visual system. p0322 A72-28615

OVERALL, G. H.

Dilatant suspensions for impact protection. p0369 A72-32604

Non-Newtonian flow for human impact protection. [AD-740542] p0526 A72-30095

OVERINGTON, I.

Evaluation of a total system - Optics plus operator. p0183 A72-19181

A model of threshold detection for photopic vision. p0495 A72-80733

OVSLAFKHOV, V. V.

Motor preconditioning in man under conditions of water immersion. p0334 A72-30255

OWEN, W. G.

Spatio-temporal integration in the human peripheral retina. p0133 A72-29970

The generation of the late receptor potential - An excitation-inhibition phenomenon. p0451 A72-37830

OWLA, J.

Deep-body temperature changes in rats exposed to chronic centrifugation. p0226 A72-12089

OZAWA, J.


Computer analysis of phonocardiograms. [NASA-TT-F-14568] p0563 A72-32114

OWLERS, P. P.

Changes in certain hemodynamic indices during muscular strain in people with differing capacity to perform work. p0550 A72-44591

PACK, H.

Neurogenesis in the pig-tailed monkey Macaca
Flicker adaptation. II: Effect on the apparent brightness of intermittent lights.

Fast and slow fibers in human muscles.

Flicker adaptation. III: Effect on the apparent brightness of intermittent lights.

Factors modifying the response of large animals to hyperventilation: Its relations with spasmophobia. Approach of a test of induced hyperventilation. Evolution of anasthesia in armed forces operating aircraft.

Futural, V. G.

Fast and slow fibers in human muscles.

Flicker adaptation. II: Effect on the apparent brightness of intermittent lights.

Flicker adaptation. III: Effect on the apparent brightness of intermittent lights.

Factors modifying the response of large animals to hyperventilation: Its relations with spasmophobia. Approach of a test of induced hyperventilation. Evolution of anasthesia in armed forces operating aircraft.
The interpretation and meaning of laboratory preliminary analysis of some factors that procedure for correcting perceived noise level.

Beavy work in mine stopes with hot, humid procedure for correcting perceived noise level.

Beavy work in mining fields in a hot, damp climate procedure for correcting perceived noise level.

On the prophylactic action of salted drinks during procedure for correcting perceived noise level.

Use of spectral analyses in the study of human procedure for correcting perceived noise level.

Effects of 72-hour partial sleep deprivation human procedure for correcting perceived noise level.

Application and design characteristics of procedure for correcting perceived noise level.

Effect of earplugs on passenger speech reception of the autonomic nervous system in the procedure for correcting perceived noise level.

Non-auditory effects of noise procedure for correcting perceived noise level.

Effects of ischemia and reoxygenation on regional procedure for correcting perceived noise level.

Differences in apparent straightness of dot and line stimuli.

Serum cortisol, plasma free fatty acids, and urinary catecholamines as indicators of complications in acute myocardial infarction.

Serum cortisol, plasma free fatty acids, and urinary catecholamines as indicators of complications in acute myocardial infarction.

An indirect method for evaluation of left ventricular function in acute myocardial infarction.

Procedure for correcting perceived noise level calculations for the effect of background noise.

Millisecond second of porcine skin to simulated CO2 laser radiation.

The interpretation and meaning of laboratory determinations of the effect of duration on the judged acceptability of noise.

The interpretation and meaning of laboratory determinations of the effect of duration on the judged acceptability of noise.

The interpretation and meaning of laboratory determinations of the effect of duration on the judged acceptability of noise.

Effect of earplugs on passenger speech reception of the autonomic nervous system in the hypoxic response of the pulmonary vascular bed.

Effect of earplugs on passenger speech reception of the autonomic nervous system in the hypoxic response of the pulmonary vascular bed.

The interpretation and meaning of laboratory determinations of the effect of duration on the judged acceptability of noise.

The interpretation and meaning of laboratory determinations of the effect of duration on the judged acceptability of noise.

The interpretation and meaning of laboratory determinations of the effect of duration on the judged acceptability of noise.

The interpretation and meaning of laboratory determinations of the effect of duration on the judged acceptability of noise.
PETIT, J. M.  
Muscle blood flow during submaximal and maximal exercise on a bicycle ergometer.  
Analysis of femoral venous blood during maximal muscular exercise.  

PETKARDOESEK, E. A.  
Recording of blood content variations and the possibility of determining the total volume of blood in the organism by measuring the electrical resistance of the human body.  

PETROV, B. A.  
Some peculiarities in the design of reversible follow up systems.  

PETROV, I. E.  
Influence of microwave radiation on the organism of man and animals.  

PETROV, R. V.  
Neurological problems of closed environments and gnotobiotics.  
Study of streptococcal flora of the human pharynx in isolated human subjects.  

PETROV, V. M.  
Providing radiation safety for the Soyuz-9 spaceflight crew.  

PETROV, T. F.  
Basic problems of the physiology of the visual analyzer under extreme conditions.  
Effect of spaceflight factors on visual functions.  

PETROVSKII, V. G.  
Bioelectric control: Man and automatic systems (selected articles).  
Study of the biological effect of a fine lunar soil fraction returned to earth by the 'Luna 16' automatic station.  
The effect of lunar ground on radiation damage in mice.  
The effect of G forces on the microcirculatory system.  

PETTIGREW, J. D.  
The neurophysiology of binocular vision.  

PETTY, G.  
Reliability and normal variations of computer analysis of Frank electrocardiograms by Smith-Hyde program /1968 Version/.  

PETUHOV, V. N.  
Supercellular regulators of the triggering mechanism of the regenerative reaction in erythropoietic tissue.  

PEYVEZ, L. Z.  
Nucleic acid contents in cholinergic and adrenergic spinal cord neurons and in their glial satellite-cells during hypoxic hypoxia and a post-hypoxia period.  

PEYVEZ, R. A.  
Gravitation receptor: Evolution of the structural, cytochemical, and functional organization.  

PEW, B. W.  
Human information processing and reaction time.  

PEHLER, R.  
The precise simulation of image transfer systems with the aid of an optical convolution obtained with a rotating slit of prescribed form.  

PFEISTER, A.  
Preliminary dosimetric results of cosmic radiation.
Some effects of ionizing radiations on the
Plight and Psychology
Physiology of respiration
Cardiocirculatory responses to exercise -
Bering's law of equal innervation and the position
Effects of autonomic blockade on the baroreflex in
Solar activity and chemical tests
The role of water in the genesis of biological
Does cessation of a negative stimulus lead to the
Psychophysiological aspects of paced and unpaced
A method for spirographic display of functional
Spatial parameters of eye-hand adaptation to
Automated detection of bacteria in urine . •
Bacterial adenosine triphosphate as a measure of
Temporal organization of night workers
Natural aging and radiation-induced life
Viruslike particles in the tissues of normal and
gamma-irradiated Drosophila melanogaster.
Continuous human behavior
Analysis of femoral venous blood during maximum
Participation of free radicals in the generation
The probability of visual detection of objects as
Statistical analysis of unfitness of flying
cochlear pathology in monkeys exposed to impulse
Mathematical analysis and description of
Light flash phenomenon seen by astronauts
Light flash phenomenon seen by astronauts
Possibilities and dangers during long working
Day-to-day variation of the normal orthogonal
electrocardiogram and vectorcardiogram.
Odor test
Muscle blood flow during submaximal and maximal
analysis of femoral venous blood during maximal
Participation of free radicals in the generation of
Quantitative evaluation of the kinetics of
Development of the inner ear in albino rat embryos
RNA content in the cortex neurons in connection
Emergence of an animal from hypothermia
The photoperiodic time measurement in Pectinophora
the view-point of random theory.
Tracking.
Emergence of an animal from hypothermia
hypoxic conditions
Post-synaptic potentials of motor neurons of the
Influence of a preceding afferent stimulation on
Indices of aerobic working capacity in runners
Expression of their angular size, contrast and
search time.
Statistical analysis of unfitness of flying
Cochlear pathology in monkeys exposed to impulse
Mathematical analysis and description of
Light flash phenomenon seen by astronauts
Light flash phenomenon seen by astronauts
Possibilities and dangers during long working
Day-to-day variation of the normal orthogonal
electrocardiogram and vectorcardiogram.
Post-synaptic potentials of motor neurons of the
Influence of a preceding afferent stimulation on
Indices of aerobic working capacity in runners
The role of water in the genesis of biological
Research on French Air Force personnel in the French Air Force
relationship to the circadian
tracking.
Emergence of an animal from hypothermia
expression of their angular size, contrast and
search time.
Emergence of an animal from hypothermia
expression of their angular size, contrast and
search time.
Emergence of an animal from hypothermia
expression of their angular size, contrast and
search time.
Emergence of an animal from hypothermia
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search time.
Emergence of an animal from hypothermia
expression of their angular size, contrast and
search time.
Emergence of an animal from hypothermia
expression of their angular size, contrast and
search time.
Emergence of an animal from hypothermia
expression of their angular size, contrast and
search time.
An integrated medical system for long-duration space missions.


The role of ionizing radiation in primordial organic synthesis.

Exobiology.

Interstellar molecules and the origin of life.

Primordial organic chemistry and the origin of life.

In the search for extraterrestrial life.


Survival of common terrestrial microorganisms under simulated jovian conditions.

The principles of an active operator and the functional distribution between man and machine (JPRS-56279).

Long ventilation and gas exchange of a man breathing different gas mixtures while swimming under water (NASA-TT-F-14260).

Medical technology advances from space research. An integrated medical system for long-duration space missions.

Action of acetylcholinesterase in experimental myocardial infarction.

An optical effect in the blood stream.

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Engineering psychology in radar (JPRS-55527).

Theory and practice of aviation medicine.
Changes in certain hemodynamic indices during muscular strain in people with differing capacity to perform work.

Effect of hypoxia on the condition of skeletal muscles in rats under hypokinesia.

Structural and cytological changes in the rat's skeletal muscles associated with restricted mobility.

Effect of hypoxia on the skeletal muscles of rats during hypokinesia.

Determination of systolic time intervals using the apex cardioenvelope and its first derivative.

Control parameters of the blood-pressure regulatory system. I - Reference pressure and basal heart rate.

Effect of electrical excitation of various auditory analyzer levels on a conditioned motor reflex.

Some indices of the growth of rats and their skeletal muscles during prolonged restriction of mobility.

Changes in skeletal muscles associated with inactivity.

Multiparameter vision tester apparatus.

Representation by models of the biochemical system man-operator under the action of random vibrations.

High-energy nucleon tissue dosages.

Calcium metabolism in calcified tissues of rats during a lasting hypodynia and thyrococcalin administration.

Calcium metabolism in calcified tissues of rats during prolonged hypodynia and thyrococcalin administration.

Human operator performance in hypoxic stress.

Effect of reproduction scale on probability of image recognition.

Parathyroid hormone - Secretion and metabolism in vivo.

The role of pyramidal and extrapyramidal components of the visual cortex to antidromic stimulation of the pyramidal tract.

Synaptic organization of the vestibulo-trochlear pathway.

Role of pyramidal and extrapyramidal components of cortically-induced effector stimuli in the mechanism of cortical motor activity coordination.

The effect of back-chest 6 forces on mesencephalic and mesencephalic blood vessels.

Effects of hypercapnia and physical deconditioning on muscularkeletal protein in man.

The effects of spacecraft environments on some hydrolytic enzyme patterns in bacteria.

Calibration of condenser microphones under increased atmospheric pressures.

The determination of an optimum size cylindrical handle by use of electromyography.

History and clinical findings related to selective coronary angiography.

Evidence for a metabolic limitation of survival in
hypothermic hamsters.

PRICE, R. B., JR.
Myocardial correlates of halina-cold induction and maintenance of hypothermia.

PRICE, R. W.
Effects of weightlessness on the nutrition and growth of Polonya carolinensis

PRISE, Y.
The thermodynamics of life

PRISE, Y.
Incorporation of methionine-5-35 into the proteins of the digestive organs of rabbits under the action of radiation and vibration

PRYDE, J. A.
Respiratory efficiency measurement using quantitative DOP man tests

PRIVE, R. G.
Some of the results and prospects in space anatomy of the vascular system

PROCARR, V. J.
A neuroelectric signal recognition system

PROFANT, G. R.
Splenic hemorrhage in hypothermic man - Role of falling blood pressure.

PROKHOV, V. T.
Activation of biological properties of staphylococci isolated from persons during a prolonged stay in an airtight chamber

PROBE, K. I.
Study of the condition of a pilot during flight from his oxygen uptake

PROB, V. H.
Recommendations for drawing up provisional safety rules for working with lasers

PROPER, R.
Etiological factors associated with the diminution of ballistocardiographic amplitudes occurring with advancing age.

PROPST, W. W.
Performance measurement in helicopter training and operations

PROPST, B. D.
Adaptive display using prediction

PROPST, D. N.
Analysis of the activity evoked in the cerebellar cortex by stimulation of the visual pathways

PROPST, J. R.
Selected anthropometric dimensions of naval aviation personnel

PRUESS, R. D.
Physiological changes during prolonged bed rest

PSHINDEBOYA, A. A.
Quantitative determination of fluorescence within the eye without disrupting the integrity of the eyeball

PSHINDEBOYA, N. G.
Effect of preadaptation to hypoxia on the myocardium sarcodermal content in rats with experimental vitia cordis

PSID, S.
The use of organic scintillators as an acceptable LET-dependent detector for quality factor and dose equivalent determinations in mixed radiation field

POHLONA, V. A.
Studies of allergic properties of chlorella

POHLO, L. E.
Oxygen-modified collagen and its possible pathological significance

PHISH, T.
Effect of Aetazolamide /Diamox/ at different dose levels on survival time of rats under acute hypoxia and on Ba+/+K+/-ATP-ase activity of rat tissue microsomes

POHM, P. T.
Lateral geniculate unit activity and eye movements - Saccade-locked changes in dark and in light

POXIB, N. G.
Determining microelements in human food rations and excreta using the extraction method

POYIB, R.
Periodicities in intermediary metabolism

POYIB, S. W.
Novelty, recency and frequency effects on visual recognition and pseudo-recognition thresholds

POYUNBOYA, V. A.
Significance of the nature of an increase in physical strain as it affects the adaptation of an organism to intense muscular activity

QUIDIDAE, A. H.
Loss of sleep and combat efficiency - Effects of the work/rest cycle

QUISTULLINI, V.
Investigation made at CEBR into the biological effectiveness of high-energy radiations

RABIN, A. G.
Neuropsychological mechanisms of the action of barbiturates on projection systems of the brain

Depolarization of axon terminals of return corticothalamic neurons
ROBERTS, A. P.

(AD-735802)

Urological considerations in space medicine.

p0358 A72-23079

ROBERTS, A. P.

A tissue injury model for crash helmet design.

p0370 A72-32607

Studies of inflating restraint systems

p0404 A72-10177

Analysis of Daisy track human tolerance tests

p0405 A72-10119

Mathematically miscation of Daisy track human

p0406 A72-10117

volunteer tests

p0246 A72-1824

Impact tolerance: Abdominal injury

p0255 A72-19118

Biomechanics of restraint and impact attenuation

p0260 A72-19156

The biomechanical aspects of crash helmet design

p0260 A72-19161

A mathematical model for the behavior of the brain

p0528 A72-30108

when the head is subjected to impulsive loads

p0528 A72-30109

HOBBS, D. G.

Arterial-arterial carbon dioxide pressure difference during rebreathing.

p0406 A72-34346

Reverse flow venous ventilation

p0353 A72-22097

A laboratory comparison of three methods of venous conditioning

p0466 A72-29092

ROBILLARD, C. L.

The effects of various cure cycles upon the viability of Bacillus subtilis var. niger spores within solid propellant.

p0283 A72-36437

ROBINSON, C. E.

Contaminant detector for aviator's breathing oxygen.

p0290 A72-28253

Eye movements evoked by collicular stimulation in the alert monkey.

p0551 A72-44906

ROBINSON, C. E.

Lung changes after beryllium inhalation - Ultrastructural and morphometric study.

p0270 A72-20686

ROBINSON, C. E.

Physiological adjustments of men to work and heat

p0270 A72-20686

ROBINSON, C. E.

Acute mountain sickness - Repeatability of its severity and duration in an individual.

p0014 A72-11287

Ventilation response to hypoxia and acute mountain sickness.

p0282 A72-27618

Vascular headache of acute mountain sickness.

p0511 A72-42491

ROBINSON, W. L.

Compilation of published information on elemental concentrations in human organs in both normal and diseased states. I: raw data ordered byatomic number, subordered by organ and suborgan, listing method of analysis, geographical source, age, sex, number of individuals

p0306 A72-20081

ROBISON, S. C.

Circulatory responses to hypoxia in experimental myocardial infarction.

p0097 A72-158152

ROCCO, E.

Obituary Prod Otolith experiment (PFO-A): Data reduction and control experimentation.

p0552 A72-30055

RODAHL, K.

Physiological changes during prolonged bed rest

p0552 A72-32085

RODRIK, S.

Stress concentrations induced by flow.

p0545 A72-43936

RODEMA, A. H.

Vision tests using laser speckle

p0532 A72-31107

RODEGERS, W. F.

Introduction to system safety engineering.

p0506 A72-14573

RODIBOW, V. I.

Effect of resin and angiotensin on blood clotting.

p0186 A72-22095

RODIBOW, J. A.

Increase in skeletal muscle performance during emotional stress in man.

p0186 A72-22095

RODE E, F. L.

Influence of oxygen and carbon monoxide concentrations on blood carboxyhemoglobin saturation.

p0064 A72-14853

RODRI GERS, F. A.

Correlation between ergometry, ballistocardiography and coronary angiography in 267 patients.

p0022 A72-36034

RODGERS, J.

Muscular exercise, 2,3-DPG and oxyhemoglobin affinity.

p0064 A72-14898

ROELS, O. A.

Data synthesis of biological samples collected for research in nitrogen metabolism in the sea.

p0366 A72-20084

ROECH, J.


p0222 A72-23325

ROEVRSA, J. N. J. G.

On the instantaneous measurement of bloodflow by ultrasonic means.

p0230 A72-29373

ROGATIN, L. H.

Complex of measures preventing microbial contamination of spacecrafts and accumulation of microorganisms in them.

p0055 A72-65213

ROGERS, A. P.

Antarctic climate, clothing and acclimatization.

p0313 A72-21055

ROGERS, D. J.

Intensity versus adaptation and the Pulfrich stereophenomenon.

p0333 A72-29668

ROGERS, D. B.

Analysis of five selected factors in pursuit tracking performance of men during acceleration.

p0268 A72-28320

ROGERS, J. G.

Peripheral contrast thresholds for moving images.

p0018 A72-35688

ROGERS, T. G.

The Gemini program biomedical sciences experiments summary.

p0118 A72-21053

ROGERS, V. A.

Analysis for hydrodynamic model of human systemic arterial circulation.

p0096 A72-15952

ROGOSIN, S. D.

Effect of ATP during prolonged irradiation.

p0099 A72-16536
PERSONAL AUTHOR INDEX

Effect of ATP during prolonged irradiation  p0121 A72-14074

BOBEE, R. G.
Remote sensing of changes in morphology and physiology of trees under stress (NASA-Ch-17860) p0468 A72-28037

BOBES, R. E., JR.
Drive and performance modification following multiple dark-dark shifts in the photoperiod. p0019 A72-11703

BOBBAC, B.
The activity of collagenases and the collagen content of the skin during carcinogenesis (NASA-TD-14579) p0542 A72-32105

BOHDE, R.
Thermal stability variations in blood serum protein after electrical stimulation of various hypothalamic structures p0158 A72-19649

BOHDE, R.
Thermal stability of blood serum proteins during dienecephalic syndromes p0217 A72-22877

BOHELEKO, K. O.
Structural and cytochemical changes in the rat's skeletal muscles associated with restricted mobility p0250 A72-19086

BOEIOH, B. K.
Production of gaseous nitrogen in human steady-state conditions p0170 A72-20862

BOLF, J.
A matter of interpretation p0064 A72-14850

BOLMAN, G. B.
Simultaneous detection and recognition of electrocardiographic changes p0518 A72-42933

BOLSTER, R. F.
Armament materials for life support p0258 A72-19143

BONAI, A.
The use of cholesterol: liquid crystals in the study of skin temperature and their applications in aviation medicine p0086 A72-12059

BONAI, A.
Techniques and procedure for differential ballistocardiography of extremitities p0463 A72-39325

BONAI, A. L.
Diurnal rhythm of mitotic activity and the duration of mitosis in the esophageal epithelium during normality and under the action of thyroxin p0169 A72-20623

BONAI, A. S.
The resonance mechanism of the biological action of vibration p0463 A72-39409

BONAI, A. S.
Physiological mechanism of the onset of third-order waves in arterial blood pressure p0023 A72-12014

BONAI, Y. D.
A method for controlling the human operator p0390 A72-24133

BONAI, E. A.
Study of the effect of flight factors on the 200-F automatic station on a culture of yeast and bacterial cultures p0203 A72-17067

BONAI, E. S.
An analysis of different regimes of work of supplementary respiratory muscles p0329 A72-29328

BONAI, E. I.
Effects of space flight factors and of ethylenimine on oat seeds p0102 A72-16777

BONAI, R.
Influence of space-flight factors and ethylenimine on barley seeds p0417 A72-35280

BONAI, J.
Comments on excess calcium in the body (NASA-TT-F-14155) p0189 A72-16007

B086, P. H.
Steady-state conditions. p0121 A72-14074

BOBEE, R. G.
Remote sensing of changes in morphology and physiology of trees under stress (NASA-Ch-17860) p0468 A72-28037

BOBES, R. E., JR.
Drive and performance modification following multiple dark-dark shifts in the photoperiod. p0019 A72-11703

BOBBAC, B.
The activity of collagenases and the collagen content of the skin during carcinogenesis (NASA-TD-14579) p0542 A72-32105
B-140

PERSONAL AUTHOR INDEX

ROSENBERG, B.

H-T intervals in left bundle-branch block - Clinical and electrocardiographic correlations.

ROSENBERG, B.

A criticism of adaptive neural sets as models of perception.

ROSENBERG, B. N.

A computer model for the genesis of the electrocardiogram.

ROSENBERGER, P. B.

Concurrent schedule control of human eye movement behavior (AD-74-1397).

ROSENFELD, R. A.

Electroretinographic evaluation of the Bunsen-Roscoe law for the human eye at high energy levels (AD-73-8803).

ROSENFELD, P.

Hardware problems in ergonomics measurements.

ROSENFELD, L.

Visual pattern analysis in machines and animals.

ROSENFELD, A.

Edge and curve detection for visual scene analysis, 2 (AD-73-37).

ROSENFELT, W. P.

System analysis approach to the study of spinal mechanisms.

ROSENFELT, T.

Patellar cardiohypoxia - A review of 11 families.

ROSENFELT, W.

Mechanism of adaptation to hypoxic hypoxia.

ROSSTANO, S.

Advance techniques for monitoring human tolerance to Gz accelerations (AD-73-37).

ROSSTANO, S. A.


ROSENB, R. S.

Neurophysiological effects of different anesthetics in conscious man.

ROSI, J. W., JH.

The effects of 2,2 dichlorovinyl dimethyl phosphate (DDVP) used as an aircraft disinsectant (TF-70-601-120A).

ROSI, L. W.

Potential applications of NASA-developed technology to problems of the environment.

ROSI, R. S.

QBS-wave detector evaluation.

ROSSANTO, T.

The importance of electrocardiograms recorded during hypoxia for determining piloting aptitude.

Experimental studies of the production of erythropoietin in relation to the intensity and duration of hypoxia.

Studies of renal and extrarenal production of erythropoietin in male and female rats.

Mutations induced in Tradescantia by small doses of X-rays and neutrons - analysis of dose-response curves.

Methods and approaches to dosimetry.

ROSSELING, R. G.

Hazard rate of recurrence in patients with malignant melanoma.

Hazard rate of recurrence in germinal cell tumors of the testis.

Hazard rate of symptomatic recurrence in Hodgkins disease.

Uneven ventilation as a continuous distribution function of alveolar dilution (AD-70-3797).

HOTL, P.

Hematological modifications due to acute exposure to heat.

The use of cholesterol liquid crystals in the study of skin temperature and their applications in aviation medicine.

ROTH, W. S.

Sleep - Neurophysiological, vegetative, psychological, chemical, and pathophysiological aspects.

HOTL, H. P.


HOTL, J.

Water-soluble insulin receptors from human lymphocytes.

HOTL, N.

Phase relations between alpha-waves and automated rhythmic motoric activity.

HOTL, R. C.

Pamper or ignore.

HOTLBAUER, G.

A fingerstick with variable control gain.

Static Machine-to-Man Adaptation.

HOTLBAUER, R.

Flight trace contaminant sensor - A design study.

HOTLEBUD, G.

Statistical study of the clinical, physical, and psychic causes of temporary and permanent unfitness for flight service in aircrews of the Italian air force.

Statistical survey on the clincial causes of temporary grounding and permanent unfitness of IAP aircrews.

ROODOR, R. N.

Behavior and physiology of the sockey /macaca mulatta/ following 2500 rads of pulsed mixed gamma-neutron radiation.

ROOPS, J. A. J.

Dynamic properties of vision. I, II.

ROOKS, J. G.

The development of a 150,000 watt-inch variable conductance heat pipe for space vehicle thermal control.

ROUILLER, A.

Perimetry - The information theoretical basis for its automation.

ROUSE, J.

The Orbiter ETC/LSS in terms of the unique space shuttle requirements.

ROUSE, R.

Physiology: The effect of thyrocalcitonine on the renal excretion of sodium and chlorides in normal man.

ROUSE, L. B.

Splanchnic vasoconstriction in hyperthermic man - Role of falling blood pressure.

Importance of the splanchnic vascular bed in human blood pressure regulation.

Skin and muscle components of forearm blood flow in directly heated resting man.

ROWLAND, G.

A new method of measuring the mechanical impedance of men or dummies.
The origin of life by natural causes.

Acclimatization and human pathology in Antarctica

A study of the function of pulmonary respiration among polar expedition members in coastal Antarctica.

Some results of work in the field of space hydrobiology at Dnepropetrovsk University (1961-1970) (JPP-8-555S9).

Intoxicating liquor and the general aviation pilot.

A study of the function of pulmonary respiration among polar expedition members in coastal Antarctica.

The effect of membrane parameters on the action of thyroxin.

A mathematical model for the dependence of changes in pupil diameter in the human cells in culture.

Biological effects of space flight on the human thyroid gland.

Diurnal rhythms of autonomic activity and the duration of sleep in the esophageal epithelium during normality and under the action of thyroxin.

Experiments on the interaction of ionizing radiation and tissues in diagnostics, therapy and protection.

A mathematical description of radiation damage and therapeutic efforts.

Radiation effects in man: manifestations and therapeutic effects.

The role of mast cells in the peroxidase activity of neutrons of the respiratory center.

Natural acclimatization to work in severe heat.

Experiments on the interaction of ionizing radiation and tissues in diagnostics, therapy and protection.

Biological effects of space flight on the lysogenic bacteria E. coli K-12 /lambda/ and on human cells in culture.

Experiments on the effect of sonic-boom exposure on humans.

A mathematical description of radiation damage.

Psychological principles of active rest during prolonged space flights.

Comparison of various tremor pickup methods.

Length winter model of Martian biology - a speculation.

Some results of experiments with plant objects exposed aboard the Zond-5 probe.

Comparative study of several endurance indices as a screening test.


The origin of life by natural causes.

Effect of a polarizing current on the activity of neurons of the respiratory center.

The effect of membrane parameters on the properties of the nerve impulse.

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Mathematical Description of radiation damage and recovery processes in the hemopoietic system.

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Comparative study of several endurance indices as a screening test.

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Computer program for calculating the effects of exposure to a high-speed aircraft on the psychological state of pilots.

Sonic boom effects on sleep - A field experiment.

Magnetic field effect on the functional state of the brain's cortex.

The role of mast cells in the peroxidase activity of the thyroid gland in experimental burns.

Biological effects of space flight on the lysogenic bacteria E. coli K-12 /lambda/ and on human cells in culture.

Effect of a 30-day isolation stress on calcium, phosphorus and other excretory products in an unrestrained chimpanzee.

Urinary excretion values in 2-day food-deprived, unrestrained chimpanzees.

Effects of hyperoxia on coagulating and anticoagulating systems in blood (JPP-8-555S3).


Some results of experiments with plant objects exposed aboard the Zond-5 probe.

Computer program for calculating the effects of exposure to a high-speed aircraft on the psychological state of pilots.

Sonic boom effects on sleep - A field experiment.

Magnetic field effect on the functional state of the brain's cortex.
Effect of a general aviation simulator on the stress of flight training.

The suppression-recovery effect in relation to stimulus repetition and rapid light adaptation.

Biomedical studies during saturation diving: A comparison of a saturation dive with saturation-exursion dives.

Psychophysiological aspects of habitable compartment layout.

Permeation tubes as calibrated sources of gas.

Effect of a general aviation simulator on the performance of personnel of the Royal Air Force.

The influence of sensory pattern and alcohol on psychophysiological aspects of paced and unpaced performance as influenced by age.

Foam flotation systems for personnel wearing body armour.

The influence of Coriolis stimulation in different groups of personnel of the Royal Air Force.

Protection against the chronic effects of hyperbaric oxygen toxicity by succinate and reduced glutathione.

Extraterrestrial consumables production and utilization.

Some effects of cognitive similarity on proactive and retroactive interference in short-term memory.

Toxicology of dichloroacetonochromatic seasonal variation of cabin altitudes.

The development of equipment for psychomotor assessment.

Some effects of cognitive similarity on proactive and retroactive interference in short-term memory.

Six-month test program of two water electrolysis systems for spacecraft cabin oxygen generation.

The use of biomedical programs packages.

The use of computer graphic techniques for the determination of vestibular function.

Measurements, modeling, control and simulation as applied to the human left ventricle for purposeful physiological monitoring.

Splanchnic blood flow and plus or minus Gx acceleration.

Measurements of g tolerance after 14 days bed rest and the effects of dehydration.

Advance techniques for monitoring human tolerance to Gz accelerations.

Angiographic analysis of heart geometry.

Course of development of the physiology of vision under normal and extremal conditions.

Problems of physiological optics. Volume 15: Physiology of vision under normal and extremal conditions.

The development of equipment for psychomotor assessment.

Splanchnic blood flow and plus or minus Gx acceleration.

The use of computer graphic techniques for the determination of vestibular function.

The use of biomedical programs packages.
a prolonged commercial jet flight.

Biochemistry of submarine and diving stress. 1: Lactate-pyruvate and redox chronic hypercapnia
[AD-731420] p0314 N72-21057
Biochemistry of submarine and diving stress. 4: Responses of blood lactate-pyruvate and redox state to chronic exposure to 3 percent CO2
[AD-731422] p0314 N72-21059

SCHEIDER, P. E.

SCHEIDER, B. W.

SCHEIDER, J. A.

SCHEIDER, C. E.

SCHEIDER, C. W.

SCHEIDER, D. P.

SCHEIDER, E. D.

SCHEIDER, F. P.

SCHEIDER, G. E.

SCHEIDER, H. L.

SCHEIDER, J. P.

SCHEIDER, K. A.

SCHEIDER, K. W.

SCHEIDER, L. A.

SCHEIDER, L. R.

SCHEIDER, M. A.

SCHEIDER, N. A.

SCHEIDER, O. B.

SCHEIDER, P. M.

SCHEIDER, R. B.

SCHEIDER, R. W.

SCHEIDER, S. A.

SCHEIDER, T. A.

SCHEIDER, V. A.

SCHEIDER, W. B.

SCHEIDER, X. A.

SCHEIDENBERG, B. A.

SCHEIDENBERG, C. A.

SCHEIDENBERG, D. A.

SCHEIDENBERG, E. A.

SCHEIDENBERG, F. A.

SCHEIDENBERG, G. A.

SCHEIDENBERG, H. A.

SCHEIDENBERG, I. A.

SCHEIDENBERG, J. A.

SCHEIDENBERG, K. A.

SCHEIDENBERG, L. A.

SCHEIDENBERG, M. A.

SCHEIDENBERG, N. A.

SCHEIDENBERG, O. A.

SCHEIDENBERG, P. A.

SCHEIDENBERG, Q. A.

SCHEIDENBERG, R. A.

SCHEIDENBERG, S. A.

SCHEIDENBERG, T. A.

SCHEIDENBERG, U. A.

SCHEIDENBERG, V. A.

SCHEIDENBERG, W. A.

SCHEIDENBERG, X. A.

SCHEIDENBERG, Y. A.

SCHEIDENBERG, Z. A.

SCHEIDENBERG, A. B.

SCHEIDENBERG, A. C.

SCHEIDENBERG, A. D.

SCHEIDENBERG, A. E.

SCHEIDENBERG, A. F.

SCHEIDENBERG, A. G.

SCHEIDENBERG, A. H.

SCHEIDENBERG, A. I.

SCHEIDENBERG, A. J.

SCHEIDENBERG, A. K.

SCHEIDENBERG, A. L.

SCHEIDENBERG, A. M.

SCHEIDENBERG, A. N.

SCHEIDENBERG, A. O.

SCHEIDENBERG, A. P.

SCHEIDENBERG, A. Q.

SCHEIDENBERG, A. R.

SCHEIDENBERG, A. S.

SCHEIDENBERG, A. T.

SCHEIDENBERG, A. U.

SCHEIDENBERG, A. V.

SCHEIDENBERG, A. W.

SCHEIDENBERG, A. X.

SCHEIDENBERG, A. Y.

SCHEIDENBERG, A. Z.

SCHEIDENBERG, B. B.

SCHEIDENBERG, B. C.

SCHEIDENBERG, B. D.

SCHEIDENBERG, B. E.

SCHEIDENBERG, B. F.

SCHEIDENBERG, B. G.

SCHEIDENBERG, B. H.

SCHEIDENBERG, B. I.

SCHEIDENBERG, B. J.

SCHEIDENBERG, B. K.

SCHEIDENBERG, B. L.

SCHEIDENBERG, B. M.

SCHEIDENBERG, B. N.

SCHEIDENBERG, B. O.

SCHEIDENBERG, B. P.

SCHEIDENBERG, B. Q.

SCHEIDENBERG, B. R.

SCHEIDENBERG, B. S.

SCHEIDENBERG, B. T.

SCHEIDENBERG, B. U.

SCHEIDENBERG, B. V.

SCHEIDENBERG, B. W.

SCHEIDENBERG, B. X.

SCHEIDENBERG, B. Y.

SCHEIDENBERG, B. Z.

SCHEIDENBERG, C. B.

SCHEIDENBERG, C. C.

SCHEIDENBERG, C. D.

SCHEIDENBERG, C. E.

SCHEIDENBERG, C. F.

SCHEIDENBERG, C. G.

SCHEIDENBERG, C. H.

SCHEIDENBERG, C. I.

SCHEIDENBERG, C. J.

SCHEIDENBERG, C. K.

SCHEIDENBERG, C. L.

SCHEIDENBERG, C. M.

SCHEIDENBERG, C. N.

SCHEIDENBERG, C. O.

SCHEIDENBERG, C. P.

SCHEIDENBERG, C. Q.

SCHEIDENBERG, C. R.

SCHEIDENBERG, C. S.

SCHEIDENBERG, C. T.

SCHEIDENBERG, C. U.

SCHEIDENBERG, C. V.

SCHEIDENBERG, C. W.

SCHEIDENBERG, C. X.

SCHEIDENBERG, C. Y.

SCHEIDENBERG, C. Z.
circle vs triangle and 'red vs green' discrimination.

SCHILLING, P. W.

Radio graphic and pathologic studies for aseptic bone necrosis in dogs incurring decompression sickness.

SCHILLING, P. G.

Response of sinusoidal cells to single doses of heavy particles

SCHINDLER, I.

To develop a spectral analyzer for physiological and medical use

SCHMELZ, K.

Automatic ECG recording and evaluation by digital computer

SCHMIDT, A.

Diagnos tic errors regarding patients of draft age

SCHMIDT, H.

The photometric effects of red cell aggregation and red cell orientation

SCHMIDT, H.

Microbiology and light transmission of blood. I.

SCHMIDT, K.

Microbiology and light transmission of blood. II.

SCHMIDT, P. G.

Influence of intracranial convection on the oxygen release by human erythrocytes

SCHMIDT, P. G.

A multistage process for computing virtual dipolar discrimination.

SCHMIDT, P. G.

The imaging properties of the positron camera

SCHMIDT, P. G.

New experiments on the effect of clock shifts on homing in pigeons

SCHMIDT, K.

A method of man-display/control system evaluation

SCHMIDT, R.

Studies on the central chemosensitive mechanism of respiration. II.

SCHMIDT, R.

Studies on the central chemosensitive mechanism of respiration. III, IV

SCHMIDT, R.

Stabilized images: the search for pattern elements

SCHMIDT, R.

Stabilized images - functional relationships among populations of orientation-specific mechanisms in the human visual system

SCHMIDT, R.

The Index of Preprogramming /IP/ - a statistical method for evaluating the role of feedback in simple movements

SCHMIDT, R.

Temperature sensation - cold and heat receptors

SCHMIDT, R.

Pain

SCHMIDT, R.

Proprioceptors in muscles and tendons

SCHMIDT, R.

Man and technology in orientation and navigation

SERFES, B.

Study on data processing applied in medicine (NASA-TT-F-14034)

SCHNEIDER, B. J.

Further studies on the relation between mitochondria and glycogen

SCHNEIDER, B.

In an electrode system with rounded edges for direct ventricular defibrillation

SCHNEIDER, B.

A multistage process for computing virtual dipolar sources of EEG discharges from surface information

SCHNEIDER, U.

In vivo incorporation of C-14/valinate and N-3/6-glucose into lung lecithin

SCHNITZER, R. A. H.

Correlation between goniometry, ballistocardiography and coronary angiography in 267 patients

SCHOLTE, J.

Dangers of bed rest

SCHOLTE, J.

Dangers of bed rest

SCHOLTE, R.

Evaluation of the thermodilution technique for measuring coronary sinus blood flow

SCHROEDER, A. N.

Primates in eye movement research

SCHROEDER, R. W.

Factors involved in the antinatriuretic effects of acute constriction of the thoracic and abdominal inferior vena cava

SCHROEDER, D. J.

Effects of alcohol ingestion on tracking performance during angular acceleration

SCHROEDER, D. J.

Intravascular volume and strain-gauge plethysmography during static effort

SCHROEDER, D. J.

Mathematical methods for improving the significance of scintigrams

SCHROEDER, D. J.

Role of distal reabsorption and peritubular environment in glomerulotubular balance

SCHWARTZ, R. H.

Static comparison of vertical tape and vertical light emitting diode displays

SCHWARTZ, R. H.

Ergonomics and its importance in the development of fighting vehicles

SCHWARTZ, R. H.

Circulatory responses to hypoxia in experimental myocardial infarction

PERSONAL AUTHOR INDEX

SCHNEIDER, B. J.

Further studies on the relation between mitochondria and glycogen [NASA TT F-14034] p0033 N72-10072

SCHNEIDER, B.

In an electrode system with rounded edges for direct ventricular defibrillation [p0272 A72-26628

SCHNEIDER, R.

A multistage process for computing virtual dipolar sources of EEG discharges from surface information [p0114 A72-18201

SCHOLLE, R.


SCHOLLE, R.

In vivo incorporation of C-14/valinate and N-3/6-glucose into lung lecithin [p0426 A72-36573

SCHOTTZ, R.

Correlation between goniometry, ballistocardiography and coronary angiography in 267 patients [p0422 A72-36034

SCHURR, J.

Role of distal reabsorption and peritubular environment in glomerulotubular balance [p0115 A72-21084

SCHWARTZ, R. H.

Static comparison of vertical tape and vertical light emitting diode displays [p0131 N72-14138

SCHWARTZ, D. J.

Effects of alcohol ingestion on tracking performance during angular acceleration [p0106 N72-14874

SCHWARTZ, D. J.

Intravascular volume and strain-gauge plethysmography during static effort [p0283 A72-27485

SCHWARTZ, D. J.

Ventibular response to angular accelerations and to Coriolis stimulation following alcohol ingestion [p0343 A72-31090

SCHWARTZ, D. J.

Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation [p040 A72-34554

SCHWARTZ, D. J.

Alcohol and disorientation-related responses. 5: Influence of alcohol on positional, rotary, and Coriolis vestibular responses over 32-hour periods [p0126 A72-112779

SCHWARTZ, D. J.

Effects of alcohol ingestion on tracking performance during angular acceleration [p0131 N72-14138

SCHWARTZ, D. J.

Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation [p0148 N72-15111

SCHWARTZ, D. J.

Effects of different alcohol dosages and display illumination on tracking performance during vestibular stimulation [p0243 N72-18096

SCHROEDER, R.

Ergonomics and its importance in the development of fighting vehicles [p0566 N72-32136

SCHWARTZ, D. J.

Circulatory responses to hypoxia in experimental myocardial infarction [p0097 A72-16152

B-146
SHIM, Y.

Mental workload summary. p0506 A72-41827
A method of man-display/control system evaluation p0355 A72-22629

SHIM, T.

Relations between proposed cone sensitivities and Wright's discrimination lines. p0215 A72-22619

SKULKE, M. D.

Red-cone interaction in human scotopic vision. p0777 A72-21460

SKULKE, N.

Speed of size scaling in human vision. p0371 A72-32762

SKLF, B. C.

Visual reconnaissance from the nose versus side scanner stations of an aircraft [AD-729226] p0087 A72-13094
Airborne visual reconnaissance as a function of illumination level [AD-720629] p0128 A72-14112
Airborne visual reconnaissance with yellow light p0130 A72-14132

SELLARECK, J.

Relation of optical and labyrinthine orientation. p0496 A72-00751

SHABAGHO, L. L.

On the reserve of red blood cells in healthy and chronically irradiated dogs p0325 A72-30379
Erythrocyte reserve in healthy and chronically irradiated dogs p0387 A72-24100

SHAR tin, Y. N.

Changes of the catecholamine content in the brain of albino rats under overstrain caused by running in a rotating drum p0453 A72-38034

SHENCHEVA, E. N.

Increased hemoglobin A2 formation during adaptation of man to high mountain conditions p0218 A72-22808

SHENHOKO, N. Y.

Odorimetric evaluation of polymers used in constructing isolation chambers p0078 A72-12003

SHENHOKO, A. Y.

Undesirable effects in working with lasers [AD-726558] p0037 A72-10100

SHENHOVSKII, N. B.

Light-evoked potentials of the human visual cortex p0233 A72-24786

SHENHOFNE, Y. N.

Light evoked potentials in healthy persons and in patients with pathological lesions in various parts of the visual system p0134 A72-15047

SHENSHINA, Y. N.

Changes in the RNA content in different regions of the brain of Citellus erythrocephalus during hibernation p0112 A72-18058

SHENKOV, J. L.

Modelling pupillary motor behavior in response to light, accommodation and fusional inputs. p0152 A72-19310

SHIN, R. Y.

Correlation between electrophoretic trace phenomena in the brain and immediate memory [JPRS-55088] p0191 A72-15018

SHENHIVICH, IG. A.

Functional insufficiency of the neurovascular system caused by weightlessness and hypokinesia. p0540 A72-43387

SHEPPETINIDES, H. A.

Electrophysiological changes in humans during perceptual isolation. p0283 A72-27484

SHEPPETINIDES, K. B.

Possible role of structural lipids in accumulating the energy of light. p0061 A72-14779

SHEDEHKO, R. R.

Mechanisms of hemodynamic changes during muscle activity p0071 A72-15232
Development of arterial hypoxemia during the early stages of hypoxic ontogenesis p0218 A72-22879

SHEEBES, E.

A respiration function testing device p0221 A72-23256

SHEKHOVTSOV, P. V.

Effect of radioprotectants on the functional state of histo-plasmatic barriers in restrained animals p0326 A72-29308
Lysosomal enzymes of eye tissues during the action of hydrocortisone p0509 A72-82729

SHEKHANII, B. V.

Characteristics of breathing regulation under normal conditions and in an altered gas environment p0185 A72-22079

SHEKHOVTSOVA, A. V.

Effect of an atmosphere with a high carbon dioxide content on human tolerance to acute hypoxia and acceleration p0204 A72-17071

SHEKHOVTSOVA, A. V.

Correlation between electrographic trace phenomena in the brain and immediate memory [JPRS-55088] p0191 A72-16018

SHEKHOVTSOVA, A. V.

Changes of blood coagulation during gravity effects on the basis of thromboelastographic data p0326 A72-29309

SHEE, H.

Ejection acceleration: Physiological effects, tolerance p0259 A72-19196
Radiological study of spinal injuries to pilots undergoing sudden ejection p0259 A72-19198

SHEKHOVTSOVA, A. V.

Post synaptic potentials of auditory cortex neurons in the cat p0020 A72-11757
Responses of auditory-cortex neurons to electrical stimulation of the medial geniculate body p0285 A72-27561
Reactions of auditory cortex neurons to geniculo-cortical fiber stimulation p0514 A72-42723

SHECROV, F. R.

Electrophysiological investigation of the excitation and inhibition processes in the auditory cortex p0520 A72-43165

SHEFATFEI, B.

Biological effects of UHF electromagnetic radiation p0432 A72-26053

SHEIKO, W.

Coronary flow determination in experimental conditions with the use of radioactive xenon. p0450 A72-37475

SEVAIYTHO, V. V.

Methodology for conducting microwave irradiation experiments on animals p0340 A72-30746

SEYL, B.

Comparative study of visual acuity measured with the Bayne optometer and the Mercer optometric scale p0151 A72-19246

SEYER, R. X.

Human endurance of brief (impact) overloads (the problem of selecting a mechanical model) p0561 A72-32102

SEYERBERGHAUS, J.

Comparison of three methods for quantitating respiratory response to hypoxia in man. p0552 A72-44960

SEYERBERGHAUS, J. W.

Static pulmonary compliance of man during acute acclimation to 14,246 ft. p0231 A72-24476

SEYSEI, S.

Diffusing capacity of the lung for CO in men during acute acclimation to 14,246 ft. p0231 A72-24476
The use of a scintillation counter to measure, individual recognition between mother and infant, performance, methods of evaluating it, and drug, effects of chloralose-urethan anesthesia on, temperature regulation in dogs, environmental thermal control and life support, contamination of spaceships and accumulation of microorganisms in them.
SHEPPARD, J. C.
In-phantom dosimetry of prototypic plutonium nuclear reactors
[XBOL-S4-4121] p0564 872-32123

SHEPP, L.
Pedal nocturnal activity - A review of 11 families.
[FRVS-F4-18443] p0056 872-18443

SHELBOLD, J. H.
Late Upper Cambrian trilobites from the Gola Beds, Western Queensland
[BNL-112] p0384 872-26079

SHERIDAN, T. B.
Telemotors and remote control.
[872-41116] p0503 872-41116

SHERMAN, S. J.
Vigilance effects for duration judgments with two levels of task demand.
[p034] 872-30964

SHENTZER, R. G.
Mitochondrial alterations in heart, liver, and kidney of altitude-acclimated rats.
[p0514 872-62673

SHETTY, B. V. S.
Evaluation of impact protection of crash helmets.
[p0267 872-26016

SHIVANCHIK, D. G.
Neurophysiological mechanisms of sleep.
[p0213 872-22224

SHIVELY, I. A.
Dynamics of visual sensor signal.
[p0268 872-26049

SHIVKENTUN, O. A.
Odorimetric evaluation of polymers used in constructing isolation chambers.
[p0078 872-12003

SHIBAIKO, S. I.
Possible hazards associated with ingestion of kissing vegetables contaminated by tracemetal.
[p0078 872-12003

SHIBAROW, D. I.
Influence of Cosmic 368' space flight conditions on radiation effects in yeast, hydrophobic bacteria, and seeds of lettuce and pea.
[p0540 872-43390

SHIELDS, S.
The neurological effects of INH: [AFN-744801]
[p0564 872-32119

SHEFFER, B. M.
Visual processing capacity and attentional control.
[p0278 872-27074

SHIK, L. L.
An analysis of different regimes of work of supplementary respiratory muscles.
[p0329 872-29328

SHIK, M. L.
Multilevel motion control.
[p0416 872-35018

SHIK, M. L.
A supramuscular motion control mechanism.
[p0494 872-40093

SHIK, M. L.
Sanitary-hygiene evaluation of the extraction method for water recycling in atmospheric moisture condensates
[p0494 872-20035

SHIK, M. L.
Possibility of using a condensate of atmospheric moisture in a system for functioning of higher plants.
[p0204 872-17078

SHIK, M. L.
Sanitary-hygiene evaluation of the extraction method for regenerating water from a condensate of atmospheric moisture.
[p0081 872-29056

SHILDEKNOT, R. M.
Development of a defensive conditioned reflex to a light stimulus after artificial visual deprivation.
[p0546 872-40078

SHILLINGER, G. L. JR.
Ventilatory behavior of fish during diminished -force and weightlessness.
[p0410 872-38549

SHILLOV, V. M.
Alteration of intestinal microflora in long-term stay of man in a hermetic chamber.
[p0328 872-29323

Study of streptococcal flora of the human pharynx in isolated human subjects.
[p0075 872-11990

Dynamics of changes in the composition of the Escherichia in persons participating in a medical-technical experiment.
[p0252 872-19096

Activation of biological properties of staphylococci isolated from persons during a prolonged stay in an airtight chamber.
[p0438 872-27074

SHKOLOVRG, L.
Functional morphology in the presence of external effects.
[p0342 872-30966

SHHJOV, E.
Phonocardiogram analysis and electronic computers
[872-F7-145880] p0563 872-32113

SHISHKIN, F.
Thermolabile triose phosphate isomerase in a psychrophilic Clostridium.
[p0418 872-35397

SHIOTA, F.
The transverse response of the lumbar spine under longitudinal loads.
[p0526 872-30099

Response of the spine in the presence of transient external coronary occlusion.
[p0528 872-30106

SHIBAECYA, B. V.
Proteinase activity in different regions of the brain during development and inhibition of a conditioned passive-avoidance reflex.
[p0457 872-38927

SHIBLO, R.
Magnetic field effects in enzymes, tissue respiration, and metabolism characteristics of an intact organism.
[p0415 872-35003

SHITER, R.
Further studies on the dimensionless parameters associated with in vivo transport of heat within biological tissue.
[p0064 872-18464

Analytical solutions to the problem of transient heat transfer in living tissue.
[p0095 872-12587

Steady-state and transient temperature distributions in the human thigh covered with a cooling pad.
[p0439 872-27084

Removal of metabolic heat from man working in a protective suit.
[p0444 872-27124

Analytical prediction of the heat transfer from a blood vessel near the skin surface when cooled by a symmetrical cooling strip.
[p0467 872-26033

Mathematical models of theroregulation and heat transfer in mammals.
[p0468 872-26043

SHKLOBER, D. A.
Simulation of the color vision process in man.
[p0132 872-15030

SHLAFER, R.
The eagle's eye - Quality of the retinal image.
[p0365 872-31728

SHLIAKHOVEK, A. A.
Evoked potentials of vestibular nuclei during stimulation of visceral and somatic nerves.
[p0030 872-12512

SHLIS, A. M.
Effect of hemoglobin on the immunohchemical properties of hemoglobin.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
[p0225 872-23695

SHLOISBERGER, A. F.
Potential techniques and development activities in diver suit heating.
Clinical significance of minor ST/T depression in Carotid sinus counterpressure as a baroreceptor - Certain features of the effect of short term.

Safety of INB-chemoprophylaxis in aviation.

Effects of the factors of 'Zona automatic station 1'.

The brain of hibernating animals.

Restoration of visual acuity after a bright light flash of short duration.

Dependence of the nature of craniocerebral trauma on impact conditions.

Clinical significance of minor ST/T depression in resting electrocardiogram.

Reactor dosimetry with paired miniature ionization chambers.

Restoration of visual acuity after a bright light flash of short duration.

The measurement of orthostatic tolerance.

Theoretical-experimental method for parametric synthesis of director-type control systems.

Evaluation by the operator of the gripping force when controlling an artificial hand.

A laboratory comparison of three methods of personal conditioning.

Dependence of the nature of a craniocerebral trauma on the impact conditions.

Standards, statistics and Sternglass: Guilt by association.

A device for constraining the eye movement angle during nystagmograph calibration.

Voluntary respiration control in an altered gas environment.

The magnetic field, infection and immunity.

A universal vestibulometric swing.

Voluntary respiration control in an altered gas environment.

Electrophysiological changes in humans during total dark adaptation.

A device for constraining the eye movement angle during nystagmograph calibration.

Trace-metal concentrations in human hair.

A universal vestibulometric swing.

Human response to whole-body vibration.

A laboratory comparison of three methods of personal conditioning.

Increase in regularity of neuronal activity in the neocortex and hippocampus during EEC activation.

The influence of parenterally introduced protein hydrolysates on the external secretory activity of the human pancreas.

The influence of sustained muscular contraction on tolerance to Gz acceleration.

The functional reliability of the biological component of a life support system.

Functional reliability of the biological link in a life support system.

Trace-metal concentrations in human hair.

The functional reliability of the biological component of a life support system.

Functional reliability of the biological link in a life support system.

Heat strain in hot and humid environments.

A universal vestibulometric swing.

Heat strain in hot and humid environments.

Human tolerance to high, sustained +Gz acceleration.

Relationship of sodium deprivation to +Gz acceleration tolerance.

Human tolerance to high, sustained +Gz acceleration.

Relationship of sodium deprivation to +Gz acceleration tolerance.

Dependence of the nature of craniocerebral trauma on impact conditions.

The influence of parenterally introduced protein hydrolysates on the external secretory activity of the human pancreas.

The influence of sustained muscular contraction on tolerance to Gz acceleration.

The functional reliability of the biological component of a life support system.

Functional reliability of the biological link in a life support system.

Trace-metal concentrations in human hair.
SIMPSON, G. C.

SIMPSON, G. C.
A comparison of the legibility of three types of electronic digital displays.
p0002 A72-10118

SIMPSON, R. G.
Study of advanced vehicle simulation techniques
[FAA-TT-F-14566] P0561 H72-32101

ADAM, L. R. JR.
Chin-sternal-heart syndrome - Cardiac injury associated with parachuting mishap.
p0020 A72-11711

Roentgenography in the human factors investigation of fatal aviation accidents.
p0111 A72-17880

SIBATO, L. V.
The role of negative and positive emotional states in variations of the blood-cholesterol content and the arterial pressure level /Experimental investigation/ p0216 A72-22498

SINCLAIR, D. D.
Attitudes of air traffic controllers at Frankfurt Airport towards work and the working environment.
p0220 A72-23338

SINCLAIR, N.
Quantitative approach for the analysis of the functional organization of the visual cortex /Investigations with primates/ p0005 A72-10847

SINGH, L.
Blood coagulation changes at high altitude predisposing to pulmonary hypertension.
p0407 A72-35222

SINGH, V.
Effects of positive acceleration on the electrocardiogram.
p0267 A72-26015

SINGLETON, R. P.
General theory of presentation of information.
Some experiments on information presentation.
p0502 A72-41407
p0502 A72-41408

SITWAI, G. S.
Catalytic oxidation of certain gaseous products of pyrolysis of human wastes p1001 A72-16646

SITWAI, T. K.
Preparation and efficiency evaluation of silver-coated filters used for water disinfection and conservation p1000 A72-16637

Synthesis of oxidation-reduction polymers and their use for purifying aqueous solutions from organic impurities p0123 A72-14083

SITWAI, S. F.
Effect of light signals for use in navigation and visual collision avoidance.
p0299 A72-28326

Airport medical design guide /with comment on certain operational matters/.
p0511 A72-42500

The benefits of the use of shoulder harnesses in general aviation aircraft [FAA-AR-72-5177]
p0317 A72-21077

SITZOREN, W. E.
Respiration control and physiological adaptations of the respiratory function under hypoxia p1085 A72-22080

SIXSA, K.
The influence of exogenous ATP on cardiac metabolism in acute hypoxia.
p0413 A72-39408

SKOBKOVA, N. M.
The problem of decontaminating and preserving drinking water in spacecraft water supply systems p0553 A72-45121

SKOLOB, L.
Manipulation of projected afterimages by means of the physiological theory imposed on the observer.
p0428 A72-36920

SKYDERSEK, A. A.
Inflow as a source of extraretinal eye position information.
p0149 A72-19026

SKELTON, J.
Development of thermally durable coated fabrics for use in flight gloves.
p0359 A72-23090

SKOPKA, W.
Effects of a multi-hour immersion on trained and untrained subjects. I - Ventral function and plasma volume.
p0227 A72-23738

SEIR, V. T.
New data on the stimulation transmission mechanism in sympathetic ganglia p0168 A72-20617

Supraspinal effects in the activity of preganglionic sympathetic neurons delivering axons to the cervical sympathetic nerve.
p0494 A72-40599

SKREDITIK, V. G.
Sensory events during specific and nonspecific inhibition of visual cortex neurons.
p0546 A72-40088

SKRITTINGLAND, E.
Advance techniques for monitoring human tolerance to Gz accelerations.
p0299 A72-28328

SKREPOKOV, A. G.
Some structural and functional characteristics of a retina projection onto the visual cortex of cats.
p0498 A72-40088

SKREPOKOV, V. G.

SKUDA, N. D.
The effect of the hypothermal on the activity of myocinocytes dehydrogenase in the chialy epithelium of a rabbit eye.
p0345 A72-31099

SKUKHA, I. S.
Effect of illumination on the radiation effect in
Physiological studies of a so-called arbitrary regulation in man

Effect of illumination on the radiation effect in
leaf cabbage after irradiation by protons and
gamma-rays

The question of the effect of cumulative vertical
vibration and noise on a series of protein, fat, and
carbohydrate metabolism indices for
vara-bloeding animals

Device for eliminating the artifact of electrical
stimulation when recording evoked pulse activity
of neurons

Some peculiarities in the physiology of the human
diaphoretic system

Meaningful shape coding for aircraft switch knobs

Increased heat production by muscular contractions
due to noradrenaline

New data on physiological adaptations to arid zones

Cortical metabolism regulation and effector
systems of the adaptation process

Investigation of stimulus-signal amplitude and
frequency variation in vibrotactile-communication
of Tribolium confusum

Regeneration of oxygen from carbon dioxide and
water

Effect of hypoxia on the diurnal rhythms of mitotic
activity in the small intestine of rats

Analysis of five selected factors in pursuit
tracking performance of men during acceleration.

Effects of the vestibulo-ocular counterroll
reflex in pigeons

Analysis of the vestibulo-ocular counterroll
device in pigeons

Results of the 'integrated' radiation dose
measurements on the Soyuz spacecaches

Energy and mass exchange characteristics of algae

Early diagnostic of cerebral arteriosclerosis in
flying personnel

Hypokinesia

Some effects of sleeplessness on the flour beetle,
Tribolium confusum

Results of the integrated radiation dose
measurements on man

Effect of altered 'weight' upon animal tolerance
to restraint

Exercise capacity in a population of domestic fowl
Effects of selection and training

Stress and adaptation responses to repeated acute
acceleration

The effect of chronic erythrocytic polycythemia
and high altitude upon plasma and blood volumes

Radiological physics characteristics of the
extracted heavy ion beams of the bevatron.

Survival of bacterial isolates exposed to
simulated Jovian trapped radiation belt
electrons and solar wind protons

The effects of various care cycles upon the
viability of Bacillus subtilis var. niger
spores within solid propellant

Survival of bacterial isolates exposed to
simulated Jovian trapped radiation belt
electrons and solar wind protons

Atake on the biological activity of the noble gas
compound xenon trioxide
PERSONAL AUTHOR INDEX

SOBIN, S. S.
Pulmonary alveolar blood flow...
p0277 A72-26702

SODOMIRSKY, J.
Effect of immobilization on urinary catecholamine...p0202 A72-17063

SOEISHIBA, T. W.
Effect of flight factors on dormant lettuce seeds...
p0564 A72-32120

SOEISHIKO, T. P.
Essays on marine bionics...
[AD-74-6530] p0137 A72-15068

SOHMD,
Cyclotron production of 1123: An evaluation of...p0527 A72-30101

SOHRTNNG, J.
Control of the human forearm during abrupt acceleration...
[FAO-740451] p0219 A72-23133

SOHORM, H.
Time analyses of the tasks of approach controllers in...p0330 A72-29559

SOEBIB, C. J.
Microalgal for human nutrition...
[PO113 A72-18159

SOEBIBI, S.
Experiments on the effect of sonic-boom exposure on humans...
p0183 A72-21912

SOIFOS, B.
Analysis of fungal type isolates taken from a 90-day sampled test of an advanced regenerative life support system...
[NSR-CS-1-12061] p0563 A72-32115

SOHOKLO, V. I.
External respiration, gas metabolism and energy consumption during human activity of various types in a state of weightlessness...
p0029 A72-12347

External respiration, gas metabolism, and energy expenditure in the case of varying human activity under conditions of weightlessness...
(JPES-54345) p0085 A72-12057

SOOKYOL, D. L.
Expired air as a source of spacecraft environment carbon monoxide contamination...
p0553 A72-45120

SOOKYOL, V. N.
A system of programs for life support system optimization in terms of a minimum reduced mass...
p0555 A72-45133

SOOKYOL, Y. N.
Investigation of the critical discreetness interval of the visual system...
p0133 A72-15039

SOOKYOL, B. G.
Special features of the spectral sensitivity of the eye in persons with congenital color vision disorders...
p0324 A72-28753

SOOKYOL, A. A.
Preparation and efficiency evaluation of silver-coated filters used for water disinfection and conservation...
p100 A72-16637

Producing and evaluating the effectiveness of silvered filters for decontaminating and preserving water...
p0121 A72-14075

SOOKYOL, T. A.
Repetition rate of ranging signals of dolphins as a function of distance to target...
(JPES-55379) p0382 A72-29066

SOELIMAN, J. P.
Evidence on the effect of natural ionizing radiation on biological stimulation...
p0341 A72-26050

SOLED, B.
Studies on stabilized human plasma protein solution...
p0055 A72-13855

SOLES, B.
Biochemical changes in blood and urine indicating radiation damage: A literature review, part-1...
p0306 A72-20083

SOLOMONOFF, P. A.
A comparison of human tolerance to frontal and sagittal head tilts in rotating systems...
p100 A72-16640

The influence of a simultaneous rotation in two reciprocally perpendicular planes on the vestibular apparatus of human...
p0228 A72-23593

Features of a speech signal during cumulative action of Coriolis accelerations...
p0547 A72-44154

Coordination structure of human voluntary movements accompanying stimulation of the horizontal semicircular canals by angular accelerations...
p0078 A72-12009

Comparison of tolerance of frontal and sagittal head tilts in man in rotating systems...
p0122 A72-16078

Effect exerted by man by rotations in the sagittal plane...
p0204 A72-17076

SOLOMON, G. I.
Toxicological evaluation of some synthetic materials designed for airtight space equipment...
p0491 A72-40604

Toxicological evaluation of some synthetic materials used in sealed enclosures...
p0481 A72-29055

SOLOVYEV, A. D.
Experimental and psychological examination of aviators with erroneous action records...
p0054 A72-13723

SOLOVE, B. V.
On the hydrolocation capability of dolphins...
p0400 A72-25107

SOLOOK, R. C.
Combined effects of noise and vibration on mental performance as a function of time of day...
p0362 A72-31083

Combined effects of noise and vibration on mental performance...
p0263 A72-16096

Noise and speech levels associated with the T-111 A prep area [TAD-740028]...
p0569 A72-33085

SOLOOK, J. J.
Airbus restraint for general aviation aircraft...
p0370 A72-32605

SOLOHARUS, C. A.
On the use of quality factors and fluence to dose rate conversion in human radiation exposures...
p0208 A72-17655

SOLOOKBELENK, B. P.
Low and very low dose influences of ionizing radiations on cells and organisms, including man: A bibliography [PD-209004]...
p0570 A72-33093

SOLOOKBELENK, E. R.
Effects of hypoxia and ischemia on myocardial contraction - Alterations in the time course of force and ischemia-dependent inhomogeneity of contractility...
p0414 A72-34996

SOLOOKBELENK, E. R.
Hypoxia on the effects of pressure on organs...
[AD-70094] p0474 A72-28085

SOLOOKBELENK, B.
Sonic boom effects on sleep - A field experiment on military and civilian populations...
p0547 A72-44370

SOLOOK, S. C.
Cerebral arteriovenous oxygen difference in man native to high altitude...
p0335 A72-30704

Ventilation in man during exercise at high altitude...
p0408 A72-34935

SOLOOK, E. H.
Method for processing muscle biopotentials for input into an electronic computer...
p0078 A72-12006

SOLOOK, C.
Studies of the effect of gibberellic acid on algal growth...
p0049 A72-12975
Acceleration tolerance of man after a lasting exposure to conditions simulating weightlessness...

State of potassium, sodium and calcium ions in subcellular structures of skeletal muscles...

Special features of the spectral sensitivity of the eye in persons with congenital color vision disorders...

Adaptation to hypobaria - Sensitivity of aorticarch tissue to carbon dioxide...

Isolation of a polyvalent bacteriophage for Escherichia coli, Klebsiella pneumoniae, and Aerobacter aerogenes...

The effect of weightlessness on the dividing eggs of Bana pipiens...

Results of intravehicular manned cargo-transfer studies in simulated weightlessness...

Effect of continuous gamma-ray exposure on...

The effect of weightlessness on the dividing eggs of Sana pipiens...

Muscle glycogen utilization during prolonged exercise in man after a lasting exposure to conditions simulating weightlessness...

Increased tolerance of leukaemic mice to arabinosyl cytosine with schedule adjusted to circadian system...

Visual experience as a determinant of the response characteristics of cortical receptive fields in cats...

Exercise electrocardiograms and selective coronary arteriography...

History and clinical findings related to selective coronary angiography...

Cardiocirculatory responses to exercise - Physiologic study by invasive techniques...

Densitytopography - A new method for evaluation of cardiac performance of rest and during exercise...

Cardiovascular responses to glucagon - Physiologic measurement by external recordings...

The first derivative of the carotid displacement pulse...

Urinary excretion values in 2-day food-deprived, unrestrained chimpanzees...

The standard 12-lead scalar electrocardiogram - An assessment of left ventricular performance...

The properties of carboxypeptidase C from orange leaves...

Evaluation of the lap belt, air force shoulder harness-lap belt and air bag plus lap belt restraint systems during impact with anthropomorphic dummies...

Human head linear and angular accelerations during impact...

Portable detector of low amplitude...

Extracted heavy ion beams of the bevatrons...
Pilot management policy and pilot training rates

Experimental human exposure to carbon monoxide

Control of the human forearm during abrupt acceleration

The power law for the perception of rotation by the vestibular system

Effect of physical training on the mechanical and physiological responses of the rat heart to hypoxia.
SOSHKOV, I. B.

SOSHKOV, B. G.

SOB...

SDSKII, L. I.

SOHBITT, J. K.

SOBBABWAB, A. S.

SOLZEB, B. L.

SOLIVAH, B. B.

SOLLIVAH, A. B.

SOLC, J.

SOSIB, S.

SO,

K. S.

SIOBBOCK, D.

STOBBOCK, D.

A study on the compression strength of human vertebrae...

A qualitative investigation of the dynamics of neuron networks...

A study on the compression strength of human vertebrae...

Design of digital low-pass and band pass filters for biomedical data series [CERF-70227-1]...
A re-evaluation of material effects on microbial release from solids.

Effects of aeolian erosion on microbial release from solids.

Survival of bacterial isolates exposed to simulated Jovian trapped radiation belt electrons and solar wind protons

Visual evoked potential changes in hyperbaric environments

A research program on hyperbaric environmental effects upon primates and other animals

Survival of bacterial isolates exposed to simulated Jovian trapped radiation belt electrons and solar wind protons

Visual evoked potential changes in hyperbaric environments

Human endurance of impact angular accelerations

The silent period in man during muscle lengthening

Contrast reversal or distance paradox in the visual field

Hemodynamic correlates of myocardial oxygen consumption during upright exercise

Real time simulation of the Apollo manned mission for NASA flight controller training

Pancreatic phosphokinase responses to hypercapnia

Pharmacological and psychological aspects of the control of emesis

The silent period in man during muscle lengthening

Visual acuity and visibility, experiments 5008 and 5013

The influence of respiration and respiratory sinus bradycardia on aortic rhythm

Influence of respiration and respiratory sinus bradycardia on aortic rhythm

Development of a taxonomy of human performance

Prediction of human performance

Electroweave energy absorption in tissue

Effect exerted on erythropoiesis in fish and rats by water regenerated from human urine

Force and contraction velocity of the middle ear muscles in the cat and the rabbit

A method for spirographic display of functional residual capacity and other lung volumes

Perception of the stability of biological systems

Problems of the stability of biological systems

Effect of water regenerated from human urine on the erythropoiesis of fish and rats

Effect exerted on erythropoiesis in fish and rats by water regenerated from human urine

Survival of bacterial isolates exposed to simulated Jovian trapped radiation belt electrons and solar wind protons

Electrowave energy absorption in tissue

Survival of bacterial isolates exposed to simulated Jovian trapped radiation belt electrons and solar wind protons.
TELSOV, R. V.
Providing radiation flight safety for the Soyuz-9 spaceship crew
p0075 A72-11995

TELENKO, P. E.
Methods of information presentation to operators of automatic control systems and informative value estimates for such methods
p0269 A72-26453

TELFLE, L. E.
Techniques for mapping the spatial distribution of standing pion (minus) mesons in tissue [UCRL-20291]
p0039 A72-10112

TELENKO, J. W.
Electrophysiological correlates of behavioral temporary threshold shifts in chinchilla [AD-740227]
p0483 A72-29076

TELFLESTON, G. H.
Influence of hyperosmolality on left ventricular stiffness.
p0410 A72-34727

TEMPERANTIS, N. A.
Experimental study of the effect of extremely low-frequency electromagnetic fields on warm-blooded animals and microorganisms
p0209 A72-28214

THENNE, S. M.
Suprapontine influences on hypoxic ventilatory control.
p0513 A72-42590

TELEWICH, J. N.
Enhanced degradation of aluminum metal in the presence of selected microorganisms [NASA-CR-127864]
p0522 A72-30068

TEPLAIKOVA, V. L.
Pathologic-anatomic characterization of changes induced by magnetic fields in experimental animals
p0475 A72-35008

TEPLYOV, N. B.
Problems in studying the main properties of the human nervous system
p0181 A72-21839

TEPPER, R. E.
Advanced extravascular protective systems for shuttle, space station, lunar base and Mars missions. [NASA-PAPER 72-227]
p0231 A72-24644

Advanced extravascular protective systems
p0443 A72-27113

THEREKHOV, V. V.
Device for the determination of the stability of stance and the fine adjustments to body equilibrium [AD-741265]
p0565 A72-32129

THEREFZEEY, R. G.
Treatment with medication and flight safety /Survey of the literature/
p0324 A72-28750

Readaptation of the human organism after experiencing states of long-term hypoxia and weightlessness
p0340 A72-30745

THERESCHENKO, A. P.
Determination of water-soluble volatile organic compounds in closed artificial objects
p0328 A72-29326

Determination of copper, iron, cobalt, nickel, and manganese in biological samples of vegetable origin
p0594 A72-43924

Determining microelements in human food rations and excreta using the extraction method
p0708 A72-12004

THERESEKO, Y. P.
Information display method in discrete-production automatic control systems
p0264 A72-19167

THERESEKO, R. L.
Respiratory capacity of white, red, and intermediate muscle - Adaptive response to exercise.
p0175 A72-21083

THEREH, J. S.
Concurrent variation of response bias and sensitivity in an operant-psychophysical test.
p0377 A72-33848

THEREH, K.
Concurrent variation of response bias and sensitivity in an operant-psychophysical test.

TERRY, D. M.
FM/TV telemetry of physiological and force data during military parachuting and during high speed aerial tow.
p0026 A72-12138

THEREKHOV, I. A.
A life-supporting biological system with lower and higher plants
p0365 A72-31826

THEREUOL, C. A.
System analysis approach to the study of spinal mechanisms.
p0098 A72-40590

THERGEN, G.
Effects of combined O-G simulation and hypergravity on eggs of the nematode, Ascaris suum.

THERZ, J. S.
Echograph of human heart rate during exercise [NASA-CR-127656]
p0471 A72-25060

THERZ, N. X.
Effects of simulated sonic booms on tracking performance and autonomic response.
p0109 A72-17868

Sonic boom exposure effects. II.3 - Startle responses.
p0222 A72-23320

Self-estimates of distractibility as related to lapses of attention during perceptual-motor performance.
p0296 A72-28307

The color-word interference test and its relation to performance impairment under auditory distraction
p0408 A72-25132

THERP, G. B.
Effect of chronic exercise on adrenergic function and structure in the rat.
p0070 A72-15219

THETL, G.
The precise simulation of image transfer systems with the aid of an optical convolution obtained with a rotating slit of prescribed form
p0587 A72-44361

THETLEIB, C. J., Jr.
Increment thresholds for two nonidentical flashes [AD-739327]
p0473 A72-28076

THEODOR, L. H.
The detectability of a brief gap in a pulse of light as a function of its temporal location within the pulse.
p0049 A72-41023

THEODOR, J.
Human sleep patterns and psychomotor performance during exposure to moderate concentrations of carbon monoxide [AD-727506]
p0035 A72-10084

THEOLOGUS, G. C.
Development of a taxonomy of human performance: Validation states of ability scales for classifying human tasks [AD-736194]
p0360 A72-23094

THEO, G.
Effect of short periods of hypoxia, hyperoxia, and hypercapnia on brain 02 supply.
p0023 A72-11957

THEOLOGUS, J. R.
Analysis of visual discriminations in helicopter control [AD-730500]
p0140 A72-15087

THERP, P.
The examination in the low-pressure chamber as a special method of aerospace medicine functional diagnostics
p0341 A72-30819
THOLEM, G.

Non-auditory effects of noise
[AD-726926] p0139 W72-15000

THOLEM, J. S.

Effects of acute through life-long hypoxic exposure on exercise pulmonary gas exchange.
[TH-735951] p078 B72-28111

THOLEM, A. P.

Haematological effects of long-term continuous animal exposure to carbon monoxide
[AD-727504] p0024 W72-10080

Analysis of spontaneous activity files by a fully automated analyzer
[AD-727518] p0036 W72-10090

The acute toxicity of brief exposures to HF, R崔, NO2 and HCN singly and in combination with CO (PAA-AM-71-41) p0087 W72-13061

THOLEM, C.

Effects of simulated space vacuum on bacterial cells.
[TH-735952] p0541 A72-43395

The activity of collagenases and the collagen content of the skin during carcinogenesis
[FAS-TR-F-10579] p0562 W72-32105

THOLEM, D. F.

One hand backpack harness
[FAS-CAS-LAB-70102-1] p0359 W72-23085

THOLEM, D. J.

Human dynamic response to minus Gx impact acceleration
[TH-721913] p0256 W72-19131

Theoretical mechanics for expressing impact accelerative response of human beings
[TH-721912] p0257 W72-19132

THOLEM, I.

Vychethemeral rhythms and air trooping - Some preliminary results from 'Exercise Meteor'
[TH-722669] p0276 A72-26696

THOLEM, J. P.

Effect of selective adaptation on detection of simple and compound parafoveal stimuli
[TH-723660] p0426 A72-36607

THOLEM, J. R.

Effects of breathing air and helium-oxygen at several depths on response rates in multiple schedules
[TH-736920] p0474 W72-28082

Differential behavioral effects of breathing air and helium-oxygen at three to ten atmospheres
[TH-741691] p0532 W72-31106

THOLEM, L. J. JR.

Algorithms for selected blood acid-base and blood gas calculations.
[TH-723593] p0422 A72-35973

THOLEM, L. N.

Breaking strength of the human skull vs impact surface curvature
[FR-204239] p0199 W72-17041

THOLEM, R. C.

The measurement of enzyme kinetic parameters of poorly soluble substrates
[TH-736176] p0533 W72-31112

THOLEM, R. E.

Absorbed dose: An unfortunate red herring in radiation protection
[LNL-379] p0354 W72-22102

Radiation and risk: The source data
[LNL-331] p0357 W72-23074

THOLEM, W. G.

Calibration of condenser microphones under increased atmospheric pressures.
[TH-7217808] p0108 A72-17808

THOLEM, B. P.

A study of diver performance with communication aids, phase 2
[AD-726225] p0087 W72-31088

THOLEM, C. D.

Atmosphere revitalization in the space station prototype.
[TH-721915] p0460 A72-39153

THOLEM, D. J.

Reliability and normal variations of computer analysis of Frank electrocardiogram by Smith-Hyde program /1968 version/
[TH-735953] p0221 A72-23274

THOLEM, R. A.

Relationship between system design, technician training and maintenance job performance on two autopilot subsystems
[TH-735954] p0221 A72-23274

THOBSLDBD, T.

Effects of X-ray irradiation on human spermatogenesis
[TH-7215124] p0058 A72-15124

THOBSLDBD, T. B.

Edge and curve detection for visual scene analysis, 2
[AD-733711] p0242 W72-18085

THOBSLDBD, T. L.

Utilization of muscle elasticity in exercise.
[TH-7226615] p0271 A72-26615

THOBST, T. W.

The liminal angle of a plagioepogetic organ under weightlessness
[TH-720059] p0303 A72-20059

THOBST, W. G.

Work capacity and physiologic responses to work
[TN-720059] p0419 A72-35822

THOBST, A. H.

Acquiring a target with an unlagged acceleration control system and with 3 lagged rate control systems.
[TH-735955] p0330 A72-29819

THOBST, L. I.

Possible role of supraspinal formations in the fixation of trace alterations at the segmental apparatus level of the spinal cord
[TH-720059] p0494 A72-40592

THOBST, E. V.

Critic by validation of a tactile G-limit warning device
[TH-732194] p0195 W72-16060

THOBST, M. L.

Relationships among isometric forces measured in aircraft control locations
[TH-740930] p0455 A72-38706

THOBERG, J.

Human force exertions in aircraft control locations
[TH-7230122] p0530 W72-30122

THOBERG, J. P.

Increase in skeletal muscle performance during emotional stress in man
[TH-7234942] p0412 A72-34942

THOBERG, D. F.

Display design for electronic countermeasures application: Scope size and threat density
[AD-731786] p0144 W72-15117

THOBERG, W. A.

Three-color visual response.
[TH-722667] p0215 A72-22671

THOBERG, R.

Effects of I-ray irradiation on human spermatogenesis
[TH-7217630] p0208 W72-17630

THOBERG, J.

Study of the weightlessness and perturbations of the rhythms in the gastrointestinal system of animals and human beings.
[TH-7216043] p0193 W72-16043

THOBERG, R.

Studies on the distensibility characteristics of capacitance and resistance vessels of the isolated rabbit ear.
[TH-7215124] p0068 A72-15124

THOBERG, R.

Edge and curve detection for visual scene analysis, 2
[AD-733711] p0242 W72-18085

THOBERG, R.

Utilization of muscle elasticity in exercise.
[TH-7226615] p0271 A72-26615

THOBERG, T. W.

The liminal angle of a plagioepogetic organ under weightlessness
[TH-720059] p0303 A72-20059

THOBERG, W. G.

Work capacity and physiologic responses to work
[TH-720059] p0419 A72-35822

THOBERG, A. H.

Acquiring a target with an unlagged acceleration control system and with 3 lagged rate control systems.
[TH-735955] p0330 A72-29819

THOBERG, L. I.

Possible role of supraspinal formations in the fixation of trace alterations at the segmental apparatus level of the spinal cord
[TH-720059] p0494 A72-40592

THOBERG, E. V.

Critic by validation of a tactile G-limit warning device
[TH-732194] p0195 W72-16060

THOBERG, M. A.

Effect of AFT during prolonged irradiation
[TH-7214074] p0121 W72-14074

THOBERG, L. P.

Effect of AFT during prolonged irradiation
[TH-7214074] p0121 W72-14074

THOBERG, L. F.

Physical training as a prophylactic measure against the hypodynamic syndrome
[TH-720059] p0543 A72-43920

THOBERG, L. V.

The role of nociceptor interactions in the process of membrane stabilization of Micrococcus lysodeikticus
[TH-720059] p0337 A72-30595

THOBERG, L. F.

The condition of neurons in the autonomous nervous system following exposure to 6 forces
[TH-7219077] p0299 W72-19077

THOBERG, L. P.

Action of ionizing radiation on sensitive strains
[TH-7219077] p0299 W72-19077
of Escherichia coli B
[AD-72-12028]

Tillman, F. E.
Hypothermia and resistance of mice to lethal exposures to high gravitational forces.
[p0082] A72-12028

Tobal, J.
Skin temperatures in warm environments and the control of sweat evaporation.
[p0021] A72-35969

T implied, J.
A study of the transient stage of sweating in man.
[p0015] A72-42747

Timchenko, A. S.
Origen of a cortical aftereffect in response to peripheral stimulation.
[p0148] A72-18865

Timin, Z. N.
Analysis of impulse conduction mechanisms during the reflexatory period on a mathematical model of a myelinated nerve fiber.
[p0338] A72-30597

Timpl, P. S.
Adrenocortical function in hypothalamic deafferented rats maintained at high altitude.
[p0287] A72-27829

Timpl, P. W.
Electrophysiological analysis of limbic-reticular interaction during the orientating reflex.
[p0546] A72-54081

Timchenko, A. V.
Adaptive human operator model in one pursuit tracking problem.
[p0390] A72-24134

Timchenko, N. I.
A study of changes in the brain and eye under the effect of laser rays.
[p0329] A72-29333

Timoshew, B. P.
A universal vestibulocerebral swing.
[p0114] A72-18200

Tinker, J.
The scattergram: A new method for continuous electrocardiographic monitoring.
[p0565] A72-43938

Tipton, C. E.
The effects of exercise training and denervation on the morphology of intrafusal muscle fibers.
[p0064] A72-14895

Tobin, L. E.
Gravitational receptor: Evolution of the structural, cytological, and functional organization.
[p0055] A72-13850

Tobov, L. A.
Functional inequality of erythrocytes in relation to the variability of their content in the blood.
[p0112] A72-18050

Tobolski, E. H.
Toxins, C. A.
Radiological physics characteristics of the extracted heavy ion beams of the betatron.
[p0086] A72-12053

Brief survey of the problems of space radiobiology and radiation safety in space flights.
[p0058] A72-13693

Visual perception of accelerated nitrogen nuclei interacting with the human retina.
[p0047] A72-35376

Light flash phenomena seen by astronauts.
[p0585] A72-43940

Some effects of spaceflight on the floor beetle, Tribolium confusum.
[p0192] A72-16034

Light flash phenomena seen by astronauts.
[p0203] A72-20053

Visual phenomena induced by cosmic rays and accelerated particles.
[p0383] A72-24076

Todesoff, J. C.
Component duration and relative response rates in multiple schedules.
[p0188] A72-21715

Toppan, E.
Effect of neurohomologous phospholipids associated with other substances on experimental intoxication by asymmetrical diselthylyltracine.
[p0501] A72-61195

Topalko, E. I.
Nervous mechanisms of the acoustic stress reaction.
[p0520] A72-63169

Tolbert, J.
A new approach to clinical electrocardiography - The phase plane cardiogram.
[p0003] A72-10148

Tolbert, G. C.
Acoustic fatigue of humans exposed to noise.
[p0001] A72-10050

Tolkacheva, E. N.
The participation of relatively high-threshold afferents in the formation of the dorsal surface potential of the spinal cord.
[p0329] A72-29327

Tolles, G.
Molecular and electronic mechanisms of biological energy conversion processes.
[p0804] A72-29079

Tolstoy, V. M.
Experiment organization and the health condition of test subjects.
[p0543] A72-63913

Tossonova, L.
Effect of immobilization on urinary catecholamin excretion and blood-thyroxine level in rats.
[p0216] A72-22698

Turner, E.
A new approach to BQG simulation.
[p0242] A72-35038

Torid, G. S.
Serial electrocardiographic changes in myocardial infarction.
[p0275] A72-22078

Torneuson, G. A.
Isolation of carbohydrate-metabolizing, extremely halophilic bacteria.
[p0370] A72-34006

Torrerard, J. D.
Preliminary design study of a regenerative life support system information management and display system.
[p0529] A72-30113

Tormod, H.
Effects of ischemia and reperfusion on regional myocardial performance of the dog.
[p0075] A72-15719

Tombr, W. R.
On-line measurement of microvascular dimensions by television microscopy.
[p0072] A72-26621

Tobin, W. H.
Perceptual style and detection of motion in depth.
[p0081] A72-30965

Topilsky, H.
Anatomy of the coronary circulation at high altitude.
The effect of weightlessness on the dividing eggs of Rana pipiens.

TBBEG4B, J. I.

TBEHOB, J. I.

TBEDICI, T. J.

TBAYHOB, J. E.

TEAYBIKOVA, B. P.

TBAPEZHIKOV, V. 4.

TOUCHSTOHE, B. B.

TOT4, J. G.

TOBBEY, P. F.

TOHSE, E. J.

TORBESI1, G.

TOBOPTSEV, I. V.

TOBOPTSEV, I. V.

The effect of weightlessness on the dividing eggs of Rana pipiens.

TBBEG4B, J. I.

TBEHOB, J. I.

TBEDICI, T. J.

TBAYHOB, J. E.

TEAYBIKOVA, B. P.

TBAPEZHIKOV, V. 4.

TOUCHSTOHE, B. B.

TOT4, J. G.

TOBBEY, P. F.

TOHSE, E. J.

TORBESI1, G.

TOBOPTSEV, I. V.

TOBOPTSEV, I. V.

The effect of weightlessness on the dividing eggs of Rana pipiens.

TBBEG4B, J. I.

TBEHOB, J. I.

TBEDICI, T. J.

TBAYHOB, J. E.

TEAYBIKOVA, B. P.

TBAPEZHIKOV, V. 4.

TOUCHSTOHE, B. B.

TOT4, J. G.

TOBBEY, P. F.

TOHSE, E. J.

TORBESI1, G.

TOBOPTSEV, I. V.

TOBOPTSEV, I. V.

The effect of weightlessness on the dividing eggs of Rana pipiens.

TBBEG4B, J. I.

TBEHOB, J. I.

TBEDICI, T. J.

TBAYHOB, J. E.

TEAYBIKOVA, B. P.

TBAPEZHIKOV, V. 4.

TOUCHSTOHE, B. B.

TOT4, J. G.

TOBBEY, P. F.

TOHSE, E. J.

TORBESI1, G.

TOBOPTSEV, I. V.

TOBOPTSEV, I. V.

The effect of weightlessness on the dividing eggs of Rana pipiens.

TBBEG4B, J. I.

TBEHOB, J. I.

TBEDICI, T. J.

TBAYHOB, J. E.

TEAYBIKOVA, B. P.

TBAPEZHIKOV, V. 4.

TOUCHSTOHE, B. B.

TOT4, J. G.

TOBBEY, P. F.

TOHSE, E. J.

TORBESI1, G.

TOBOPTSEV, I. V.

TOBOPTSEV, I. V.

The effect of weightlessness on the dividing eggs of Rana pipiens.

TBBEG4B, J. I.

TBEHOB, J. I.

TBEDICI, T. J.

TBAYHOB, J. E.

TEAYBIKOVA, B. P.

TBAPEZHIKOV, V. 4.

TOUCHSTOHE, B. B.

TOT4, J. G.

TOBBEY, P. F.

TOHSE, E. J.

TORBESI1, G.

TOBOPTSEV, I. V.

TOBOPTSEV, I. V.

The effect of weightlessness on the dividing eggs of Rana pipiens.

TBBEG4B, J. I.

TBEHOB, J. I.

TBEDICI, T. J.

TBAYHOB, J. E.

TEAYBIKOVA, B. P.

TBAPEZHIKOV, V. 4.

TOUCHSTOHE, B. B.

TOT4, J. G.

TOBBEY, P. F.

TOHSE, E. J.

TORBESI1, G.

TOBOPTSEV, I. V.

TOBOPTSEV, I. V.

The effect of weightlessness on the dividing eggs of Rana pipiens.
B-171

V. Free 17-hydroxycorticosteroid levels in parotid fluid as indicators of physiologic strain in hypothermic stress.

A radiographic method for demonstrating decomposition sickness in heifers (AD-728396).

Ultrasound dosage for experimental use on human tissues (AD-731075).

Interhemispheric effects on choice reaction times to one-, two-, and three-letter displays.

Abiogenic formation of porphin, chlorin, and bacteriochlorin.

A radiographic method for demonstrating sinusitis induced in Tradescantia by small doses of X-rays and neutrons - Analysis of dose-response curves.

Changes in heart rate during intense electrocardiographic monitoring.

Development of the inner ear in albino rat embryos subjected to transverse accelerations of plus or minus 3 Gy.

Relation between alpha-hydroxybutyric dehydrogenase of the red blood cells and white blood cells.

Relation between lactic dehydrogenase and hemoglobin.

PARIS: Plasmatic and alimentary lipids among atherosclerotic subjects.

The role of perilymph in the response of the semicircular canals to angular accelerations.

The development of equipment for psychomotor assessment.

The effect of helium-oxygen atmosphere on the developing chick embryo and subsequent growth of chicks.

The role of perilymph in the response of the semicircular canals to angular acceleration.
Effects of externally imposed mechanical resistance on breathing during gas exercise.

The brain function as a hologram.

Influence of mediation and the presence of an observer on the number of agreements reached in negotiation.

A selective review of listening research.

Portable breathing apparatus for coal mines.

The terminal decontamination of rooms. Evaluation of efficacity check.

The magnetic field, infection and immunity.

Reactivity of an organism in long-duration space flights.

Cryolysis of ribonuclease preliminarily irradiated with UV.

Cutaneous reactions to large doses of radioactivity.

The development of the spleen in rats during a lasting hypodynamia and thyrocalcitonin administration.
Elaboration of steady changes in the firing rate of cortical neuron populations

Responses of bulbar respiratory neurons to stimulations of the receptor zones of the afferent tracts

Pathogenesis of weightlessness syndrome

Status of calcium metabolism in the calcified tissues of rats during prolonged hypodynamia and thyrocalcitonin administration

Effect of psychotropic substances on man's tolerance to accelerations

Triglyceridemia and relative weight

Effect of psychotropic substances on man's tolerance to accelerations

Sleep - Neuropsychophysiological, vegetative, psychological, chemical, and pathophysiological aspects

Ventilation in man at onset of work employing different standardized starting orders

Synaptic organisation of neuronal background activity in the visual cortex

Device for the determination of the stability of stance and the fine adjustments to body equilibrium

Influence of X-ray irradiation in 25- and 250-r doses on the transplant immunity in mice differing by weak and strong histocompatibility systems

Psychophysiological observations of polar expedition members in Antarctica

The state of the blood system of polar expedition members during wintering at Molodezh Station

Auto- and cross-correlational analysis of neuron firing in a stationary target

Psychophysiological observations of polar expedition members in Antarctica

The state of the blood system of polar expedition members during wintering at Molodezh Station

The value of the computer as a screening tool for routine electrocardiograms

Evaluation of impact protection of crash helmets

New shifts accessory phase induced modulation enhancement of sinusoidally flickering lights

Hematological effects of long-term continuous animal exposure to carbon monoxide

Toxic Hazards Research Unit

Effect of 90-day continuous exposure to methylisobutylketone on dogs, monkeys and rats

Continuous animal exposure to dichloromethane

Peripheral venous scintillation angiocardiography

Photopic spectral curves of relative luminous efficacy in cases of congenital deficiencies of color vision
movement of a machine unit with elastic links p0572 72-33110
VIALLE, A. J. Perceptibility of military targets with passive infrared systems as a function of thermal and geometric resolution. Part I: Definition of problem and description of equipment [PHL-1971-34] p0386 72-24091
VIALLOV, A. N. Clinical hygienic and experimental data on magnetic field effects under working conditions p0415 72-35012
VICARE, R. E. Effect of target-background luminance contrast on binocular depth discrimination at photopic levels of illumination. p0411 72-34079
VICKERY, J. C. The scattergram - A new method for continuous electrocardiographic monitoring. p0565 72-43938
VICKORY, A. C. Comparison and evaluation of printed programs for aircraft recognition [AD-73952] p0480 72-26122
VIEHBERG, G. D. Certain glycosidases of the human placenta p0029 72-12294
VIEHRE, P. Plasma renin activity in supine muscular exercise. p0069 72-15216
VIL-VILAM, L. F. Effect of an atmosphere with a high carbon dioxide content on human tolerance to acute hypoxia and ascorbic acid. p0204 72-17071
VILJANEN, A. T. The voluntary regulation of breathing in man. p0288 72-27843
VILLABOEL, F. Effect of oxygen on the uptake, metabolism and release of potassium and physical exercise p0392 72-22106
VINCENT, G. M. QRS-wave detector evaluation. p0265 72-25499
VIRNY, J. F. The effects of exhaustive exercise on rats at various times following blast exposure [AD-731395] p0469 72-28052
VYATITSKAYA, E. S. Determination of the nonuniformity of pulmonary ventilation during a single calm expiration p0031 72-12155
VOLVE, K. L. Human Operator dynamics for sural compensatory tracking. p0507 72-41950
Human Operator dynamics for audio compensatory tracking p0435 72-26078
VYIKOV, I. A. Gravitation rector: Evolution of the structural, cytochemical, and functional organization p0055 72-13850
VYKHORADOV, S. A. Experimental study of the effect of extremely-low-frequency electromagnetic fields on warm-blooded animals and microorganisms p0289 72-28214
VYKHORADAV, V. I. Experimental verification of the ability of quail embryos to assimilate atmospheric nitrogen [NASA-TT-P-14273] p0382 72-24069
VYKHORADOV, L. A. Effects of physical training and electric muscle stimulation on the metabolism p0543 72-43921
VYKHORADOVA, O. S. Comparator function of the hippocampus p0187 72-22191
VYKHORADOVA, T. S. Contribution of blood stream turbulence to the production of cardiac murmur p0106 72-17676

VIBOGBADO, T. S. Indices of acid-base equilibrium under conditions of intense muscular exertion p0113 72-18062
Content of 11-oxycorticosteroids in the blood serum of untrained female students after 3-min maximum-stress exercise p0217 72-22878
Indices of aerobic working capacity in runners p0225 72-23596
VYNKHVE, A. A. A study of changes in the brain and eyes under the effect of laser rays p0329 72-29333
Laser beam effect in the rabbit liver p0499 72-40991

Biological instrumentation for the Viking 1975 mission to Mars. p0541 72-43396

VYNKHVE, W. Light scattering experiment - The Viking Mars Lander. p0230 72-26387

VYNSOLIS, H. G. Medical aspects of grounding and noneffectiveness in Helicen Air Force pilots p0125 72-14099

VYNSRATAR, S. H. Selected bibliography on the modeling and control of plant processes [NASA-Cr-127426] p0439 72-27208

VYNSRATAR, S. H. Catalytic oxidation of certain gaseous products of pyrolysis of human wastes p0101 72-16646
Catalytic oxidation of some gaseous products of pyrolysis of wastes of human vital functions p0123 72-14084

VYNTE, H. Potassium and physical exercise [NASA-TP-16124] p0196 72-17031

VYNTE, H. Possible solar activity factors influencing processes in the biosphere p0289 72-28211
Experimental study of the effect of extremely-low-frequency electromagnetic fields on warm-blooded animals and microorganisms p0289 72-28214

VYUSOV, H. A. Sleep - Neuropsychological, vegetative, psychological, chemical, and pathophysiological aspects p0213 72-22223

WADEN, H. J. The uptake, metabolism and release of C/14/-taurine by rat retina in vitro. p0411 72-34881

WOGEL, J. A. Effect of carbon monoxide on oxygen transport during exercise. p0172 72-20893

WOGEL, J. M. Peripheral venous scintillation angiocardiography in determination of left ventricular volume in man. p0017 72-11475
Comparative study of two direct methods of bone mineral measurement. p0410 72-34552

WOGEL, K. Water-soluble filters and their use in bacterial counts [NASA-TP-14500] p0562 72-32111

WOGEL, L. Bone demineralization [ECRT-8006] p0119 72-14056
The extraction of sleep information from heart rate data: Analysis of the sleep cycle. p0314 72-21061

WOOD, L. Mechanical impedance of supine humans under sustained acceleration. p0292 72-28220

PERSONAL AUTHOR INDEX

VIBOGBADO, T. S. Indices of acid-base equilibrium under conditions of intense muscular exertion p0113 72-18062

VYKHBE, A. A. A study of changes in the brain and eyes under the effect of laser rays p0329 72-29333

VYNSOLIS, H. G. Medical aspects of grounding and noneffectiveness in Helicen Air Force pilots p0125 72-14099

VYNSRATAR, S. H. Selected bibliography on the modeling and control of plant processes [NASA-Cr-127426] p0439 72-27208

VYNSRATAR, S. H. Catalytic oxidation of certain gaseous products of pyrolysis of human wastes p0101 72-16646
Catalytic oxidation of some gaseous products of pyrolysis of wastes of human vital functions p0123 72-14084

VYNTE, H. Potassium and physical exercise [NASA-TP-16124] p0196 72-17031

VYNTE, H. Possible solar activity factors influencing processes in the biosphere p0289 72-28211
Experimental study of the effect of extremely-low-frequency electromagnetic fields on warm-blooded animals and microorganisms p0289 72-28214

VYUSOV, H. A. Sleep - Neuropsychological, vegetative, psychological, chemical, and pathophysiological aspects p0213 72-22223

WADEN, H. J. The uptake, metabolism and release of C/14/-taurine by rat retina in vitro. p0411 72-34881

WOGEL, J. A. Effect of carbon monoxide on oxygen transport during exercise. p0172 72-20893

WOGEL, J. M. Peripheral venous scintillation angiocardiography in determination of left ventricular volume in man. p0017 72-11475
Comparative study of two direct methods of bone mineral measurement. p0410 72-34552

WOGEL, K. Water-soluble filters and their use in bacterial counts [NASA-TP-14500] p0562 72-32111

WOGEL, L. Bone demineralization [ECRT-8006] p0119 72-14056
The extraction of sleep information from heart rate data: Analysis of the sleep cycle. p0314 72-21061

WOOD, L. Mechanical impedance of supine humans under sustained acceleration. p0292 72-28220
Respiratory and circulatory response to added air
Effect of hyperoxia on the erythropoietic
Formation and aggregative properties of the red cell

Microcirculatory and light transmission of blood.

Adjustments of visual tilt as a function of age.

Experimental study of disorientation in manual and mental tasks at 66 feet.

Object code storage in the static portion of a short-time memory.

Biological effects of space flight on the lymocytic bacteria E. coli K-12 in man and on human cells in culture.

Development of a defensive conditioned reflex to a light stimulus after previous visual deprivation.

Cardiac electric activity during various levels of decompression of the lower body.

Study of hemodynamics during the action of decompression and accelerations.

Use of automatic volume control in systems for registering physiological functions.

Cardiac electric activity accompanying different degrees of decompression of the lower half of the body.

Investigation of hemodynamics with exposure to decompression and accelerations.

Rescue of flight vehicle crews after emergency landings on land and water.

Rescue of spacecraft crews after their forced landing on land or at sea.

Calcium metabolic conditions in calcified tissues of rats during a lasting hypophysectomy and thyrocalcitonin administration.

Status of calcium metabolism in the calcified tissues of rats during prolonged hypophysectomy and thyrocalcitonin administration.

Experimental study of the effect of extremely-low-frequency electromagnetic fields on warm-blooded animals and microorganisms.

Pathology of the cardiovascular system in terms of the theory of cortico-visceral interrelations.

Effect of hyperoxia on the erythropoietic properties of blood plasma flowing from the kidney.
VOS, J. J.

New data on the relationship between electrogaphic effective and trace processes and short-time memory p0073 [AD-72-15581

Some data on the interrelations of conscious and unconscious reactions p0111 [AD-72-17939

Correlation between electrogaphic trace phenomena in the brain and immediate memory p0545 [AD-72-44076

VOS, J. J.

An analytical description of the line element in the some-fluctuation model of colour vision. I, II. p0426 [AD-72-36606

VOS, G. P.

Some data on the relationship between electrographic effective and trace processes and short-time memory p0227 [AD-72-23736

VOSLINS, S.

Operational mechanisms of a parallel type recognition device [AD-72-77170]

VOSKRESENSKII, A. D.

Experimental organization and the health condition of test subjects p0543 [AD-72-33913

VOSIUS, G.

The functional organization of object directed human intended-movement and the forming of a mathematical model. p0504 [AD-72-41422

VOUTKIDS, K. C.

Application of the Gabor-Belson theory in electrocardiography. p0273 [AD-72-26629

VREDEBREGENGT, J.


VIAGNET, P.

Physiology: The effect of thyrocalcitonine on the renal excretion of sodium and chlorides in normal man [NASA-TT-F-14356]

VUKOVIĆ, M.

A contribution to the mathematical theory of the artificial bipped model. p0315 [AD-72-18073

VULCAN, A. P.

Elastic deformation characteristics of the spine. p0002 [AD-72-10111

VULSTEK, K.

Trydil: A new approach to criterion development in the replacement-air group /BAG/. p0291 [AD-72-26262

WAGG, M. L.

Team size and decision rule in the performance of simulated monitoring teams. p0099 [AD-72-41016

The prediction of individual differences in monitoring performance [AD-73074]

Monitoring performance across sense modes: An individual differences approach p0131 [AD-72-18140

WALTER, E. P.

Elastic deformation characteristics of the spine. p0554 [AD-72-45128

WALTER, E. H.

Experimental test of lightweight underweare of the winter flight clothing system. Thermal protection [AD-73-14299]

WARSHAW, M. L.

Cardiovascular responses in pressure breathing. p0267 [AD-72-26017

WASHER, T. Y.

The priomordial sequence, ribosomes, and the genetic code. p0061 [AD-72-14775

WASHER, W. A.

The influence of Coronil stimulation in different groups of personnel of the Royal Air Force [T9-1971-19]. p0385 [AD-72-24090

WECHSEL, K.

Relaxation phenomena in the biological carbon cycle under conditions of variable atmospheric CO2-content. p0412 [AD-72-34897

WECHSEL, C.

Topography and pigeon orientation. p0397 [AD-72-25077

WECHSEL, J. T.

Studies of the influence of theophylline on the vasodilation action of different medications on the cerebral and coronary circulation of man p0426 [AD-72-36799

WEBSTER, J. V.

Zero-gravity testing of a waste management system. p0365 [AD-72-31825

WEBSTER, P. D.

Diffusing capacity and anatomic dead space for carbon-18 monoxide. p0069 [AD-72-15215

WEHRLE, J.

Effect of diffusion impairment on O2 and CO2 time course in pulmonary capillaries. p0421 [AD-72-35967

WELCH, W. L.

Myocardial lipid and carbohydrate metabolism in fasting men during prolonged exercise. p0408 [AD-72-34347

WELD, J. T.

Efect of nicotinic acid on myocardial metabolism. p0428 [AD-72-36799

WELD, L. P.

Effects of diffusion impairment on O2 and CO2 time course in pulmonary capillaries. p0421 [AD-72-35967

WELD, G.

Mathematical methods for improving the significance of scintigrams. p0423 [AD-72-36425

WELD, C.

The navigation of homing pigeons: Do they use sun Navigation? p0397 [AD-72-25077

WELD, R. H.

A mathematical model of optical illusions and figural aftereffects [AD-72-1411]. p0128 [AD-72-14120

WELD, J. N.

Geliotor coordination following REM and non-REM sleep periods. p0048 [AD-72-35462

WELD, J. T.

Natural visual capture in bilateral length comparisons. p0229 [AD-72-24270

WELD, L.

Pneumograph recording using a cotton-wick probe. p0272 [AD-72-26679

WELDINSHAW, C.

Origin and development of plasma membrane derived invaginations in Vinca rosea l. p0095 [AD-72-15810

WELDINSHAW, C. H.

Apollo 12 lunar material - Effects on lipid levels of tobacco tissue cultures. p0159 [AD-72-19850

Apollo 12 lunar material - Effects on plant pigments. p0284 [AD-72-27626

B-176
Determining the detectability range of camouflaged targets. p0436 A72-26082

The colour vision requirements of civil aircraft pilots. [FAYIKAION-NID-9000-29] p0081 A72-12020

The effect of secondary tasks on pilot describing functions in a compensatory tracking task. (UTIAS-178) p0530 A72-30118

Monitoring of molecular binding on the stopping power of alpha particles in hydrocarbons. p0430 A72-37193

Tektite 2 habitat research program. [NASA-CR-127719] p0137 A72-15069

New cancer therapy treatment techniques using space dosimetric concepts. p0553 A72-45112

Effects of injected histamine on intracranial pressure and systemic blood pressure. [AD-726583] p0037 A72-10095

On the birefringence of rods and cones. p0012 A72-10862


Design of a specialized computer for on-line monitoring of cardiac stroke volume. [NASA-T8-D558] p0310 A72-20108

Human calorimetry with a water-cooled garment. p0265 A72-25499


Patterns of sleep behaviour. p0274 A72-26679


The oesocardiogram: Techniques - General considerations. p0168 A72-20608

Aspects of visual and acoustic imagery. p0371 A72-32764

Noise rating methods for predicting speech communication effectiveness. p0161 A72-20167

Determining the detectability range of camouflaged targets. p0419 A72-35590

Biological cycling of atmospheric trace gases. [NASA-CR-126663] p0381 A72-24057

Lactate dehydrogenase from an extremely thermophilic bacteria. p0549 A72-44550

Apollo 12 lunar material - Effects on lipid levels of tobacco tissue cultures. p0159 A72-19850

Apollo 12 lunar material - Effects on plant pigments. p0284 A72-27626

Aliphatic hydrocarbons of the fungi. p0331 A72-29834

Desynchronization of body temperature and performance circadian rhythms as a result of out-going and home-going transmeridian flights. (ARNL-T8-71-89) p0162 A72-20716

Psychological and physiological changes caused by desynchronization following transzonal air travel. p0276 A72-26694

An indirect method for evaluation of left ventricular function in acute myocardial infarction. p0646 A72-39462


Visual orientation performances of desert ants (Cataglyphis bicolor) toward astrogeonetsic directions and horizon landmarks. p0390 A72-25088

Unresponsiveness of pial precapillary vessels to catecholamines and sympathetic nerve stimulation. p0307 A72-41938

Visualization of extracellular lining layer of lung alveoli by freeze-etching. p0103 A72-16787

Lung changes after beryllium inhalation - Ultrastructural and morphometric study. p0170 A72-20686

Morphometric evaluation of changes in lung structure due to high altitude. p0512 A72-42585

Auditory adaptation and its relationship to a model for loudness. p0182 A72-21897

To develop a spectral analyzer for physiological and medical use. p0084 A72-12045

The incidence and mortality of intraventricular conduction defects in acute myocardial infarction. p0221 A72-23273

Wavelength effect on visual latency. p0335 A72-30267

The Poggendorff illusion - Amputations, rotations, and other perturbations. p0008 A72-10717


Modifications to X-ray motion monitor. Low dose, wide-variable field television radiograph for biodynamic analysis. (AD-748483) p0573 A72-33122

Parametric adjustment to a shifting target alternating with saccludes to a stationary reference point. p0501 A72-81250

Diffusing capacity of the lung for CO in man during acute acclimation to 4,246 ft. p0231 A72-24076

Lack of effect of high altitude on hemoglobin-oxygen affinity. p0491 A72-60430

Study of the techniques feasible for food synthesis aboard a spacecraft. [NASA-CR-126397] p0359 A72-23086

Annual variations of diurnal rhythms in man. p0519 A72-82977
missions of sixty or more days duration [p0051 N72-12743]

WEEDON, G. D.
Effects of weightlessness on mineral metabolism - Experience to date. [p0375 N72-33552]
Calcium and nitrogen balance, experiment 5007 [FD-17007]
[p0119 N72-194057]

WEEDON, G. D.
Comparative sensitivity of four methods for measuring changes in respiratory flow resistance in man. [p0070 N72-15222]

WEIDTOS, J. T.
Biological aspects of skin irradiation. Part 3: New epidermal thickness measurements and their importance [FD/6-1936-PT-3]
[p0190 N72-16012]

WEIN, A.
The oxidation of pyruvic acid in yeast [FAA-170-14031]
[p0033 N72-10068]

WEINHAN, E.
A scientist in the cockpit - The case history and analysis of a UFO sighting. [p0216 N72-22646]

WICK, R. L.
The effects of alcohol on pilot performance during instrument flight [FAA-AW-72-12]
[p0386 N72-24094]

WIDICOBEH, J. G.
Patterns of spontaneous and reflexly-induced activity in paraseal and intercostal motoneurons. [p0505 N72-41162]

WIER, H.
The state of water in muscle tissue as determined by proton nuclear magnetic resonance. [p0551 N72-44774]

WICK, R. L.
Escape conditioning and low-frequency whole-body vibration - The effects of frequency, amplitude, and controls for noise and activation. [p0378 N72-33868]

WICK, S. S.
Escape conditioning and low-frequency whole-body vibration - The effects of frequency, amplitude, and controls for noise and activation. [p0378 N72-33868]

WILSHREF, R.
Influence of hyperosmolality on left ventricular stiffness. [p0110 N72-34577]

WILK, J. A.
A Review: Some biological effects of high LET radiations [p0208 N72-17629]

WILKE, T. L.
Effect of sustained muscular contraction on tolerance to G z acceleration. [AD-739063]
[p0171 N72-20857]

WILKE, J. L.
Work capacity and physiologic responses to work - Men born in 1913. [p0419 N72-35522]

WILKE, W.
Spacecraft contamination problems [p0541 N72-93619]

WILKE, R. E.
Sonic boom effect on fish: Observations [NASA-TM-X-26163]
[p0382 N72-24065]

WILLBER, P. E.
Development of data acquisition facilities and data analysis services applicable to experimental hyperbaric physiology [AD-734053]
[p0565 N72-32129]

WILKINSON, A.
Apparent movement and change in perceived location of a stimulus produced by a change in accommodative vergence. [p0500 N72-41024]

WILKINSON, R. C.
The heavy particle hazard, what physical data are needed? [p0211 N72-17732]

WILKINSON, R. T.
Sleep deprivation - Eight questions. [p0274 N72-26678]
A study of four days partial sleep deprivation. [p0275 N72-26683]

WILKS, S. S.
Growth responses of Paramaecium caudatum to hyperbaric environments - Induction of cellular tolerance to hyperbaric oxygen pressures. [p0295 N72-28299]
Effect of bedrest on thermoregulation.

Motivation, cognition, and sleep work factors.

The influence of molecular binding on the stopping power of alpha particles in hydrocarbons.

Hematologic responses to hypobaric hyperoxia.

Biological system transfer-function extraction.

Pattern recognition: Perception of binary sequences.

Hematologic responses to hypobaric hyperoxia.

Electrocardiogram and vectorcardiogram in...
WINFREE, A. T.

Corkcrews and singularities in fruitflies - 
Resettling behavior of the circadian escliosis rhythm.

WINHEART, J.

Comparison of LGH and optic tract
flight-rated liquid-cooled garment for use.

Physiological response in pilot/back-seat man.

Energy cost of pushing loaded handcart.

WINEX, F. B.

Liquid waste feed system.

WINHEART, C.

Self-paced ergometer performance - Effects of
pedal resistance, motivational contingency and
inspired oxygen concentration.

WINER, H. E.

Energy cost of pushing loaded handcart.

WINTHER, D. A.

Computer determination of left ventricular volume
using videodensitometry.

WINTELY, W. H.

Physiological response in pilot/back-seat man
during aerial combat maneuvers in F-16 aircraft.

A flight-rated liquid-cooled garment for use
within a full-pressure suit.

WINTERBURN, D. A.

Microbial burden prediction model for unmanned
planetary spacecraft.

WINHORN, H. R.

Comparison of IGR and optic tract
intensity-response functions.

WINWOOD, R.

Stimulus complexity and the EGG - Differential
effects of the number and the variety of display
elements.

WINTH, J.

Problems of functional diagnostics of the heart
and circulation system.

WINE, F.

Left ventricular dynamics during handgrip.

WISE, G.

The impedance of stainless-steel electrodes.

WIST, L. R.

The neuronal basis of binocular vision.

WITT, F. F.

Evaluation of cardiopulmonary function and work
performance in man during caloric restriction.

WIXT, S.

Development of a tape transport bacterial
detection system.

WITZ, S. W.

An automated instrument for monitoring the quality
of recovered water.

WITZEL, R. F.

Role of eye movements in the perception of
apparent motion.

WITTMANN, S.

Digital image processing of the diagnostic
echocardiogram.

WLODARSKI, E.

Delayed reactions in humans
(AR-126-1696-1).

WOLFE, C.

Anthropotechnical aspects of taxiing/pilot/ and
taxi-guidance/flight manager/ of aircraft in the
landing area.

WORS, C. R.

The emergence of genetic organization.
ventricle.


Effects plus Gy acceleration on blood oxygen saturation and pleural pressure relationships in dogs' breathing first air, then liquid fluorocarbon in a whole body immersion respirator. [NASA-CR-172682] p0038 A72-27078

WOOD, R. E.


WOOD, W. C.

An experimental study of the velocity distribution and transition to turbulence in the nasa. [NASA-CR-172682] p0231 A72-24468

WOOCCOCK, B. P.


WOODWARD, R. J., JR.


WOODTON, F. C.


WOOLER, B. C.


WOOTSELL, C. M.

Comparative studies on cortical representation of vision. [NASA-CR-172682] p0108 A72-17722

WOOTEN, R. R.

Photonic and acoustonic contributions to the human visually evoked cortical potential. [NASA-CR-172682] p0548 A72-44380

WOOTER, P. T.

Advances in medicine from aerospace research. [NASA-CR-172682] p0114 A72-18616

Advances in medicine from aerospace research [NASA-CR-172682] p0078 A72-12011


Advances in medicine from aerospace research. [NASA-CR-172682] p0356 A72-23069

WOODBABY, B. B.


WOBLEY, D.

Nychthemeral rhythms and air trooping - Some preliminary results from 'Exercise Medex.' [NASA-CR-172682] p0276 A72-26696

WORKSYNOVIC-JALOVIC, E.


WORTE, E. C.

Tektite 2 habitation research program. [NASA-CR-172682] p0137 A72-15069

WREN, G. N.

Snr protection provided by several standard air force devices. [NASA-CR-172682] p0195 A72-16058

WEIGHT, J. P.

Thermal control concept evaluation for a ten-year life modular space station. [NASA-PAPER 72-EBAY-301] p0459 A72-39147

WEIGHT, W. B.

Differential effects of refractive errors and receptive field organization of central and peripheral ganglion cells. [NASA-CR-172682] p0451 A72-37826

WHEELE, L.

Apparatus for programmed oral administration of drugs to large primates in altered environments. [NASA-CR-172682] p0045 A72-25058

WYHNER, B. A.

Calculation of cumulative pulmonary oxygen toxicity. [J.4-742668] p0552 A72-44908

WYERMAN, J. E.


WEHN, C. H.


WRIGHT, B. J.

Brain serotonin content - Increase following ingestion of carbohydrate diet. [NASA-CR-172682] p0032 A72-12805

WYERS, T.

Regeneration of oxygen from carbon dioxide and water. [NASA-CR-172682] p0554 A72-45183

Catalyzed sodium chlorate candles. [NASA-CR-172682] p0145 A72-27131

YAVARPELLY, C. R.


YAWAE, S.

Splanchnic vasocirculation in hypothermic man - Role of falling blood pressure. [NASA-CR-172682] p0070 A72-15217


YABAGOCHI, Y.


YABAGA, B. S.


YABAGA, Y.

Growth and recovery of temporary threshold shift at 4 kHz due to a steady state noise and impulse noise.

Role of mitochondrial biogenesis in adaptation of the organism to altitude hypoxia (NASA-TI-P-14524)

Some effects of spaceflight on the floor beetle, Tribolium confusum (EPT-P-10539)

Dynamics of dissolution of gas bubbles in pockets in tissues.

Respiratory protective device design using control system techniques.

Studies of carbon monoxide hemoglobin in blood.

Histopathology of argon laser-induced retinal lesions (AD-728113)

Histopathology of argon laser-induced retinal lesions (NASA-CR-171830)

Psychosocial reconstruction inventory - A multidisciplinary instrument in aircraft accident investigation.

Quantitative stress vectorcardiography.

Stimulus control in pigeons after extended discriminative training (NASA-CR-127772)

Reliability and normal variations of computer analysis of Frank electrocardiogram by Smith-Hyde program /1968 version/.

Operational mechanism of a parallel type recognition device (AD-727170)

Investigation of the dynamics of a manipulator's working organ

An electronic model of visual receptive fields.

Development of a solid-state impedance plethysmograph for research in a space environment (AD-780886)

Induction of ventricular arrhythmias by elevation of arterial free fatty acids in experimental myocardial infarction.

Experimental investigation of an astronaut maneuvering scheme.

Experimental investigation of an astronaut maneuvering scheme.

Some methods for transporting liquid wastes of the missions and sanitary waste during space flights.

The utilization of the achievements of space medicine in the care of public health (NASA-TI-P-14048)

The effects of exhaustive exercise on rats at various times following blast exposure (AD-731395)

The problem of artificial gravitation from the viewpoint of experimental physiology.

The facilitating effects of mental rehearsal in the acquisition of rotary pursuit tracking.

The effects of exhaustive exercise on rats at various times following blast exposure.

The problem of artificial gravitation from the viewpoint of experimental physiology.

The facilitating effects of mental rehearsal in the acquisition of rotary pursuit tracking.

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The problem of artificial gravitation from the viewpoint of experimental physiology.

The facilitating effects of mental rehearsal in the acquisition of rotary pursuit tracking.

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The problem of artificial gravitation from the viewpoint of experimental physiology.

The facilitating effects of mental rehearsal in the acquisition of rotary pursuit tracking.

The effects of exhaustive exercise on rats at various times following blast exposure.

The problem of artificial gravitation from the viewpoint of experimental physiology.

The facilitating effects of mental rehearsal in the acquisition of rotary pursuit tracking.

The effects of exhaustive exercise on rats at various times following blast exposure.

The problem of artificial gravitation from the viewpoint of experimental physiology.

The facilitating effects of mental rehearsal in the acquisition of rotary pursuit tracking.
PERSONAL AUTHOR INDEX

ZEIDIPARD, B.
Biodurability of indirect CO2/ P1ick method for calculation of cardiac output.

ZEISSER, A. E.
Physiological effects of backscatter of high intensity light pulses on the human pilot.

ZELENSON, B. B.
Significance of the reversible aggregation of erythrocytes with respect to the variation of the electrical conductivity of the blood during its motion.

ZELLER, A. F.
Human error in the seventies.

ZELLER, S. S.
A portable life support system for use in mines.

ZEMER, B. J.
Bibliography of research reports and publications issued by the biosciences and biodynamics division, 1963-1970 [AD-729859].

ZEBRICK, A.
Phonocardiogram analysis and electronic computers.

ZEIDIFABD, E.
The Gemini program biomedical sciences experiments summary [NASA-TN-X-58074].

ZELAC, B. E.
Influence of intracellular convection on the oxygen release by human erythrocytes.

ZEBET, B. B.
The effect of transection of cortico-subcortical connections upon the spontaneous activity of the lateral geniculate body and visual cortex neurons.

ZELIKSOH, B.
Application of a computer-based model for EEG analysis.

ZENKINSKY, V. I.
Providing radiation flight safety for the Soyuz-9 spaceship crew.

ZAVALOV, V. D.
The principles of an active operator and the functional distribution between man and machine [JPHS-56297].

ZAVET, E. M.
Clinical aspects of nocisizing radiation.

ZAVETSKII, G. N.
Psychological principles of active rest during long space flights.

ZAVETSKII, G. N.
Psychological principles of active rest during prolonged space flights.

ZAVEKO, V. E.
Jumping on the moon - Power output at different gravity values.

ZAVKHOV, E. G.
Influence of intracellular convection on the oxygen release by human erythrocytes.

ZAYCHENKO, A. Y.
Functional state of the central nervous system in dogs reanimated by means of artificial blood circulation after long periods of clinical death by drowning in salt water.

ZAKABOV, S. I.
A method for determining the electrical components of cardiac and skeletal muscle impedance.

ZAKABOV, S. I.
The effect of transection of cortico-subcortical connections upon the spontaneous activity of the lateral geniculate body and visual cortex neurons.

ZAKABOV, S. I.
Some problems in neurobiotics.

ZAKABOVA, S. I.
Provisioning of radiation flight safety for the Soyuz-9 spaceship crew.

ZAKABOVA, S. I.
The principles of an active operator and the functional distribution between man and machine [JPHS-56297].

ZAPLATKIBA, I. I.
Some recent survey findings.

ZAPCZUK, V. V.
First-breath response of medullary inspiratory neurons to the mechanical loading of inspiration.

ZEPHYR, V. V.
Psychophysiological aspects of habitable compartment layout.

ZEBET, B. B.
The effect of transection of cortico-subcortical connections upon the spontaneous activity of the lateral geniculate body and visual cortex neurons.

ZEBET, B. B.
Application of a computer-based model for EEG analysis.

ZEBED, 1.
Psychophysical aspects of habitable compartment layout.
and after exercise with two different computer systems.

ZERPOLI, G.
Studies of bacteriological bioluminescence.
Action of sodium salt (SHSA-72-7-14031)

ZELTIN, R. S.
Thermal stability variations in blood serum protein after electrical stimulation of various hypothalamic structures.

ZEBELL, K. E.
Microbe biochemistry of oxygen.

ZECOWSKI, E. J.
Coronary flow determination in experimental conditions with the use of radioactive xenon.

ZEBAN, L. R.
Practical considerations concerning exercise ECG telemetry equipment.

ZEHNEWALD, F. W.
A quantitative performance measure for night vision.

ZELTE, V. I.
Influence of prolonged longitudinal accelerations on control habits.

ZEBOTA, G. I.
Adaptation of vessels of the telecephalon to gravitational overloads in the head-pelvis direction.

ZEBOTA, G. I.
The effect of chest-back G forces on telecephalic vessels.

ZOL, J. I.
Functional efficiency of the visual analyzer during work with microscopes.

ZONII, E. P.
Search for optimum muscle work conditions guided by muscle-work dependent temperature dynamics.

ZISAG, E.-J.
Preprocessing of nerve pulse sequences for analysis by digital computer.

ZOEKE, J. P.
Changes in auditory flutter fusion frequency during prolonged visual deprivation.

ZUBIKOVA, E. S.
The state of natural immunity of dogs during chronic gamma-irradiation under the influence of amitetravite.

ZUBIKOVA, E. S.
Evaluations of the functional granulopoiesis condition by means of a pyrogen test.

ZUBIKOVA, E. S.
The state of natural immunity of dogs during chronic gamma irradiation under the influence of amitetravite.

ZUBIKOVA, E. S.
Effect of prolonged gamma irradiation on the functional activity of leukocytes.

ZUBERTA, G.
Pulmonary gas exchange in Andean natives at high altitude.

ZUBROVA, O. B.
Electrophysiological analysis of limbic-cortical interaction during the orientating reflex.

ZUBYA, V. A.
The state of natural immunity of dogs during chronic gamma-irradiation under the influence of amitetravite.

ZULL, R.
The effects of variations in the sleep-wakefulness cycle during a 'time-isolation' experiment on reaction time and spontaneous tempo.

ZUKHAR, V. P.
The problem of sleep and its limitations during
ZOTEVA, V. A.

Prolonged space flights

State of natural immunity of dogs during chronic gamma irradiation under the influence of nitrate

SWAINE, G. P.

Dynamics of minute blood volume during prolonged hypokinesia as estimated by the acetylene method

SWARTZ, V. E.

Spatial orientation of bats under the action of hypergravity

Spatial orientation of bats under the influence of increased gravity

SWINEZIG, J. B.

Studies on the pH-dependence, inhibition, and reactivation of angiotensin 2 and angiotensin 2-ase cleaving enzymes of human plasma

ZEKOV, V. B.

EEG monitoring of a free-swimming diver at a working depth of 15 meters

ZEKOV, A. A.

Diurnal variations of urine potassium excretion in man during long-term wakefulness

ZEKOV, A. A.

B-109
### A

<table>
<thead>
<tr>
<th>AEROSPACE MEDICINE AND BIOLOGY</th>
<th>JANUARY 1973</th>
</tr>
</thead>
</table>

#### Typical Corporate Source Index Listing

<table>
<thead>
<tr>
<th>TITLE</th>
<th>REPORT NUMBER</th>
<th>PAGE NUMBER</th>
<th>ACCESION NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Cross-sensory effects of white noise on color perception</em></td>
<td>P0007</td>
<td>W72-13055</td>
<td></td>
</tr>
</tbody>
</table>

The title of the document is used to provide a brief description of the subject matter. The NASA or AIAA accession number is included in each entry to assist the user in locating the abstract in the abstract section of an individual issue of Aerospace Medicine and Biology. The page number indicates the exact page on which the abstract is found. If applicable, a report number is also included as an aid in identifying the document.
An introduction to relaxed hand anthropometry  
[AD-731183] p014  W72-15115
Display system for electronic countermeasures  
application: Scope size and threat density  
[AD-731186] p014  W72-15117
Aircraft track initiation and maintenance in a  
single-operator simulated surveillance system:  
Technical report 1  
[AD-730609] p0165  W72-15120
Centrifuge validation of a tactile G-limit  
warning device  
[AD-730434] p0195  W72-15160
Human head linear and angular accelerations  
during impact  
[AD-700642] p0195  W72-15160
Exposure of earlobes (Tagetes) to gaseous  
hydrogen chloride  
[AD-731715] p0201  W72-17052
Combined effects of noise and vibration on  
mental performance  
[AD-731186] p0243  W72-18094
Biodynamic models and their applications  
[AD-731186] p0257  W72-19133
The dynamic biomechanical nature of spinal  
fractures and articular facet disarrangement  
[ARMEL-71-117] p0259  W72-19139
Restraint design: Laboratory test and  
evaluation of operational effectiveness  
[AD-731184] p0262  W72-19176
Effects of noise on serial search performance  
[AD-731184] p0262  W72-19176
Technical facilities' summary  
[AD-734544] p0311  W72-20119
Investigation of the primate vestibular system  
function through analysis of the  
vestibulo-ocular reflex response to various  
input stimuli  
[AD-734505] p0315  W72-21065
Pedal operation by the seated operator  
[AD-735315] p0318  W72-21099
Effects of acute stimuli on the vestibular  
system  
[ARMEL-78-71-58] p0393  W72-23038
Analysis of the vestibulo-ocular counterroll  
reflex in primates  
[AD-780061] p0393  W72-25040
The effects of high intensity noise on human  
equilibrium  
[AD-737826] p0400  W72-27093
Analysis of the vestibulo-ocular counterroll  
reflex in primates  
[AD-737826] p0400  W72-27094
Symposium on Biodynamic Models and Their  
Applications  
[AD-739593] p0406  W72-27140
Continuous animal exposure to dichloroethane  
[NASA-CF-127656] p0406  W72-28051
Physiological and performance effects on the  
aircrew during low-altitude high-speed flight  
missions  
[AD-737827] p0472  W72-28069
Two biodynamic models used to determine optimum  
energy absorber characteristics  
[AD-740047] p0484  W72-29077
Human operator performance in hypoxic stress  
[AD-740046] p0484  W72-29078
Interfacing man-machine control performance in a  
biodynamic environment  
[AD-740665] p0487  W72-29099
Dynamic simulation techniques for the design of  
escape systems: Current applications and  
future Air Force requirements  
[AD-740439] p0487  W72-29100
Some aspects of biodynamic modelling for  
aircraft escape systems  
[AD-740464] p0487  W72-29101
The implications of a rearward-swinging sled for  
the examination of test vehicle  
[AD-740557] p0523  W72-30074
Biomechanics in motor skeletal structure  
[AD-740456] p0523  W72-30075
A theoretical analysis: The mechanical  
characteristics of the patella  
[AD-740555] p0523  W72-30076
A model to simulate thoracic responses to air  
blast and impact  
[AD-740338] p0524  W72-30084
An analysis of the pressure wave generated in  
seated spinal impact  
[AD-740454] p0526  W72-30097
A method for monitoring systolic and diastolic  
artery pressures on a beat by beat basis  
[AD-740465] p0527  W72-30102
A mathematical model for the evaluation of  
head injury, criteria  
[AD-740555] p0527  W72-30103
Some current biomedical research in the  
United Kingdom, as related to the effects of  
impact and vibration on man  
[AD-740460] p0527  W72-30104
Biomechanics in motor skeletal structure  
[AD-740556] p0527  W72-30104
A theoretical analysis: The mechanical  
characteristics of the patella  
[AD-740555] p0527  W72-30105
A method for monitoring systolic and diastolic  
artery pressures on a beat by beat basis  
[AD-740338] p0528  W72-30106
A mathematical model for the evaluation of  
head injury, criteria  
[AD-740555] p0528  W72-30107
Some current biomedical research in the  
United Kingdom, as related to the effects of  
impact and vibration on man  
[AD-740460] p0528  W72-30108
Biomechanics in motor skeletal structure  
[AD-740556] p0528  W72-30108
A theoretical analysis: The mechanical  
characteristics of the patella  
[AD-740555] p0528  W72-30109
A method for monitoring systolic and diastolic  
artery pressures on a beat by beat basis  
[AD-740338] p0529  W72-30109
A mathematical model for the evaluation of  
head injury, criteria  
[AD-740555] p0529  W72-30110
An annotated bibliography of United States Air  
Force applied physical anthropology  
[AD-740329] p0529  W72-30110
A method for monitoring systolic and diastolic  
artery pressures on a beat by beat basis  
[AD-740338] p0536  W72-31137
Noise and speech levels associated with the  
F-111A Deep area  
[AD-740628] p0569  W72-33085
CORPORATE SOURCE INDEX

B

BALLISTIC RESEARCH LABS., ABERDEEN PROVING GROUND, MD.
Vegetation density determinations by gamma ray absorption
[AD-729319] p0087 N72-13068
A mathematical model of optical illusions and illusional aftereffects
[AD-728461] p0126 N72-14120

BATTLESHELL MEMORIAL LABS., OHIO.
Improvements to the control block of the Mark 6 Nod 2 SCUBA
[AD-764275] p0574 N72-33133

BATTLESHELL MEMORIAL INST. COLUMBUS, OHIO.
Data collection and preparation of authoritative reviews on space food and nutrition research
[NASA-CB-115416] p0244 N72-18103
Construction of a prototype flexible recompression chamber
[AD-737304] p0263 N72-19178
Investigations of laser skin hazards
[AD-755774] p0358 N72-23080
Semicycles -circuit atmosphere control in a portable recompression chamber
[AD-755774] p0433 N72-27116
The measurement of radiation exposure of astronauts by radiocarbon techniques
The measurement of radiation exposure of astronauts by radiocarbon techniques
[NASA-CR-124818] p0207 N72-17623

BATTLESHELL NORTHWEST, ECLALEND, WASH.
The measurement of radiation exposure of astronauts by radiocarbon techniques
[NASA-CR-124713] p0087 N72-13055
The measurement of radiation exposure of astronauts by radiocarbon techniques
[BNL-SA-369441] p0248 N72-16047
Ecological and environmental problems in the application of biomatics
[NASA-SA-3977-REF] p0198 N72-17037
The measurement of radiation exposure of astronauts by radiocarbon techniques
In -phantom dosimetry of prototypic plutonium circulatory support heat sources
[BNL-SA-4121] p0564 N72-32123
Completely implantable three channel temperature biotelemetry system
[NASA-SA-4321] p0567 N72-32141

BAYLOR UNIV., HOUSTON, TEX.
Analysis of infrequent sleep, experiment 008
[AD-70-M008] p0119 N72-14060
Operation testing of systems for automatic sleep analysis
Analysis of biometric records and fabrication of prototypic sleep analysis equipment
[NASA-CR-115551] p0385 N72-24088
Compressible biomedical electrode
[NASA-CASE-MSC-13648] p0442 N72-27103
Research program for experiment 033
[NASA-CR-15756] p0405 N72-29085
BEACH AMBULANCE HOSPITAL, PORT WOLVES, TEX.
Medical evaluation of students undergoing primary operational tasks
[NASA-CB-12805] p0394 N72-23049

BECKMAN INSTRUMENTS, INC., FULLERTON, CALIF.
Prototype slide stainer
White blood cell counting system

BECTON, DICKINSON AND CO., BURLINGTON, N.J.
Development and testing of a magnetically connected plastic vacuum probe
Investigation of methods for sterilization of potting compounds and coated surfaces
[NASA-CR-121283] p0548 N72-33080

BELGIAN AIR FORCE, BRUSSELS.
Analytical study of the causes of medical unfitness of flying personnel in the Belgian
BRUSSELS OBIT. (BELGIDR)  

BBOOKHATEB.BATIOBAL LAB., DPIOB, B.T. 

BOBLIG GBBBB STUB OBIT., 

BOBKE-EAHO COBP., VESTLAKB TILLAGE, CALIF. 

BBTB BABE COIL., PA.  

BBTB BAD OF BIBEBAL BBSOOBCES, GEOLOGT 1BD 

BOBE10 OF HIBES, PITTSBURGH, PA. 

BOBEAD OF BADIOLOGICAL HEALTH, BOCKTILLB, BD. 

Comparison of technigenes for the total-bo'dy 
Beutron sources, energy, flux density, and' 
Lynphatic involution, and .early nortality in. the 
Membranes, material transfer, and ideal tracer 
Genetic Implications of' spaceflight 
Standards, statistics and sternglass: Guilt by 
Evaluation of long-term effects of low level 
Badiobiologic studies'of Tradescantia plants 
Relationship bet»een system design, technician . 
'discriminative training 
Elastic analysis of a skull 
Development of a human performance reliability 
Stimulus control in pigeons after extended . 
Medical atlas of radionnclides used in medicine, 
Late Upper Cambrian trilobites from the Gola 
Lower carboniferous spores from the Bonaparte 
The OS Navy's program in nonionizihg radiation 
Disorientation, tact and fancy 
Low and very low dose influences of ionizing 
Radiofreguency and microwave radiation levels 
KBIC index to biological effects and related, 
Theory suggested in biomechanics 
[BSL-1125]  p0383 B72-21076  
In vivo radiobiological studies of 910 BeT . 
Light flash phenomenon seen by astronauts 
Heavy ion induced single and double strand 
problem suggested in biomechanics 
A class of nonlinear viscpelastic. materials: A 
Enzyme activity in, terrestrial soil in relation 
Technigues for mapping the spatial distribution 
Investigations of bonding, structure, and 
Experimental design 
Fluctuations in energy .loss and their 
On the use of quality factors and dosimetry to 
dose rate conversion in human radiation 
exposures . 

CALIFORNIA UNIV., BERKELEY. LAWRENCE BEREKELAB. 
absorbed dose: an unfortunate red horning in 
radiation protection 
Techniques for mapping the spatial distribution 
Constituency and origins of cyclic growth layers 
in pelecypod shells, part 1 
Visual phenomena induced by cosmic rays, and, 
accelerated particles 
Remote sensing of changes in morphology and 
physiology of trees under stress  
Development of analysis techniques for remote 
meaning of vegetation resources. 

CALIFORNIA UNIV., BERKELEY. LAWRENCE BEREKELAB. 
Radiation protection . 

CALIFORNIA UNIV., BERKELEY. LAWRENCE RADIATION LAB. 
Techniques for mapping the spatial distribution 
Constituency and origins of cyclic growth layers 
in pelecypod shells, part 1 
Visual phenomena induced by cosmic rays, and, 
accelerated particles 
Remote sensing of changes in morphology and 
physiology of trees under stress  
Development of analysis techniques for remote 
meaning of vegetation resources. 

CALIFORNIA UNIV., LIVERMORE. LAWRENCE LIVERNORE LAB. 
Low-level counting with solid-state Ge (Li). 

CALIFORNIA UNIV., LIVERMORE. LAWRENCE RADIATION LAB. 
Respiratory cartridge-efficiency studies  
Experimental design
<table>
<thead>
<tr>
<th>Title</th>
<th>Journal/Publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed guideline for low dose radiation exposure to populations based on benefit-risk analysis</td>
<td>[UCLL-72-20081]</td>
</tr>
<tr>
<td>Sensitivity problems in biological and environmental counting</td>
<td>[UCLL-72-20081]</td>
</tr>
<tr>
<td>Compilation of published information on elemental concentrations in human organs in both normal and diseased states: 1: raw data ordered by atomic number, subdivided by organ and subgroup, limiting method of analysis, geographical source, age, sex, number of individuals</td>
<td>[UCLL-5013-72-100-1]</td>
</tr>
<tr>
<td>Radiobiology, biochemistry, environmental radiation, and nuclear medicine</td>
<td>[UCLL-72-10080]</td>
</tr>
<tr>
<td>Center for Computer-based Behavioral Studies</td>
<td>[AD-72-20080]</td>
</tr>
<tr>
<td>Chemical basis of fitness</td>
<td>[AD-72-20081]</td>
</tr>
<tr>
<td>Neurophysiological correlates of human performance capabilities in aerospace systems</td>
<td>[AD-72-20082]</td>
</tr>
<tr>
<td>Ecological aspects of piston dissection in terrestrial environments</td>
<td>[AD-72-20083]</td>
</tr>
<tr>
<td>Plant tissue and the color infrared record</td>
<td>[AD-72-20084]</td>
</tr>
<tr>
<td>Visual acuity and visibility, experiments, and S008</td>
<td>[AD-72-20085]</td>
</tr>
<tr>
<td>and S013</td>
<td>[AD-72-20086]</td>
</tr>
<tr>
<td>Electrophysiological findings relevant to echolocation in marine animals</td>
<td>[AD-72-20087]</td>
</tr>
<tr>
<td>Electrophysiological studies of the nervous system</td>
<td>[AD-72-20088]</td>
</tr>
<tr>
<td>Thermal equilibrium studies on men breathing helium-oxygen mixtures</td>
<td>[AD-72-20089]</td>
</tr>
<tr>
<td>Canadian Armed Forces Inst. of Environmental Medicine, Toronto (Ontario)</td>
<td>[AD-72-20090]</td>
</tr>
<tr>
<td>Diabetes mellitus in flying personnel</td>
<td>[AD-72-20091]</td>
</tr>
<tr>
<td>CAREGIVE-BELLOM UNIV., PITTSBURGH, PA</td>
<td>[AD-72-20092]</td>
</tr>
<tr>
<td>Protocol analysis as a task for artificial intelligence</td>
<td>[AD-72-20093]</td>
</tr>
<tr>
<td>CASE WESTERN RESERVE UNIV., CLEVELAND, OHIO.</td>
<td>[AD-72-20094]</td>
</tr>
<tr>
<td>Hair radioactivity as a measure of exposure to radioisotopes</td>
<td>[AD-72-20095]</td>
</tr>
<tr>
<td>Sequential search of an optimal dosage</td>
<td>[AD-72-20096]</td>
</tr>
<tr>
<td>CATHOLIC UNIV. OF AMERICA, WASHINGTON, D.C.</td>
<td>[AD-72-20097]</td>
</tr>
<tr>
<td>Recent statistical methods for orientation data</td>
<td>[AD-72-20098]</td>
</tr>
<tr>
<td>CENTRAL ELECTRICITY GENERATING BOARD, BERKELEY (ENGLAND)</td>
<td>[AD-72-20099]</td>
</tr>
<tr>
<td>Biological aspects of skin irradiation. Part 3: New epidermal thickness measurements and their importance</td>
<td>[AD-72-20100]</td>
</tr>
<tr>
<td>CENTRAL INST. FOR THE DEAF, ST. LOUIS, MO.</td>
<td>[AD-72-20101]</td>
</tr>
<tr>
<td>Electrophysiological correlates of behavioral temporal threshold shifts in chimpanzea</td>
<td>[AD-72-20102]</td>
</tr>
<tr>
<td>Effects of noise on people</td>
<td>[AD-72-20103]</td>
</tr>
<tr>
<td>CENTRE D'ENSEIGNEMENT ET DE RECHERCHES DE MEDICINE AERONAUTIQUE, PARIS (FRANCE)</td>
<td>[AD-72-20104]</td>
</tr>
<tr>
<td>Some considerations on the difficulties of dosimetric evaluation and cosmic radiation injuries</td>
<td>[AD-72-20105]</td>
</tr>
<tr>
<td>CENTRE D'ESSAIS EN VOL, BRETECHY-DU-LORGE (FRANCE)</td>
<td>[AD-72-20106]</td>
</tr>
<tr>
<td>Ejection acceleration: Physiological effects, tolerance</td>
<td>[AD-72-20107]</td>
</tr>
<tr>
<td>Radiational study of spinal injuries to pilots undergoing sudden ejection</td>
<td>[AD-72-20108]</td>
</tr>
</tbody>
</table>
Clemson Univ.

Practical techniques for disorientation facilitation and the influence of visual reference and alcohol on disorientation-related responses

Index to FAA Office of Aviation Medicine Reports: 1961 through 1971

Attrition from active airman status during 1970

Effects of alcohol on a problem solving task

Pilot tracking performance during successive in-flight simulated instrument approaches

Physiological evaluation of a modified jet transport passenger oxygen mask

The color-word interference test and its relation to performance impairment under auditory distraction

A comparison of serum cholinesterase methods, 2

Methodology in the measurement of complex human performance: Two-dimensional compensatory tracking

High temperature and performance in a flight tank simulator

A proposed new test for aptitude screening of air traffic controller applicants

Aviation Medicine Translations: Annotated bibliography of recently translated material, 7

The use of simple indicators for detecting potential coronary heart disease susceptibility in the air traffic controller population

Residual performance effects of simulated sonic booms introduced during sleep

A study of the state-trait anxiety inventory and the assessment of stress under simulated conditions

Sonic booms and sleep: Affect change as a function of increased sonic environments

Behavioral changes from chronic exposure to pesticides used in aerial application: Effects of Phosdrin on the performance of monkeys and pigeons on variable interval reinforcement schedules

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Clemson Univ., S.C.

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Colorado State Univ., Fort Collins

Stimulation of cardiovascular adaptability during prolonged space exposure

Columbia Univ., New York

Radiological physics, biophysics, and radiobiology [NTO-2740-8]

Visual perception

Conor space/defense corp., hingham, mass.

Research to determine the role of gravity in neurosecretory physiology

CONRAD TRANS. L'ENERGIE ATOMIQUE, CADARACHE (France)

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Relative biological effectiveness of 3-GeV proton beams in producing cataracts in rabbits [CCEA-COBF-1782]

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Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 1: Executive summary

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report: Appendix A

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Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report: Appendix A

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report: Appendix B

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 3: Test procedures and instrumentation

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Columbia Univ., New York

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Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report: Appendix A

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report: Appendix B

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 3: Test procedures and instrumentation

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Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report: Appendix A

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report: Appendix B

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 3: Test procedures and instrumentation

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Columbia Univ., New York

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Computer image Corp., Denver, Colo.

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Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report: Appendix A

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 2: Final program report: Appendix B

Preliminary vehicle tests: Inflatable occupant restraint systems. Volume 3: Test procedures and instrumentation

Columbia Univ., S.C.

bare-gas effects on metabolism and inert gas narcosis [NASA-CH-128213]
Auditory loss and recuperation of guinea pigs
Studies in pilot training: The anatomy of transfer
Three explanations of temporal changes in visual landing simulator for a ground based system
Effects of the man on the task in complex man-machine systems
An evaluation of three possible explanations of the temporal decay in predicting pilot proficiency
An annotated bibliography on response surface methodology and related papers
A visual landing simulator for a ground based trainer
Natural numbers in transclassic systems
Effects of the man on the task in complex man-machine systems
An evaluation of three possible explanations of the temporal decay in predicting pilot proficiency
Auditory loss and recuperation of guinea pigs
Steady state and transient temperature distributions in the human thigh covered with a cooling pad
Removal of metabolic heat from man working in a protective suit
Analytical prediction of the heat transfer from a blood vessel near the skin surface when cooled by a symmetrical cooling strip
Removal of metabolic heat from man working in a protective suit
Analytical prediction of the heat transfer from a blood vessel near the skin surface when cooled by a symmetrical cooling strip
Removal of metabolic heat from man working in a protective suit

Alcohol induced postrotatory fixational nystagmus, a training film on a simple method of detecting slight alcoholic intoxications in pilots
What is the meaning of the master-step-test in examinations to determine the fitness for military flying duty
Use of longterm ECG in aviation medicine
The automatic analysis of the ECG at rest, during and after exercise with two different computer systems
A simplified and improved method for operational anthropometric programmes
Alcohol induced postrotatory fixational nystagmus, a training film on a simple method of detecting slight alcoholic intoxications in pilots

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Clinical causes for permanent grounding of aircrew within the German Armed Forces
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PLANETARY SURVEYING, MILAN.
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[NASA-CR-127237] p0069 H72-28048

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[NASA-CR-128302] p0563 H72-32117

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[AD-726161] p0138 H72-15076

Evolution of psychomotoric frames of reference  
[AD-73632] p034 H72-24094

Individual recognition between mother and infant bats (Myotis)  
[NASA-CR-115268] p0087 H72-13057

Finite amplitude shock waves in intervertebral discs  
[AD-73837] p0212 H72-19166

Peripheral coding of acoustic stimuli  
[AD-73837] p0317 H72-26857

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[JPPS-55266] p0242 H72-18082

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[JPPS-55266] p0242 H72-18082

Studies of man-machine relationships  
[JPPS-55266] p0261 H72-19164

a study of operator's work with data input devices  
[JPPS-55266] p0261 H72-19165

selection of operational check points  
[JPPS-55266] p0261 H72-19166

Information display method in discrete-production automatic control systems  
[JPPS-55266] p0261 H72-19167

Engineering psychology in radar  
[JPPS-55266] p0262 H72-19172

Application of biotelemetry for research in the physiology of labor and sports: Equipment for studying freely moving people  
[JPPS-55266] p0317 H72-20147

application of biotelemetry in physiology of labor and sports  
[JPPS-55266] p0317 H72-20148

Space biology and medicine, volume 6, number 1, 1972  
[JPPS-55266] p0317 H72-20148

Effects of hyperoxia on coagulating and anticoagulating systems in blood  
[JPPS-55266] p0317 H72-20148

measures against the unfavorable effect of weightlessness  
[JPPS-55266] p0353 H72-22095

Development of a cybernetic model of an animal-environment system  
[JPPS-55266] p0359 H72-23087

Repetition rate of ranging signals of dolphins as a function of distance to target  
[JPPS-55579] p0382 H72-28066

The effect of laser beams on the tunics of the eye  
[JPPS-55701] p0382 H72-28067

Space biology and medicine, volume 6, no. 2, 1972  
[JPPS-56030] p0382 H72-28067

Performance, methods of evaluating it, and drug stimulation  
[JPPS-56030] p0382 H72-28067

Dynamics of the content of carbon monoxide in an atmosphere regenerated by Chlorella  
[JPPS-56030] p0382 H72-28067

Some indices of the growth of rats and their skeletal muscles during prolonged restriction of mobility  
[JPPS-56030] p0382 H72-28067

Erythrocyte reserve in healthy and chronically irradiated dogs  
[JPPS-56030] p0382 H72-28067

State of natural immunity of dogs during chronic gamma irradiation under the influence of nitrate vitamin  
[JPPS-56030] p0382 H72-28067

Effect of synthetic carbohydrates on rat liver  
[JPPS-56030] p0382 H72-28067

Cardiac activity changes in dogs during acute overheating and the prognostic importance of electrocardiographic data  
[JPPS-56030] p0382 H72-28067

Cardiac electric activity accompanying different degrees of decompression of the lower half of the body  
[JPPS-56030] p0382 H72-28067

Ultrasonic Doppler cardiography in a medical monitoring system  
[JPPS-56030] p0382 H72-28067

Vascular tone in different parts of the body during prolonged restriction of the heart activity  
[JPPS-56030] p0382 H72-28067

Increasing the functional capacity of the human cardiovascular system by the regulated cooling method  
[JPPS-56030] p0382 H72-28067

Role of higher autonomic centers in the mechanisms of vestibular-autonomic reflexes  
[JPPS-56030] p0382 H72-28067

Change in refleer reaction of human muscles during adequate vestibular stimulation  
[JPPS-56030] p0382 H72-28067

Study of water-mineral metabolism during restricted motor activity  
[JPPS-56030] p0382 H72-28067

Diurnal periodicity of the human respiration rate in experiments with an inversion of the work and rest schedule  
[JPPS-56030] p0382 H72-28067

Pulse rate adaptation during change in the sleep-wakefulness rhythms  
[JPPS-56030] p0382 H72-28067

Peculiarities in time perception in simulated and real flight  
[JPPS-56030] p0382 H72-28067

New method for implanting electrodes in chronic experiments  
[JPPS-56030] p0382 H72-28067

Bionics  
[JPPS-55982] p0389 H72-28067

Role of peculiarities in external structure in the hydrodynamics of high-speed fish  
[JPPS-55982] p0389 H72-28067

Cybernetics and computer technology  
[JPPS-55982] p0389 H72-28067

Some problems in neurobionics  
[JPPS-55982] p0389 H72-28067

Problem of modeling perception of "distance from target"  
[JPPS-55982] p0389 H72-28067

Experiments in classification and formation of concepts  
[JPPS-55982] p0389 H72-28067

Investigating the language and intellect of dolphins  
[JPPS-55982] p0389 H72-28067

Structure and modeling of robots  
[JPPS-55982] p0389 H72-28067

C-13
Effect of high brightnesses on the rate of eye adaptation to darkness.

Dynamics of minute blood volume during prolonged hypokinesia as estimated by the acetylene method.

External respiration and gas exchange during a passive orthostatic test.

Hypodynamia and hormonal activity.

Objective evaluation of polymers used in constructing isolation chambers.

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Future of science.

Morphological changes in the cerebral vascular system induced by transverse accelerations.

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In-flight acceleration sensations and methods for combating them.

Dependence of the nature of cranio-cerebral tracts on impact conditions.

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Synthesis of redox polymers and their use for purifying aqueous solutions from organic impurities.

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Development of staphylococcal infection in human subjects under the influence of some spaceflight factors

Histopathologic substrate of atherosclerosis transmigrating without symptoms in young people

Thermotopography of the skin in healthy human subjects under comfortable conditions

Physiological-hygienic evaluation of regenerated drinking water

Effect exerted by man by rotations in the sagittal plane

Possibility of synthesis of precursors of complex organic compounds in regions of submarine volcanism

Possibility of using a condensate of atmospheric moisture in a system for functioning of higher plants

Hydrodynamics of fish and dolphins

Some distinctions of hydrodynamics of nekton (fish and dolphins)

Vortex formation in the hydrodynamic wake of fish during propulsion

Selection, training and compatibility of spaceship crews

Biological effect of extreme environmental factors

Some of the results and prospects in spaceflight factors

The effect of G forces on the microcirculatory system

The condition of neurons in the autonomous nervous system ganglia following exposure to G forces

The effect of transverse G forces on atrial nerve cells (experimental morphological investigation)

The effect of transverse G forces on nerve elements of the rat's pharyngeal and esophageal nerve elements following preliminary exposure to a constant magnetic field

Changes in tropic function of the embryonic liver under the influence of transverse G forces (plus G x)

The effect of chest-back G forces on telencephalic vessels

The effect of back-chest G forces on mesencephalic and mesencephalic blood vessels

The effect of accelerator training on the rabbit's retinal vessels

The effect of accelerator training on splenic reticular tissue

Changes in skeletal muscles associated with inactivity

Structural and cytochemical changes in the rat's skeletal muscles associated with restricted mobility

The effect of hypodynamia and hypokinesia on the portal system of the liver

The effect of hypodynamia and hypokinesia on the vascular system of the hind limb

The effect of hypodynamia and hypokinesia on the cardiovascular system of the hind limb

Possibility of using a condensate of atmospheric moisture in a system for functioning of higher plants

Effect of an atmosphere with a high carbon dioxide content on human tolerance to acute hypoxia and acceleration

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Effect of extreme environmental factors

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pressure in treatment of primary blast injury
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[AD-732912] p0257 W2-19134
The biodynamics of air blast
[AD-734028] p0313 W2-21054
Pulmonary product absorption program
[AD-734028] p0401 W2-25109
The effects of exhaustive exercise on rats at
various times following blast exposure
[AD-736276] p0469 W2-26052
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Inertial waste separation system for zero G WRS

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The design and development testing of aircraft
protective boots
[AD-726012] p0260 W2-19162
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Experimental study of diver performance in
manual and mental tasks at 66 feet
[AD-737376] p0402 W2-25116
MARTIN MARINITA CORP., DENVER, COLO.
Experimental study of the control of surgically induced infections
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maintenance instructions D203613-004
[NASA-CS-127597] p0117 W2-16044
Influence of a detailed model of man on proton
depth/dose calculation
[AD-731957] p0210 W2-17705
Experimental study of the control of surgically induced infections
[NASA-CR-127649] p0467 W2-28035
Experimental study, and its evaluation for the control of surgically induced infections
[NASA-CS-127649] p0467 W2-28036
Target acquisition studies: (1) transition from
direct to TV mediated viewing. (2) target
acquisition performance: Color vs monochrome
TV displays
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Biological applications of neutron scattering
C-25

CORPORATE SOURCE INDEX

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in medical diagnosis
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an account of a new transonic test facility
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vibrations
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The dynamic behaviour of crash helmets
[RAB-CR-1202] p0846 W72-29091
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relation to the workload
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Circadian variations in choice reaction time
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C-25
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Evaluation of efficacy check

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A study of the effects of illumination and noise on simple motor performance [AD-739474] p0441 872-27095
A dynamic analysis of the arc complex subjected to an external load [AD-739478] p0441 872-27096
The effects of combined environmental factors on human performance of a manual task: Noise and temperature [AD-739432] p0441 872-27097
Techniques for measurement of centers of gravity [AD-739439] p0446 872-27136
Psychophysical measurements applied to maintainability evaluation of equipment design [AD-739437] p0446 872-27137
Investigation of sellium-signal amplitude and frequency variation in vibrotactile communication [AD-739423] p0446 872-27139
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Performance, recovery and man machine effectiveness [AD-729964] p0111 872-14139
The prediction of individual differences in monitoring performance [AD-730374] p0111 872-14140
Effects of decision criteria on human decision-making performance [AD-729828] p0136 872-15075
Effects of work/rest schedules on monitoring performance in the heat [AD-729829] p0143 872-15105
The biomechanics of pushing and pulling tasks [AD-729827] p0143 872-15106
Crew performance in extended operation under vibrational stress [AD-729373] p0144 872-15114
Study of optimal speed on bicycle ergometer [AD-733608] p0205 872-17084
An annotated bibliography of selected works in salinity and its effect on decision making [AD-733608] p0205 872-17084
The development of insulated electrodess in electrocardiography [NASA-CR-15550] p0533 872-22096
Performance, recovery, and man machine effectiveness [AD-739016] p0436 872-26087
Monitoring performance across sense modes: An individual differences approach [AD-737735] p0440 872-27089
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Diagnosis and prediction: A study of daily behavior patterns in TETNIT 2 [AD-73-39283] p0263 872-19177
The extraction of sleep information from heart rate data: Analysis of the sleep cycle [AD-734283] p0310 872-21061
Auditory signal detection and recognition [AD-736086] p0358 872-23082
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TRANSLATION CONSULTANTS, LTD., ARLINGTON, VA.
Methods of evaluating pulsed vibrations (vibration evaluation methods 3) [NASA-TT-P-13987] p0033 872-10069
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Methods of evaluating sinusoidal vibrations (vibration evaluation methods 1) [NASA-TT-P-13985] p0033 872-10071
Condition of the human cardiovascular system in true and simulated weightlessness [NASA-TT-P-14030] p0033 872-10073
The utilization of the achievements of space medicine in the care of public health [NASA-TT-P-14040] p0080 872-12014
Relationship between substrates, respiration and structure of mitochondria in Euglena gracilis (z) [NASA-TT-P-14017] p0081 872-12029
Glycolysis in adenovirus infected rat cell cultures and in adenovirus type 12 induced hamster sarcoma cells [NASA-TT-P-14061] p0087 872-13062
On the prophylactic action of salted drinks during work at high temperatures. Present state of the problem [NASA-TT-P-14050] p0157 872-15067
Electrolytes in cells of skeletal muscles and developing chick embryo and subsequent growth of chicks [NASA-TT-P-14129] p0239 872-18060
The problem: Aphanomus Sukal or Aniliosis Hansen [NASA-TT-P-14092] p0239 872-18065

C-30
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[AD-737720] p0391 N72-24139
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dioxide and water reduction system for oxygen
recovery
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interactions
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A Review: Some biological effects of high LET
radiations
p0208 N72-17629
Homing orientation in salamanders: A mechanism
involving chemical cues
p0399 N72-25052

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[NASA-CS-720907] p0359 N72-23086

WRIGHT CO., KETTERING, OHIO.
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p0258 N72-19143

WYLE LABS., INC., ROCKVILLE, MD.
Calculation of rocket powered trajectories of a
plane of symmetry model of a human subject and
ejection seat
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[AD-731195] p1015 N72-15121

Y

YALE UNIV., NEW HAVEN, CONN.
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relation to pulse and echo evoked potentials
in the bat
p0398 N72-25084
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p0398 N72-25089

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[AD-726467] p0038 N72-10101

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[AD-735513] p0352 N72-22088

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directions and horizon landmarks
p0398 N72-25088

[NOTICE TO READER: This report is a summary
of the current state of knowledge and is not
intended to present the most recent data
available.]


C-32
# AEROSPACE MEDICINE
AND BIOLOGY

A CONTINUING BIBLIOGRAPHY

Abstracts
January–December 1972

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SP-7011 Supplement</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>99</td>
<td>1</td>
</tr>
<tr>
<td>100</td>
<td>.49</td>
</tr>
<tr>
<td>101</td>
<td>.95</td>
</tr>
<tr>
<td>102</td>
<td>147</td>
</tr>
<tr>
<td>103</td>
<td>213</td>
</tr>
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<td>104</td>
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A Cumulative Index to the 1972 Issues

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