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EUROPEAN OFFICE
AEROSPACE RESEARCH

SUPPLEMENT

to the

BIBLIOGRAPHY

of

TECHNICAL NOTES and TECHNICAL REPORTS

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P R E F A C E

This supplement contains an additional list of all Technical Notes and Technical Reports emanating from the European Office of Aerospace Research contracts and published since 1 July 1962. The supplement is arranged in order of the following technical areas:

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Monitoring Agency Number
ASTIA Document Number

Requests originating from continental United States sources:

Copies of the listed reports are available, upon request, from the Armed Services Technical Information Agency (ASTIA), or the Monitoring Agencies in the United States as indicated by the assignment of appropriate numbers. Requests should be addressed as follows:

For:

ASTIA

Direct Correspondence to:

Armed Services Technical Information Agency
Attn: Document Service Center
Arlington Hall Station
Arlington 12, Va.

A F O S R

Air Force Office of Scientific Research
Attn: (Monitoring Agency Symbol, for ex: SRIA)
Washington 25, D.C.

<u>For:</u>	<u>Direct Correspondence to:</u>
ACIC	Aeronautical Chart & Information Center Second and Arsenal St. Louis, Missouri
A F C R L	Air Force Cambridge Research Laboratories Attn: (Monitoring Agency Symbol) Laurence G. Hanscom Field Bedford, Massachusetts
A R L	Aeronautical Research Laboratory Attn: (Monitoring Agency Symbol) Wright-Patterson Air Force Base Ohio
A S D	Aeronautical Systems Division Attn: (Monitoring Agency Symbol) Wright-Patterson Air Force Base Ohio
A F S W C	Air Force Special Weapons Center Attn: (Monitoring Agency Symbol) Kirtland Air Force Base New Mexico
M R G	Aerospace Medical Research Laboratories Wright-Patterson Air Force Base Ohio
R A D C	Rome Air Development Center Griffiss Air Force Base New York
S A M	School of Aviation Medicine USAF Aerospace Medical Center (ATC) Brooks Air Force Base, Texas

Requests originating from European sources:

Copies of the listed reports are available, upon request, from the Technical Information Office, European Office, Aerospace Research (EOAR), on loan for a period of forty-five days, by directing correspondence as follows:

Technical Information Office
European Office, OAR
Shell Building, 47, Cantersteen
Brussels, Belgium

Requests should include the technical area, the contract number and title of report desired. Example: BIOSCIENCES - Contract AF 61(052)-25, Technical Note March 1962, "AN ESERINE-LIKE ACTION OF CHLORAL HYDRATE"

BIOSCIENCES

Contract Title: STUDY OF SPINAL REFLEX RESPONSES DURING STRESS AND FATIGUE

Investigator: Professor R. MARGARIA
University of Milan
Physiological Laboratory
Milan, Italy

Contract No: AF 61(052)-23 Monitoring Agency: AFOSR, SRLA

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:

FUNCTIONAL FUNDAMENTAL CHARACTERISTICS OF THE NERVOUS SYSTEM IN ATHLETES AND
THE EFFECTS OF PERFORMANCE

Contract Title: DRUGS AND NEURAL TRANSMISSION

Investigator: Dr. J.P. QUILLIAM
Medical College of
St Bartholomew's Hospital
London, England

Contract No: AF 61(052)-25 Monitoring Agency: AFOSR, SRLA

Technical Note March 1962 Monitoring Agency No:
ASTIA Document No:

AN ESERINE-LIKE ACTION OF CHLORAL HYDRATE (Repr. fr. the British Jnl of
Pharmacology and Chemotherapy, Aug'62)

Contract Title: BASIC RESEARCH IN THE FIELD OF VISION

Investigator: Professor V. RONCHI
Istituto Nazionale di Ottica
Arcetri-Florence, Italy

Contract No: AF 61(052)-80 Monitoring Agency: AFOSR, SRLA

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:

BINOCULAR INTERACTION EFFECT II: INVESTIGATION ON THE TIME BEHAVIOUR OF MONO-
CULAR SENSITIVITY DURING CONTRALATERAL STIMULATION (Reprint fr. Atti della
Fondazione Giorgio Ronchi, Anno XVII, No.3, May-June'62)

BIOSCIENCES

Contract Title: NEUROPHYSIOLOGICAL MECHANISMS OF SKILLED MOVEMENTS
Investigator: Professor Dr. J. PAILLARD
Faculte des Sciences de Marseille
Marseille, France
Contract No: AF 61(052)-95 Monitoring Agency: AFOSR, SRLA
Technical Report April 1962 Monitoring Agency No:
ASTIA Document No:
SOME NEUROPHYSIOLOGICAL MECHANISM OF MOTOR CONTROL STUDIED IN MAN BY MONO-
SYNAPTIC TESTING

.....
Contract Title: NEUROPHYSIOLOGICAL STUDIES OF INSTINCTUAL BEHAVIOR AND LEARNING
Investigator: Dr. W.H. THORPE
University of Cambridge
Cambridge, England
Contract No: AF 61(052)-97 Monitoring Agency: AFOSR, SRLA
Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
SELECTION OF NEST MATERIAL BY FEMALE CANARIES (Repr. fr. Animal Behaviour, 10,
1962)
Technical Note May 1961 Monitoring Agency No:
ASTIA Document No:
TEMPORAL RELATIONS OF BROOD PATCH DEVELOPMENT IN DOMESTICATED CANARIES (Repr.
fr. Ibis, 104, 1962)

.....
Contract Title: EFFECTS OF ACETYLOCHOLINE OF THE MAMMALAR MOTOR END PLATE
Investigator: Dr. S. THESLEFF
University of Lund
Lund, Sweden
Contract No: AF 61(052)-106 Monitoring Agency: AFOSR, SRLA
Technical Report Aug'1962 Monitoring Agency No: AFOSR 3479
ASTIA Document No:
RESEARCH ON EFFECTS OF ACETYLCHOLINE ON THE MAMMALIAN MOTOR END-PLATE
.....

BIOSCIENCES

Contract Title: RELATION OF BRAIN STEM RETICULAR FORMATION TO ANIMAL BEHAVIOR

Investigator: Professor G. MORUZZI
University of Pisa
Pisa, Italy

Contract No: AF 61(052)-107 Monitoring Agency: AFOSR, SRLA

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
PALPEBRAL SYMMETRY IN THE DARK ADAPTED OWL (ATHENE NOCTUA) FOLLOWING UNILATERAL
IRREVERSIBLE VISUAL DEAFFERENTATION (Repr. fr. Arch.Ital.Biol. 100, 1962)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
ENHANCEMENT OF EEG SYNCHRONY IN THE ACUTE "CERVEAU ISOLE" (Repr. fr. Arch.Ital.
Biol., 100, 1962)

Technical Note 1962 Monitoring Agency No: AFOSR 2882
ASTIA Document No:
ROLE OF THE PUPIL IN CHANGES IN EVOKED RESPONSES ALONG THE VISUAL PATHWAYS

Technical Report June 1962 Monitoring Agency No:
ASTIA Document No:
RESEARCH ON RELATIONS OF BRAIN STEM RETICULAR FORMATION TO ANIMAL BEHAVIOR

Contract Title: BRAIN STEM MECHANISMS REGULATING AUTOMATIC ACTIVITIES

Investigator: Dr. U. SODERBERG
Karolinska Institute
Stockholm, Sweden

Contract No: AF 61(052)-119 Monitoring Agency: AFOSR, SRLA

Technical Note 1961 Monitoring Agency No: AFOSR 2908
ASTIA Document No:
SINGLE UNIT ACTIVITY IN THE RABBIT LATERAL GENICULATE BODY DURING EXPERIMENTAL
EPILEPSY

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
BLOOD PRESSURE AND PULSE-WAVES IN SMALL CEREBRAL ARTERIES DETERMINED WITH MANO-
METERS WITH STIFF MEMBRANES (Repr. fr. Intern. Biophysics Congress, Stockholm,
July-Aug'61)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
QUANTITATIVE MEASUREMENTS OF GLUCOSE UPTAKE AND BLOOD FLOW IN NEURONALLY ISOLATED
CAT CORTEX (XXII INT. CONGRESS OF PHYSIOLOGICAL SCIENCES, Leiden, Sept 1962)
(Repr. fr. Excerpta Medica, Intern.Congress Series No.48)

BIOSCIENCES

Contract Title: FACET DESIGN AND ANALYSIS DATA ON PERSONALITY AND ATTITUDES OF HUMAN ORGANIZATION

Investigator: Dr. L. GUTTMAN
Israel Institute of Applied Social Research
Jerusalem, Israel

Contract No: AF 61(052)-121 Monitoring Agency: AFOSR, SRLB

Technical Note 1961 Monitoring Agency No:
ASTIA Document No:
DYADIC INTERACTION: THEORY AND EXPERIMENT (Repr. fr. Acta Psychologica, Vol.XIX, 1961)

Technical Report March 1962 Monitoring Agency No: AFOSR 3763
ASTIA Document No:
FACET DESIGN AND ANALYSIS OF DATA ON PERSONALITY AND ATTITUDES RELATED TO HUMAN ORGANIZATION

Contract Title: ACETATE METABOLISM IN MICRO-ORGANISMS

Investigator: Dr. H.A. KREBS
Oxford University
Oxford, England

Contract No: AF 61(052)-180 Monitoring Agency: AFOSR, SRLA

Technical Report Sept' 1962 Monitoring Agency No:
ASTIA Document No:
THE METABOLISM OF C₁ COMPOUNDS AND OXALIC ACID IN MICRO-ORGANISMS

Contract Title: STUDY ON LOCALIZED RADIOLESIONS IN CENTRAL NERVOUS SYSTEM

Investigator: Dr. B. LARSSON
University of Uppsala
Institute of Nuclear Chemistry
Uppsala, Sweden

Contract No: AF 61(052)-183 Monitoring Agency: AFOSR, SRLA

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
MORPHOLOGICAL STUDIES ON PERIPHERAL NERVES EXPOSED TO A BEAM OF HIGH ENERGY PROTONS (Repr. fr. Acta Pathologica et Microbiologica Scandinavica, Suppl.154, 1962)

BIOSCIENCES

Technical Note 4 Aug 1962 Monitoring Agency No: AFOSR 3480
ASTIA Document No:
HISTOLOGY OF THE SURGICAL RADIOLESION IN THE HUMAN BRAIN AS PRODUCED BY HIGH
ENERGY PROTONS

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
ON THE APPLICATION OF A 185 MeV PROTON BEAM TO EXPERIMENTAL CANCER THERAPY
AND NEUROSURGERY (A BIOPHYSICAL STUDY - INAUGURAL DISSERTATION)

Technical Report Aug 1962 Monitoring Agency No:
ASTIA Document No:
STUDY ON LOCALIZED RADIOLESIONS IN THE CENTRAL NERVOUS SYSTEM

Contract Title: EFFECT OF CEREBRAL LESIONS ON VISUAL DISCRIMINATION AND TIMING

Investigator: Dr. L. WEISKRANTZ
University of Cambridge
Cambridge, England

Contract No: AF 61(052)-185 Monitoring Agency: AFOSR, SRLA

Technical Note 1961 Monitoring Agency No:
ASTIA Document No:
VISUAL FIELD DEFECTS IN MONKEYS (Repr. fr. Nature, Vol.193, No.4812, Jan'62)

Technical Note 1961 Monitoring Agency No:
ASTIA Document No:
ROLE OF EXPERIENCE IN MISREACHING PRODUCED BY VISUAL CORTEX LESIONS (Repr. fr.
Nature, Vol.192, No.4809, Dec'61)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
EFFECTS OF FRONTAL CORTEX LESIONS ON OBJECT DISCRIMINATION LEARNING BY MONKEYS
(Repr. fr. Nature, Vol. 195, No.4838, Jul 62)

Technical Note Jan 1962 Monitoring Agency No:
ASTIA Document No:
EVIDENCE FOR DISSOCIATION OF IMPAIRMENT ON AUDITORY DISCRIMINATION AND DELAYED
RESPONSE FOLLOWING LATERAL FRONTAL LESIONS IN MONKEYS (Repr. fr. Experimental
Neurology, Vol.5, No.6, June 62)

BIOSCIENCES

Contract Title: INFORMATION PROCESSING IN BIOLOGICAL SYSTEMS
Investigator: Dr. B. HASSENSTEIN
Max-Planck Institut
Tübingen, Germany
Contract No: AF 61(052)-232 Monitoring Agency: AFOSR, SRLA
Technical Report Dec'1961 Monitoring Agency No:
ASTIA Document No:
FINAL REPORT

Contract Title: INTERMEDIATE METABOLITES DURING PHOTOSYNTHESIS
Investigator: Dr. O. KANDLER
Technische Hochschule
Munich, Germany
Contract No: AF 61(052)-244 Monitoring Agency: AFOSR, SRLA
Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
DIFFERENCES IN THE pH OPTIMUM OF THE PHOTOSYNTHETIC FIXATION OF CARBON DIOXIDE
IN ISOLATED WHOLE AND BROKEN CHLOROPLASTS (Repr. fr. Nature, Vol.194, Apr 62)
Technical Note May 1962 Monitoring Agency No:
ASTIA Document No:
STUDIES ON THE CHANGE OF THE CONCENTRATIONS OF INTERMEDIATES DURING PHOTO-
SYNTHESIS OF CHLORELLA AND ISOLATED CHLOROPLASTS (Annual Summary No. 2)

Contract Title: INTRANEURONAL MECHANISMS FOR INFORMATION STORAGE
Investigator: Professor H. HYDEN
University of Göteborg
Göteborg, Sweden
Contract No: AF 61(052)-248 Monitoring Agency: AFOSR, SRLA
Technical Note 1962 Monitoring Agency No: AFOSR 2887
ASTIA Document No:
NUCLEAR RNA CHANGES OF NERVE CELLS DURING A LEARNING EXPERIMENT IN RATS

BIOSCIENCES

Contract Title: BIOSYNTHETIC MEACHNISMS IN FORMATION OF TERPENES AND DERIVATIVES

Investigator: Prof. Dr. F. LYNEN
Max-Planck Institut f. Zellchemie
München, Germany

Contract No: AF 61(052)-251 Monitoring Agency: AFOSR, SRLA

Technical Note April 1961 Monitoring Agency No:
ASTIA Document No:
REINIGUNG UND WIRKUNGSWEISE DER PYRUVATCARBOXILASE AUS PSEUDOMONAS CITRO-
NELLOLIS (Repr. fr. Biochemische Zeitschrift, 334, 1961)

Contract Title: CENTRAL NERVOUS MECHANISM IN CIRCULAR REGULATION AND FUNCTIONAL
DERANGEMENT (HYPERTENSION)

Investigator: Professor O. BARTORELLI
University of Siena
Siena, Italy

Contract No: AF 61(052)-253 Monitoring Agency: ASD, ASBMB

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
CARDIOPULMONARY ORIGIN OF VAGAL AFFERENT FIBERS EXERTING A TONIC REFLEX
INFLUENCE ON THE CIRCULATION (Repr. fr. *Experientia*, Vol. XVIII, 1962)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
TONIC REFLEX REGULATION OF THE CAT'S BLOOD PRESSURE THROUGH VAGAL "NON-ARTIC"
AFFERENTS (Repr. fr. *Experientia*, Vol. XVIII, 1962)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
SOMATIC FUNCTIONS OF THE NERVOUS SYSTEM (Repr. fr. *Annual Review of Physiology*,
Vol. 24, 1962)

Technical Report May 1962 Monitoring Agency No:
ASTIA Document No:
CENTRAL NERVOUS MECHANISMS IN CIRCULATION REGULATION

Contract Title: ANATOMICAL LOCALIZATION OF TARGET LEARNING AND MEMORY

Investigator: Professor Y.Z. Young
University College
Department of Anatomy
London, England

BIOSCIENCES

Contract No: AF 61(052)-256 Monitoring Agency: AFOSR, SRLA
Technical Note May 1961 Monitoring Agency No: AFOSR 2990
ASTIA Document No:
EVIDENCE FOR THE INTRAOCULAR DISCRIMINATION OF VERTICALLY AND HORIZONTALLY
POLARIZED LIGHT (Repr. fr. Jnl. Exp.Biol.1962, 39)

Technical Note Oct'1960 Monitoring Agency No: AFOSR 2991
ASTIA Document No:
THE DISCRIMINATION OF POLARIZED LIGHT BY OCTOPUS: A BEHAVIOURAL AND MORPHO-
LOGICAL STUDY (Repr. fr. Zeitschrift f. Vergleichende Physiologie, 44, 1961)

Technical Note 1960 Monitoring Agency No: AFOSR 2988
ASTIA Document No:
THE VISUAL SYSTEM OF OCTOPUS (1). REGULARITIES IN THE RETINA AND OPTIC LOBES
OF OCTOPUS IN RELATION TO FROM DISCRIMINATION (Repr. fr. Nature, Vol. 186,
No. 4728, June 1960)

Technical Note March 1960 Monitoring Agency No: AFOSR 2989
ASTIA Document No:
LEARNING AND DISCRIMINATION IN THE OCTOPUS (Repr. fr. Biological Reviews,
Vol. 36, 1961)

Technical Note March 1961 Monitoring Agency No: AFOSR 2992
ASTIA Document No:
THE RETINA OF CEPHALOPODS AND ITS DEGENERATION AFTER OPTIC NERVE SECTION.
THE OPTIC LOBES OF OCTOPUS VULGARIS. (Repr. fr. Philosophical Transactions of
the Royal Society of London, Series B. Biological Sciences, No. 718, Vol.245,
March'62)

Technical Report May 1962 Monitoring Agency No:
ASTIA Document No:
NERVOUS SYSTEM OF THE OCTOPUS (FINAL REPORT)

Contract Title PHYSICAL AND CHEMICAL STUDIES OF CHLOROPHYLL SYSTEMS

Investigator: Prof. Dr. E. WASSINK
Agricultural University
Wageningen, The Netherlands

Contract No: AF 61(052)-270 Monitoring Agency: AFOSR, SRLA

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
STRONGLY CAROTENOID-DEFICIENT CHROMATIUM-STRAIN D CELLS WITH "NORMAL" BACTERIO-
CHLOROPHYLL ABSORPTION PEAKS IN THE 800-850 M μ REGION (Repr. fr. Nature, Vol.194,
No. 4828, May 1962)

BIOSCIENCES

Contract Title: CORRELATION OF ANATOMICAL STRUCTURE WITH PHYSIOLOGICAL FUNCTIONS OF THE HYPOTHALAMUS

Investigator: Dr. B.A. CROSS
University of Cambridge
Sub=Department of Veterinary
Anatomy
Cambridge, England

Contract No: AF 61(052)-301 Monitoring Agency: AFOSR, SRLB

Technical Note Aug 1961 Monitoring Agency No:
ASTIA Document No:
NEUROVASCULAR CONTROL OF OXYGEN TENSION IN THE TESTIS AND EPIDIDYMIS (Repr. fr. Jnl. Reprod.Fertil. 1962, 3)

Contract Title: DISTRIBUTION OF BIOLOGICALLY ACTIVE COMPOUNDS IN THE BODY

Investigator: Professor U.S. VON EULER
Karolinska Institute
Stockholm, Sweden

Contract No: AF 61(052)-309 Monitoring Agency: AFOSR, SRLB

Technical Note Oct 1961 Monitoring Agency No:
ASTIA Document No:
URINARY EXCRETION OF CATECHOLAMINES IN ENDOTOXIN-INDUCED FEVER IN RABBITS (Repr. fr. Acta Physiol.Scand. 1962, 54)

Technical Note Oct 1961 Monitoring Agency No:
ASTIA Document No:
INHIBITION BY GANGLIONIC BLOCKING AGENTS OF THE MOTOR RESPONSE OF THE ISOLATED GUINEA-PIG VAS DEFERENS TO HYPOGASTRIC NERVE STIMULATION (Repr. fr. Acta Physiol. Scand. 1962, 54)

Contract Title RESEARCH ON THE ROLE OF SULPHYDRYL AND DISULFIDE GROUPS

Investigator: Professor J. BRACHET
University of Brussels
Faculte des Sciences
Brussels, Belgium

Contract No: AF 61(052)-356 Monitoring Agency: AFOSR, SRLA

BIOSCIENCES

Contract No: AF 61(052)-367 Monitoring Agency: AFOSR, SRLA
Technical Report Oct 1962 Monitoring Agency No: AFOSR 3912
ASTIA Document No:
EFFECT OF DRUGS ON THE CATECHOLAMINE CONTENT OF NERVOUS TISSUE

Contract Title: ULTRASTRUCTURAL ORGANIZATION OF SKELETAL TISSUE

Investigator: Professor D. CARLSTROM
Karolinska Institute
Stockholm, Sweden

Contract No: AF 61(052)-386 Monitoring Agency: AFOSR, SRLA
Technical Note Dec 1961 Monitoring Agency No:
ASTIA Document No:
CORRELATION OF ION EXCHANGE COLUMN WITH MOLECULAR STRUCTURE OF BONE
(Annual Summary Rept No. 1)

Contract Title: PHOTOPHOSPHORYLATION MECHANISM IN PHOTOPHOSPHORYLATION CHLORO-
PLASTS

Investigator: Dr. M. AVRON
The Weizmann Institute of Science
Rehovoth, Israel

Contract No: AF 61(052)-390 Monitoring Agency: AFOSR, SRLA
Technical Note Apr' 1961 Monitoring Agency No:
ASTIA Document No:
PHOTOPHOSPHORYLATION AS A TOOL FOR THE SYNTHESIS OF SPECIFICALLY LABELED
NUCLEOTIDES (Repr. fr. Analytical Biochemistry, Vol.2, No.6, Dec'61)

Technical Note Dec'1961 Monitoring Agency No:
ASTIA Document No:
LIGHT-DEPENDENT ADENOSINE TRIPHOSPHATASE IN CHLOROPLASTS (Repr. fr. The Jnl
of Biological Chemistry, Vol.237, No.6, June'62)

Technical Report Apr'1962 Monitoring Agency No: AFOSR 2950
ASTIA Document No:
THE MECHANISM OF PHOTOPHOSPHORYLATION IN CHLOROPLASTS

BIOSCIENCES

Contract Title: DESIGN OF ADAPTIVE TEACHING SYSTEMS WITH A CAPABILITY FOR
SELECTING AND ALTERING CRITERIA FOR ADAPTATION

Investigator: Mr. A.G. PASK
System Research Ltd
London, England

Contract No: AF 61(052)-402 Monitoring Agency: MRG, MRP

Technical Note April 1962 Monitoring Agency No:
ASTIA Document No:
RESEARCH ON THE DESIGN OF ADAPTIVE TEACHING SYSTEMS WITH A CAPABILITY FOR
SELECTING AND ALTERING CRITERIA FOR ADAPTATION (Annual Summary Rept No. 2)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
THE LOGIC AND BEHAVIOUR OF SELF ORGANISING SYSTEMS AS ILLUSTRATED BY THE
INTERACTION BETWEEN MEN AND ADAPTIVE MACHINES (Intern. Symposium on Information
Theory, Brussels, 1962, Belgium)

Contract Title: CHEMICAL FACTORS IN THE EXCITATION OF CEREBRAL TISSUES

Investigator: Professor H. McIlwain
Maudsley Hospital
Department of Biochemistry
London S.E.5, England

Contract No: AF 61(052)- 404 Monitoring Agency: AFOSR, SRLA

Technical Report May 1962 Monitoring Agency No: AFOSR 3041
ASTIA Document No:
CHEMICAL FACTORS IN THE EXCITATION OF CEREBRAL TISSUES

Contract Title: STRUCTURE OF THE PHYCOBILINS

Investigator: Professor C. O'hEOCHA
University College
Galway, Ireland

Contract No: AF 61(052)-409 Monitoring Agency: AFOSR, SRLA

Technical Note Sept 1962 Monitoring Agency No:
ASTIA Document No:
ZINC COMPLEX SALT FORMATION BY BILIRUBIN AND MESOBILIRUBIN (Repr. fr. Nature,
Vol. 195, No.4844, Sep 1962)

BIOSCIENCES

Technical Report April 1962

Monitoring Agency No:

ASTIA Document No:

HYPOTHALAMIC AND FOREBRAIN AREAS RESPONSIBLE FOR CONTROL OF SECRETION OF
THYROTROPIC AND ADRENOCORTICOTROPIC HORMONES

Contract Title: RESEARCH ON RELATION BETWEEN BRAIN STEM AND ELECTROCORTICA
ACTIVITY

Investigator: Professor G.F. ROSSI
University of Genova
Laboratory of Neurophysiology
Genova, Italy

Contract No: AF 61(052)-461

Monitoring Agency: AFOSR, SRLA

Technical Note Sept'1961

Monitoring Agency No: AFOSR 3450

ASTIA Document No:

BLOOD PRESSURE DURING NATURAL SLEEP IN CATS (Repr. fr. Excerpta Medica, Intern.
Congress Series No.37 - 5th Intern.Congress of Electroencephalography and
Clinical Neurophysiology)

Technical Note Oct'1961

Monitoring Agency No: AFOSR 3449

ASTIA Document No:

INDUCTION OF SLEEP IN CATS BY ELECTRICAL STIMULATION OF THE BRAIN STEM RETICULAR
FORMATION (Repr. fr. Excerpta Medica, Intern.Congress Series, No.36, Second Int.
Congress of Neurological Surgery)

Technical Note 1962

Monitoring Agency No:

ASTIA Document No:

BLOOD PRESSURE DURING NATURAL SLEEP AND DURING SLEEP INDUCED BY ELECTRICAL
STIMULATION OF THE BRAIN STEM RETICULAR FORMATION (Repr. fr. Arch.Ital.Biol.
100, 1962)

Technical Note 1962

Monitoring Agency No:

ASTIA Document No:

INTERPRETAZIONE FISIOPATOLOGICA DEI MECCANISMI DEL SONNO INSORGENTE DURANTE LA
GUIDA (Reprint)

Contract Title: NEUROPHYSIOLOGIC INHIBITORY SYSTEMS ACTIVE DURING SLEEP

Investigator: Dr. M. JOUVET
University of Lyon
School of Medicine
Lyon, France

BIOSCIENCES

Contract No: AF 61(052)-472 Monitoring Agency: AFOSR, SRLA
Technical Report May 1962 Monitoring Agency No: AFOSR 2886
ASTIA Document No:
RESEARCH ON THE NEUROPHYSIOLOGICAL MECHANISMS OF SLEEP

Contract Title: ROLE BEHAVIOR AND SOCIAL STRUCTURE

Investigator: Professor S. EISENSTADT
Hebrew University
Jerusalem, Israel

Contract No: AF 61(052)-480 Monitoring Agency: AFOSR, SRLB

Technical Note 5 Sept 1962 Monitoring Agency No: AFOSR 4057
ASTIA Document No:

THE IMPACT OF PERSONAL ATTRIBUTES. HUMAN QUALITIES AND PRIMORDIAL TIES ON
ROLE BEHAVIOUR

Contract Title: EFFECTS OF FEAR AND ANXIETY REACTIONS ON VARIOUS PSYCHOLOGICAL
FUNCTIONS

Investigator: Dr. O. SPREEN
University of Saarland
Saarbrücken, Germany

Contract No: AF 61(052)-483 Monitoring Agency: AFOSR, SRLA

Technical Report Aug 1962 Monitoring Agency No:
ASTIA Document No:

EFFECTS OF ANXIETY LEVEL AND MILD SITUATIONAL STRESS ON VARIOUS PSYCHOLOGICAL
FUNCTIONS. THE INTERRELATIONSHIPS AMONG THESE FUNCTIONS, ANXIETY LEVEL AND
OTHER PERSONALITY VARIABLES.

Contract Title: REVIEW OF RECENT EUROPEAN LITERATURE ON PERIODONTAL DISEASES

Investigator: Professor J.J. PINDBORG
Royal Dental College
Copenhagen, Denmark

Contract No: AF 61(052)-532 Monitoring Agency: SAM, EXPDENT

BIOSCIENCES

Technical Report 1962 Monitoring Agency No:
ASTIA Document No:
SUPPLEMENT TO THE BIBLIOGRAPHY OF EUROPEAN LITERATURE ON PERIODONTAL
DISEASES 1950-1959

Technical Report 1962 Monitoring Agency No:
ASTIA Document No:
BIBLIOGRAPHY OF EUROPEAN LITERATURE ON PERIODONTAL DISEASES 1950-1959
(Part III: ARRANGED ACCORDING TO SUBJECT)

.....
Grant Title: FORMATION AND ROLE OF RADICALS IN FLAVOPROTEIN CATALYSIS

Investigator: Professor Q.H. GIBSON
University of Sheffield
Department of Biochemistry
Sheffield, England

Grant No: EOAR 61-2 Monitoring Agency: AFOSR, SRLA

Technical Note Nov 1961 Monitoring Agency No:
ASTIA Document No:
THE OXIDATION OF REDUCED FLAVIN NOMONUCLEOTIDE BY MOLECULAR OXYGEN (Repr. fr.
Biochem.Jnl. 1962, 83)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
ON THE NATURE OF COMPOUNDS PRESENT IN MIXTURES OF OXIDIZED AND REDUCED FLAVIN
MONONUCLEOTIDES

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
REACTIONS OF CYTOCHROME OXIDASE WITH OXYGEN AND CARBON MONOXIDE

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
STUDIES ON THE MECHANISM OF TPNH-CYTOCHROME c REDUCTASE (Abstract American
Chemical Society Meetings, Atlantic City, N.J. Sep 62)

Technical Report 1962 Monitoring Agency No:
ASTIA Document No:
FINAL REPORT

BIOSCIENCES

Grant Title: QUANTITATIVE VECTORCARDIOGRAPHY

Investigator: Professor P. RIJLANT
Free University of Brussels
Institut Solvay de Physiologie
Brussels, Belgium

Grant No: EOAR 61-10 Monitoring Agency: AFOSR, SRLA

Technical Note 1961 Monitoring Agency No:
ASTIA Document No:
THE VALIDATION OF A DIPOLAR REPRESENTATION OF THE ELECTRICAL ACTIVITY OF THE HEART (Repr. fr. Archives Intern. de Physiologie et de Biochimie, 1961, 69)

Technical Note 1961 Monitoring Agency No:
ASTIA Document No:
DEMONSTRATION OF A MODEL OF THE ELECTRICAL GENERATORS OF THE HEART (Repr. fr. Archives Intern. de Physiologie et de Biochimie, 1961, 69)

Technical Note 1961 Monitoring Agency No:
ASTIA Document No:
SEMI ANNUAL-REPORT

Grant Title: METABOLISM OF SIMPLE CARBON COMPOUNDS IN MICROORGANISMS

Investigator: Professor H. KORNBERG
University of Leicester
Leicester, England

Grant No: EOAR 61-12 Monitoring Agency: AFOSR, SRLA

Technical Note March 1962 Monitoring Agency No:
ASTIA Document No:
FORMATION OF PYRUVATE AND ACETYL-COENZYME A FROM ITACONYL-COENZYME A BY PSEUDOMONAS sp. (Repr. fr. Biochem.Biophys.Acta,59,1962)

Technical Note Apr'1962 Monitoring Agency No:
ASTIA Document No:
DISCONTINUITY OF AMIDASE FORMATION BY PSEUDOMONAS AERUGINOSA (Repr. fr. Biochem..Biophys.Acta,59,1962)

Technical Note June 1962 Monitoring Agency No:
ASTIA Document No:
IDENTIFICATION OF ENZYMES INVOLVED IN THE FORMATION OF PYRVATE FROM ITACONYL-COENZYME A (Repr. fr. Biochimica et Biophysica Acta 62,1962)

BIOSCIENCES

Technical Report June 1962

Monitoring Agency No:

ASTIA Document No:

THE METABOLISM OF SIMPLE CARBON COMPOUNDS IN MICRO-ORGANISMS

Grant Title: INVESTIGATION OF BONE AND TOOTH STRUCTURE

Investigator: Professor M.J. DALLEMAGNE
Institut de Therapeutique Experimentale
Universite de Liege
Liege, Belgium

Grant No: EOAR 61-26

Monitoring Agency: SAM, RSEC

Technical Report Oct 1962

Monitoring Agency No:

ASTIA Document No:

INVESTIGATION OF TOOTH AND BONE STRUCTURE

Grant Title: NERVOUS SYSTEM ACTIVITY IN A SPECIALIZED GANGLION

Investigator: Dr. A. CHALAZONITIS
Laboratoire d'Electrobiologie
C.N.R.S.
LYON, France

Grant No: EOAR 61-30

Monitoring Agency: AFOSR, SRLA

Technical Note Dec'1961

Monitoring Agency No:

ASTIA Document No:

PHOTOPOTENTIALS OF THE SEPIA GIANT AXONS SENSITIZED TO LIGHT (Repr. fr.
Bulletin de l'Inst. Oceanographique, Dec'61, No.1223)

Grant Title: BASIC RESEARCH IN THE FIELD OF VISION

Investigator: Professor V. RONCHI
Istituto Nazionale di Ottica
Arcetri-Firenze, Italy

Grant No: EOAR 61-34

Monitoring Agency: AFOSR, SRLA

Technical Note 1962

Monitoring Agency No:

ASTIA Document No:

ADAPTATIONAL EFFECTS AT PHOTOPIC AND MESOPIC LUMINANCES AS A FUNCTION OF
CONTRAST (Repr. fr. Atti della Fondazione Giorgio Ronchi, Anno XVII, N.2,
March-April 1962)

BIOSCIENCES

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
ADAPTATION AND TRAINING EFFECTS IN ERG: I LONG TERM ADAPTATION (Repr. fr.
Atti della Fondazione Giorgio Ronchi, Anno XVII, N.4, July-Aug 62)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
SUBJECTIVE SHARPNESS AND CONTRAST THRESHOLD (Repr. fr. Atti ..., Anno XVII,
No.4)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
ON THE SHARPNESS OF DEFOCUSSED CONTOURS (Repr. fr. Atti ..., No.4)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
TRAINING AND RETINAL LOCATION AFFECTING THE PERIODIC FLUCTUATION OF APPARENT
BRIGHTNESS DURING PROLONGED FIXATION (Repr. fr. Atti ... No.4)

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
ON THE VARIABILITY OF THE RATES OF RISE AND DECAY OF THE SCOTOPIC B-WAVE
(Repr. fr. Atti della ... No.4)

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Grant Title: NEUROPHYSIOLOGICAL STUDIES OF CONDITIONING

Investigator: Dr. G.F. RICCI
University of Pisa
Istituto di Farmacologia
Pisa, Italy

Grant No: EOAR 61-36 Monitoring Agency: AFOSR, SRIA

Technical Report June 1962 Monitoring Agency No: AFOSR 3218
ASTIA Document No:
NEUROPHYSIOLOGICAL STUDIES OF CONDITIONING

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Grant Title: FORMATION, METABOLISM AND PHUSIOLOGIC ROLE OF DOPAMINE IN THE
BRAIN

Investigator: Professor A. CARLSSON
University of Gteborg
Department of Pharmacology
Gteborg, Sweden

Grant No: EOAR 61-44 Monitoring Agency: AFOSR, SRIA

BIOSCIENCES

Contract Title: FUNCTIONAL SIGNIFICANCE OF TEMPORAL LOBE CENTERS IN THE BRAIN

Investigator: Dr. B. KAADA
University of Oslo
Oslo, Norway

Contract No: AF 61(514)-1127 Monitoring Agency: AFOSR, SRLA

Technical Note 1961 Monitoring Agency No:
ASTIA Document No:
DECREASE IN SEX DRIVE BY ABLATION OF THE SENSORIMOTOR CORTEX, AMYGDALA AND
OLFACTORY BULBS IN RATS

Technical Note 1961 Monitoring Agency No:
ASTIA Document No:
INCREASE IN SEX DRIVE BY SEPTAL, TEMPORAL CORTICAL AND HABENULAR LESIONS IN
RATS

Technical Report Jan 1962 Monitoring Agency No:
ASTIA Document No:
RESEARCH ON FUNCTIONAL SIGNIFICANCE OF "LIMBIC" AND RELATED STRUCTURES IN THE
BRAIN

Contract Title: STATISTICAL ANALYSIS OF ELECTROENCEPHALOGRAM

Investigator: Professor H. GASTAUT
Faculty of Medicine
Marseille, France

Contract No: AF 61(052)-20 Monitoring Agency: AFOSR, SRLA

Technical Report April 1962 Monitoring Agency No: AFOSR 3219
ASTIA Document No:
CHRONOGRAPHIC AND TOPOGRAPHIC STUDY OF CEREBRAL POTENTIALS EVOKED BY PHOTIC
STIMULATION IN MAN AND IN CAT

Contract Title: STUDY OF BIOCHEMISTRY OF BIOGENIC AMINES

Investigator: Dr. H. BLASCHKO
University of Oxford
Oxford, England

Contract No: AF 61(052)-235 Monitoring Agency: AFOSR, SRLA

BIOSCIENCES

Technical Note February 1962 Monitoring Agency No: AFOSR 3615
ASTIA Document No:
SPERMINE OXIDASE AND BENZYLAMINE OXIDASE. DISTRIBUTION, DEVELOPMENT AND
SUBSTRATE SPECIFICITY (Repr. fr. The Proc. of the Royal Society, B, Vol.156)

Technical Report July 1962 Monitoring Agency No: AFOSR 3032
ASTIA Document No:
STUDY OF BIOCHEMISTRY OF BIOGENIC AMINES

.....

CHEMISTRY

Contract Title: CRYSTAL CHEMISTRY OF ADDITION COMPOUNDS

Investigator: Dr. I. LINDQVIST
University of Uppsala
Uppsala, Sweden

Contract No: AF 61(052)-43 Monitoring Agency: AFOSR, SRC

Technical Report June 1962 Monitoring Agency No: AFOSR 3135
ASTIA Document No:
RESEARCH ON THE CRYSTAL CHEMISTRY OF THE SOLVATES OF $AsCl_3$, $POCl_3$, $SeOCl_2$,
 $SOCl_2$, SO_2Cl_2 AND THE DERIVATIVES OF THESE COMPOUNDS

.....

Contract Title CHEMICAL REACTIVITY OF THE ARYL-SILICON BOND

Investigator Dr. C. EABORN
University of Leicester
Leicester, England

Contract No: AF 61(052)-64 Monitoring Agency: ARL, ERG

Technical Report Sept 1961 Monitoring Agency No:
ASTIA Document No:
THE CHEMICAL REACTIVITY OF THE ARYL-SILICON BOND

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CHEMISTRY

Contract Title: APPLICATION OF THEORY OF IRREVERSIBLE PROCESSES TO CHEMICAL PROBLEMS

Investigator: Dr. T.A. BAK
University of Copenhagen
Copenhagen, Denmark

Contract No: AF 61(052)-133 Monitoring Agency: ARL, ARC

Technical Note 6 March 1962 Monitoring Agency No: ARL 62-384
ASTIA Document No:

WEAK INTERACTION DISSOCIATION OF DIATOMIC MOLECULES

.....

Contract Title: INVESTIGATION OF SOLID STATE CHEMICAL REACTIONS

Investigator: Professor S. PATAI
Hebrew University
Dept of Organic Chemistry
Jerusalem, Israel

Contract No: AF 61(052)-143 Monitoring Agency: ARL, ARC

Technical Note Nov 1961 Monitoring Agency No:
ASTIA Document No:

REACTIONS BETWEEN SOLIDS. V. UNCATALYSED, CATALYSED AND INHIBITED REACTION OF POTASSIUM CHLORATE WITH POLYDIVINYLBENZENE (Repr. fr. the Jnl of Applied Chemistry, 1962, Vol. 12)

Technical Note Nov 1961 Monitoring Agency No:
ASTIA Document No:

REACTIONS BETWEEN SOLIDS. III. UNCATALYSED, CATALYSED AND INHIBITED REACTION OF POTASSIUM PERCHLORATE WITH POLYDIVINYLBENZENE (Repr. fr. Jnl of Applied Chem. 1962, Vol.12)

Technical Note Nov 1961 Monitoring Agency No:
ASTIA Document No:

REACTIONS BETWEEN SOLIDS. IV. REACTION OF SODIUM PERCHLORATE, POTASSIUM BROMATE AND POTASSIUM IODATE WITH POLYDIVINYLBENZENE (Repr. fr. Jnl of Appl. Chemistry, 1962, Vol.12)

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Contract Title: HYDROLYSIS EQUILIBRIA OF CATIONS AND ANIONS

Investigator: Professor L.G. SILLEN
Royal Institute of Technology
Department of Inorganic Chemistry
Stockholm, Sweden

CHEMISTRY

Contract No: AF 61(052)-162 Monitoring Agency: AFOSR, SRC

Technical Note 14 1962 Monitoring Agency No: AFOSR 3216
ASTIA Document No:
HIGH-SPEED COMPUTERS AS A SUPPLEMENT TO GRAPHICAL METHODS I. FUNCTIONAL
BEHAVIOR OF THE ERROR SQUARE SUM

Technical Note 15 1962 Monitoring Agency No: AFOSR 3217
ASTIA Document No:
HIGH-SPEED COMPUTERS AS A SUPPLEMENT TO GRAPHICAL METHODS II. SOME COMPUTER
PROGRAMS FOR STUDIES OF COMPLEX FORMATION EQUILIBRIA

Technical Note 16 March 1961 Monitoring Agency No:
ASTIA Document No:
THE CRYSTAL STRUCTURE OF $\text{InOHSO}_4(\text{H}_2\text{O})_2$

Technical Note 17 July 1961 Monitoring Agency No:
ASTIA Document No:
THE CRYSTAL STRUCTURES OF $[\text{Al}_2(\text{OH})_2(\text{H}_2\text{O})_8] (\text{SO}_4)_2 \cdot 2\text{H}_2\text{O}$ AND $[\text{Al}_2(\text{OH})_2(\text{H}_2\text{O})_8]$
 $(\text{SeO}_4)_2 \cdot 2\text{H}_2\text{O}$

Technical Note 18 1961 Monitoring Agency No:
ASTIA Document No:
ON THE CRYSTAL STRUCTURE OF $\text{Na}_4\text{Ge}_9\text{O}_{20}$

Technical Note 19 Oct 1961 Monitoring Agency No:
ASTIA Document No:
STUDIES ON THE HYDROLYSIS OF METAL IONS 38. THE HYDROLYSIS OF MERCURY (II) IN
PERCHLORATE MEDIUM

Technical Note 20 Aug 1961 Monitoring Agency No:
ASTIA Document No:
THE MONONUCLEAR HYDROLYSIS OF VANADIUM (V)

Technical Note 21 Sept 1961 Monitoring Agency No:
ASTIA Document No:
EQUILIBRIUM STUDIES ON POLYANIONS 9. THE FIRST STEPS OF ACIDIFICATION OF
CHROMATE ION IN 3 M $\text{Na}(\text{ClO}_4)$ MEDIUM AT 250 C

Technical Note 22 Dec 1961 Monitoring Agency No:
ASTIA Document No:
ON THE CRYSTAL STRUCTURES OF FeOHSO_4 AND InOHSO_4

Technical Note 23 March 1962 Monitoring Agency No:
ASTIA Document No:
ON THE STRUCTURE OF CrOCl

Technical Report October 1962 Monitoring Agency No: AFOSR 3766
ASTIA Document No:
HYDROLYSIS EQUILIBRIA OF CATIONS AND ANIONS

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CHEMISTRY

Contract Title: SILICON AND PHOSPHORUS DERIVATIVES OF VARIOUS NITROGEN COMPOUNDS

Investigator: Dr. R.A. SHAW
Birckbeck College
University of London
London, England

Contract No: AF 61(052)-175 Monitoring Agency: ASD, ASRCNP

Technical Note 2 February 1962 Monitoring Agency No:
ASTIA Document No:
1,3,5-TRIAZINES. Part II. THE REACTION OF ACID CHLORIDES WITH TRIPHENYL PHOSPHITE

Contract Title MICROWAVE STUDIES OF ADSORBED MOLECULES

Investigator: Dr. M. FOLMAN
Technion-Israel Institute of Technology
Haifa, Israel

Contract No: AF 61(052)-308 Monitoring Agency: ARL, ARC

Technical Report July 1962 Monitoring Agency No:
ASTIA Document No:

MICROWAVE STUDIES OF ADSORBED MOLECULES

Contract Title RESEARCH ON QUANTUM THEORY OF MANY PARTICLE SYSTEMS

Investigator: Professor P.O. LOWDIN
University of Uppsala
Uppsala, Sweden

Contract No: AF 61(052)-351 Monitoring Agency: ARL, ARC

Technical Note 72 December 1961 Monitoring Agency No: ARL 255
ASTIA Document No:

THE STABILITY OF HARTREE-FOCK STATES

Technical Note 73 December 1961 Monitoring Agency No: ARL 256
ASTIA Document No:

REMARKS ON THE QUANTUM MECHANICAL INTERPRETATION OF THE STARK EFFECT IN THE
HYDROGEN ATOM

Technical Note 74 December 1961 Monitoring Agency No: ARL 257
ASTIA Document No:

STUDY OF ATOMS BY PERTURBATION THEORY

CHEMISTRY

Technical Note 76 May 1962 Monitoring Agency No: ARL 62-400
ASTIA Document No:
ORBITAL THEORIES OF ELECTRONIC STRUCTURE

Technical Note 77 May 1962 Monitoring Agency No:
ASTIA Document No:
EIGENVALUES OF FERMION DENSITY MATRICES

Technical Note 78 May 1962 Monitoring Agency No:
ASTIA Document No:
THE ENERGY BAND STRUCTURE OF POLYNUCLEOTIDES IN THE HUECKEL APPROXIMATION

Technical Note 79 June 1962 Monitoring Agency No:
ASTIA Document No:
INVESTIGATION OF THE ONE-ELECTRON SYSTEM OF URACIL WITH DIFFERENT SEMIEMPIRICAL METHODS

Technical Note 80 June 1962 Monitoring Agency No:
ASTIA Document No:
THE STRUCTURE OF FERMION DENSITY MATRICES

Technical Note 82 Aug 1962 Monitoring Agency No:
ASTIA Document No:
STUDIES ON THE ALTERNANT MOLECULAR ORBITAL METHOD. IV. GENERALIZATION OF THE METHOD TO STATES WITH DIFFERENT MULTIPLICITIES

Technical Note 83 Aug 1962 Monitoring Agency No:
ASTIA Document No:
SOME RECENT PROGRESS IN THE QUANTUM THEORY OF MANY-ELECTRON SYSTEMS

Technical Note 84 Sept 1962 Monitoring Agency No:
ASTIA Document No:
ON THE THEORETICAL FOUNDATION OF THE ONE-ELECTRON APPROXIMATION

.....
Contract Title: KINETIC STUDY OF ION-SENSITIZED POLYMERIZATION

Investigator: Professor E.A.S. CAVELL
University of Southampton
Department of Chemistry
Southampton, England

Contract No: AF 61(052)-376 Monitoring Agency: ASD, ASRCNP

Technical Note July 1961 Monitoring Agency No:
ASTIA Document No:
KINETIC STUDY OF ION-SENSITIZED TERMINATIONS OF RADICAL POLYMERIZATION
(Annual Summ.Report)

ELECTRONICS

Contract Title: DESIGN AND DEVELOPMENT OF A 1 KW-"X" BAND "M" TYPE CARCINOTRON
Investigator: Dr. O. DOEHLER
Compagnie Generale de
Telegraphie Sans Fil (CSF)
Domaine de Corbeville
Orsay (S & O), France
Contract No: AF 61(052)-68 **Monitoring Agency:** RADC, RCWES
Technical Report January 1962 **Monitoring Agency No:**
ASTIA Document No:
HIGH POWER X-BAND BACKWARD WAVE OSCILLATOR TUBE

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Contract Title: PROPAGATION OF ELECTROMAGNETIC WAVES IN GUIDES LOADED WITH
MAGNETIZED FERRITE
Investigator: Professor Ing. G. BARZILAI
University of Rome
Rome, Italy
Contract No: AF 61(052)-101 **Monitoring Agency:** AFCRL, CRRDA
Technical Note 5 June 1962 **Monitoring Agency No:**
ASTIA Document No:
MODES WITH COMPLEX PROPAGATION CONSTANT IN RECTANGULAR GUIDES LOADED WITH
TRANSVERSELY MAGNETIZED LOSSLESS FERRITE

.....

Contract Title: ABSORPTION AND TRANSMISSION OF ELECTROMAGNETIC WAVES
Investigator: Professor D.E. Meyer
III. Physikalisches Institut
University of Göttingen
Göttingen, Germany
Contract No: AF 61(052)-154 **Monitoring Agency:** RADC, RAWEC
Technical Note Sept 1962 **Monitoring Agency No:**
ASTIA Document No:
PHASE J: INVESTIGATION OF INTERDEPENDENCE OF ABSORBER DESIGN PARAMETERS (BROAD-
BAND MAGNETIC LAYER ABSORBERS WITH SMALL THICKNESS)
Technical Note Sept 1962 **Monitoring Agency No:**
ASTIA Document No:
Phase M, Part A: COMBINATION OF MAGNETIC LAYER- AND WEDGE TYPE ABSORBERS

ELECTRONICS

Contract Title: ACOUSTIC SPECIFICATION OF SPEECH

Investigators: Professor G. FANT
The Royal Institute of Technology
Stockholm, Sweden

Contract No: AF 61(052)-342 Monitoring Agency: AFCRL, CRRSV

Technical Note 1960 Monitoring Agency No:
ASTIA Document No:
DESCRIPTIVE ANALYSIS OF THE ACOUSTIC ASPECTS OF SPEECH (Repr. fr. Logos, Vol.5,
No. 1, Apr'62)

Technical Report Jan 1962 Monitoring Agency No:
ASTIA Document No:
SPEECH ANALYSIS AND SYNTHESIS

Contract Title: RECOVERY OF INFORMATION TRANSFERRED INTO PHASE MODULATION IN
IONOSPHERIC WAVES PATHS

Investigator: Professor U. TIBERIO
University of Pisa
Pisa, Italy

Contract No: AF 61(052)-359 Monitoring Agency: AFCRL, CRRKP

Technical Report Feb 1962 Monitoring Agency No: AFCRL 62-547
ASTIA Document No:
RECOVERY OF INFORMATION TRANSFERRED INTO PHASE MODULATION IN IONOSPHERIC WAVE
PATHS

Contract Title EMISSION OF HOT ELECTRONS FROM A COLD LATTICE

Investigator: Professor P. AIGRAIN
Ecole Normale Superieure
Rue Lhomond 24
Paris 5, France

Contract No: AF 61(052)-403 Monitoring Agency: AFCRL, CRRPB

Technical Note June 1962 Monitoring Agency No:
ASTIA Document No:
RESEARCH ON EMISSION OF HOT ELECTRONS FROM A COLD LATTICE (Annual Summary Report
No. 2)

ELECTRONICS

Contract Title: STUDIES ON THE DISTRIBUTION OF RADIO ECHOES FROM METEOR TRAILS
Investigator: Professor N. CARRARA
Centro di Studio per la
Fisica delle Microonde
Firenze, Italy
Contract No: AF 61(052)-477 **Monitoring Agency:** AFCRL, CRRK
Technical Note Dec 1961 **Monitoring Agency No:**
ASTIA Document No:
RADAR OBSERVATIONS OF METEOR ECHOES AS A MEANS OF INVESTIGATION IN THE FIELD OF
METEOR ASTRONOMY AND PHYSICS (Repr. fr. Il Nuovo Cimento, Serie X, Vol. 24)

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Contract Title: IONOSPHERIC ABSORPTION DURING A SOLAR ECLIPSE
Investigator: Dr. M. SCHAFFNER
Centro di Studio per la
Fisica delle Microonde
Firenze, Italy
Contract No: AF 61(052)-498 **Monitoring Agency:** AFCRL, CRRKI
Technical Report Jan 1962 **Monitoring Agency No:**
ASTIA Document No:
STUDY OF IONOSPHERIC ABSORPTION DURING A SOLAR ECLIPSE (Part I: SOLAR ECLIPSE)
Technical Report Jan 1962 **Monitoring Agency No:** AFCRL 62-312
ASTIA Document No:
STUDY OF IONOSPHERIC ABSORPTION DURING A SOLAR ECLIPSE. Part III: IONOSPHERIC
MEASUREMENTS BY MEANS OF SIGNALS FROM ARTIFICIAL SATELLITES

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Contract Title: RADIATION FIELDS ASSOCIATED WITH SHORT WAVE ANTENNAS IN ARBITRARY
LAND-SEA AREAS
Investigator: Professor H. LOTTRUP KNJDSSEN
Technical University of Denmark
Copenhagen, Denmark
Contract No: AF 61(052)-503 **Monitoring Agency:** AFCRL, CRRDW
Technical Note 1 March 1962 **Monitoring Agency No:**
ASTIA Document No:
A SURVEY OF THE LITERATURE ON MIXED PATH PROPAGATION

.....

ELECTRONICS

Contract Title: POLAR IONOSPHERIC PHENOMENA AND ITS RELATION TO POLAR RADIO
BLACKOUT

Investigator: Dr. B. LANDMARK
Norwegian Defense Research
Establishment
Kjeller pr Lillestrom, Norway

Contract No: AF 61(052)-526 Monitoring Agency: AFCRL, CRRKP

Technical Report June 1962 Monitoring Agency No:
ASTIA Document No:

EXPERIMENTAL STUDIES OF THE IONOSPHERIC D-REGION

Contract Title: TRANSVERSE WAVE INTERACTION

Investigator: Mr. K. BLOTEKJAER
Norwegian Defense Research
Establishment
Kjeller pr Lillestrom, Norway

Contract No: AF 61(052)-531 Monitoring Agency: RADG, RALTP

Technical Note 5 May 1962 Monitoring Agency No:
ASTIA Document No:

AN UNEXPECTED EFFECT IN AN EXPERIMENTAL TRANSVERSE-WAVE TUBE

Technical Note 6 May 1962 Monitoring Agency No:
ASTIA Document No:

MINIMUM NOISE TEMPERATURE OF DC-PUMPED TRANSVERSE-WAVE ELECTRON BEAM AMPLIFIERS

Technical Note 7 June 1962 Monitoring Agency No:
ASTIA Document No:

AN EXPERIMENTAL SYNCHRONOUS-WAVE AMPLIFIER

Technical Note 8 June 1962 Monitoring Agency No:
ASTIA Document No:

A δ -FUNCTION ANALYSIS OF TRANSVERSE WAVE INTERACTION IN PERIODIC STATIC FIELDS

Technical Note 9 June 1962 Monitoring Agency No:
ASTIA Document No:

A DC-PUMPED AMPLIFIER USING SPACE-PERIODIC MAGNETIC FIELD

Technical Note 10 July 1962 Monitoring Agency No: RADG TDR 62-486
ASTIA Document No:

A THEORETICAL ANALYSIS OF THE NOISE PERFORMANCE IN PARAMETRIC CYCLOTRON-WAVE
AMPLIFIERS

Technical Note 11 July 1962 Monitoring Agency No: RADG TDR 62-487
ASTIA Document No:

A PROPOSED HARMONIC GENERATOR BASED ON CYCLOTRON WAVES

ELECTRONICS

Technical Report July 1962

Monitoring Agency No:

ASTIA Document No:

TRANSVERSE WAVE INTERACTION IN ELECTRON BEAM DEVICES

.....

Contract Title VLF RADIATION AT LOW GEOMAGNETIC LATITUDES

Investigator: Professor ROBINSON and Mr. GALIL
Israel Institute of Technology
Physics Department
Haifa, Israel

Contract No: AF 61(052)-555

Monitoring Agency: AFCRL, CRRKA

Technical Note April 1962

Monitoring Agency No:

ASTIA Document No:

THE TRANSMISSION OF AUDIO-FREQUENCY ELECTROMAGNETIC WAVES THROUGH THE TERRESTRIAL IONOSPHERE IN THE MAGNETO-IONIC MODE

.....

Contract Title: METEOR TRAIL ECHOES

Investigator: Professor N. CARRARA
Centro di Studio per la
Fisica delle Microonde
Firenze, Italy

Contract No: AF 61(052)-592

Monitoring Agency: AFCRL, CRRKM

Technical Note 2 Sept 1962

Monitoring Agency No:

ASTIA Document No:

ON THE POSSIBILITY OF DISCERNING SPORADIC METEOR ECHOES AND SHOWER-METEOR ECHOES BY USING A WIDE-BEAM RADAR SET

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Contract Title: AURORAL ZONE-IONOSPHERIC RESEARCH

Investigator: Dr. B. HULTQVIST
Kiruna Geophysical Observatory
Kiruna, Sweden

Contract No: AF 61(052)-601

Monitoring Agency: AFCRL, CRRKI

Technical Note 1 Apr 1962

Monitoring Agency No: AFCRL 62-1014

ASTIA Document No:

SUNRISE AND SUNSET EFFECTS ON COSMIC NOISE ABSORPTION ASSOCIATED WITH AURORA AND MAGNETIC STORMS

ELECTRONICS

Technical Note 2 May 1962 Monitoring Agency No: AFCRL 62-1015
ASTIA Document No:
THE HEIGHT DISTRIBUTION OF THE RATIO OF NEGATIVE ION AND ELECTRON DENSITIES IN
THE LOWEST IONOSPHERE

Technical Note 3 June 1962 Monitoring Agency No: AFCRL 62-1044
ASTIA Document No:
STUDIES OF IONOSPHERIC ABSORPTION OF RADIO WAVES BY THE COSMIC NOISE METHOD

Technical Note 4 July 1962 Monitoring Agency No:
ASTIA Document No:
AURORAL ZONE SATELLITE SCINTILLATIONS STUDIES

Grant Title: ACOUSTIC SPECIFICATION OF SPEECH

Investigator: Dr. C.G. FANT
Royal Institute of Technology
Stockholm 70, Sweden

Grant No: EOAR 62-82 Monitoring Agency: AFCRL, CRRSV

Technical Note Apr 1962 Monitoring Agency No:
ASTIA Document No:
SPEECH TRANSMISSION LABORATORY - QUARTERLY PROGRESS AND STATUS REPORT

Technical Note March 1962 Monitoring Agency No:
ASTIA Document No:
ON THE PERCEPTION OF SWEDISH CONSONANTS IN INTERVOCALIC POSITION

Technical Note July 1962 Monitoring Agency No:
ASTIA Document No:
SPEECH TRANSMISSION LABORATORY - QUARTERLY PROGRESS AND STATUS REPORT

Grant Title: ELECTROMAGNETIC THEORY AND MICROWAVE SPECTROSCOPY

Investigator: Professor G. TORALDO DI FRANCIA
Centro di Studio per la Fisica
delle Microonde
Firenze, Italy

Grant No: EOAR 62-103 Monitoring Agency: AFCRL, CRRDW

Technical Note 1 May 1962 Monitoring Agency No:
ASTIA Document No:
RADIATION FROM A CHARGED PARTICLE IN UNIFORM STRAIGHT MOTION THROUGH A PARTICULAR
STRATIFIED MEDIUM

ELECTRONICS

Contract Title: RADIAT. DAMAGE IN SEMICONDUCTORS
Investigator: Dr. P. BARUCH
Ecole Normale Superieure
Laboratoire de Physique
Paris, France
Contract No: AF 61(052)-543 Monitoring Agency: AFCRL, CRRC
Technical Note July 1962 Monitoring Agency No:
ASTIA Document No:
Annual Summary Report No.1 (1) RADIATION ENHANCED DIFFUSION IN SILICON
(2) DESIGN OF A MICROCALORIMETER. STORED ENERGY MEASUREMENT IN IRRADIATED
GERMANIUM (3) STUDY OF DEFECT MOBILITY IN IRRADIATED GERMANIUM

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GEOPHYSICS

Contract Title: OBJECTIVE WEATHER FORECASTING
Investigator: Professor Dr. H. FLOHN
University of Bonn
Dept of Meteorology
Bonn, Germany
Contract No: AF 61(514)-1211 Monitoring Agency: AFCRL, CRZFC
Technical Report Dec 1960 Monitoring Agency No: AFCRL 62-864
ASTIA Document No:
RESEARCH IN OBJECTIVE WEATHER FORECASTING (2 volumes)

.....

Contract Title POLYDISPERSE AEROSOLS
Investigator: Senior Professor L.W. POLLAK
Dublin Institute for Advanced Studies
Dublin, Ireland
Contract No: AF 61(052)-26 Monitoring Agency: AFCRL, CRZPC
Technical Note 16 1962 Monitoring Agency No: AFCRL 62-819
ASTIA Document No:
THE APPROACH TO CHARGE EQUILIBRIUM IN A STORED AEROSOL DURING AGING (Reprint
fr. the Review Geofisica Pura e Applicata, Milano, Vol.51(1962/I)

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GEOPHYSICS

Contract Title: SKY AND SUN ULTRA-VIOLET RADIATION

Investigator: Dr. W. MOERIKOFER
Physikalisch-Meteorologisches
Observatorium Davos
Davos, Switzerland

Contract No: AF 61(052)-54

Monitoring Agency: AFCRL, CRZA

Technical Report May 1962

Monitoring Agency No:

ASTIA Document No:

INVESTIGATION ON THE SPECTRAL INTENSITY OF ULTRAVIOLET SKY AND SUN-SKY RADIATION
UNDER VARIOUS CONDITIONS AT 1590 m a.s.l.

Contract Title: INFRARED DISPERSION OF GASES

Investigator: Dr. J.H. JAFFE
The Weizmann Institute of Science
Rehovoth, Israel

Contract No: AF 61(052)-57

Monitoring Agency: AFCRL, CRZCS

Technical Report Apr 1962

Monitoring Agency No: AFCRL 62-871

ASTIA Document No:

DISPERSION OF GASES IN THE INFRARED

Contract Title: IONOSPHERIC STRUCTURE AND MOTION

Investigator: Professor Dr. K. RAWER
Ionospheric Institute
Braisach a/Rh., Germany

Contract No: AF 61(052)-81

Monitoring Agency: AFCRL, CRZIC

Technical Note 1 June 1962

Monitoring Agency No: AFCRL 62-1031

ASTIA Document No:

SOLAR AND LUNAR TIDES IN THE DRIFT OF THE E REGION

GEOPHYSICS

Contract Title: ADSORPTION PHENOMENA ON IONIC ADSORBENTS
Investigator: Dr. F.C. TOMPKINS
Imperial College of Science
and Technology
London, England
Contract No: AF 61(052)-190 Monitoring Agency: AFCRL, CRZPC
Technical Note May 1961 Monitoring Agency No:
ASTIA Document No:
ADSORPTION PHENOMENA ON IONIC ADSORBENTS (Jan'59 -May 1961 - 12th Quarterly
Status Report)

Contract Title: COSMIC RAY EXTENSIVE AIR SHOWERS
Investigator: Professor K. SITTE
Technion Research and
Development Foundation
Haifa, Israel
Contract No: AF 61 (052)-196 Monitoring Agency: AFCRL, CRZI
Technical Note 5 July 1962 Monitoring Agency No: AFCRL 62-1046
ASTIA Document No:
YIELD AND ANGULAR DISTRIBUTION OF CERENKOV RADIATION FROM EXTENSIVE AIR SHOWERS

Contract Title: DEVELOPMENT AND APPLICATION OF INFRARED TECHNIQUES
Investigator: Dr. H.W. THOMPSON
St John's College
Oxford, England
Contract No: AF 61(052)-202 Monitoring Agency: AFCRL, CRZCI
Technical Note Feb 1962 Monitoring Agency No:
ASTIA Document No:
INTENSITIES OF RAMAN VIBRATION BANDS. I (Repr. fr. Proceedings of the Royal
Society, A, Vol.268, 1962)
Technical Note Feb 1962 Monitoring Agency No:
ASTIA Document No:
INTENSITIES OF RAMAN VIBRATION BANDS. II. EFFECTS OF SOLVENT AND SOLUTE
STRUCTURE (Repr. fr. Proceedings of the Royal Soc., A, Vol.268, 1962)

GEOPHYSICS

Technical Report 1962

Monitoring Agency No:
ASTIA Document No:

BOUNDARY LAYER FLOW

Contract Title: RESEARCH ON THE OPTICS OF SELECTIVE SURFACES

Investigator: Dr. H. TABOR
Hebrew University
Jerusalem, Israel

Contract No: AF 61(052)-279

Monitoring Agency: AFCRL, CRZC

Technical Note 1962

Monitoring Agency No: AFCRL 62-1045
ASTIA Document No:

RESEARCH ON OPTICS OF SELECTIVE SURFACES (Second Annual Summary Report)

Contract Title: SPECTROPHOTOMETRIC INVESTIGATION OF AURORA WITH EMPHASIS ON RAPID VARIATIONS

Investigator: Professor A. HULTQVIST
Kiruna Observatory of the
Royal Swedish Academy of Science
Kiruna, Sweden

Contract No: AF 61(052)-288

Monitoring Agency: AFCRL, CRRK

Technical Note 1 May 1962

Monitoring Agency No:
ASTIA Document No:

TIME VARIATION OF AURORAL LIGHT EMISSION DOWN TO PERIODS OF ABOUT 200 MICRO-SECONDS

Technical Note 2 May 1962

Monitoring Agency No:
ASTIA Document No:

CONNECTIONS BETWEEN SUDDEN CHANGES IN AURORAL EMISSIONS, IONOSPHERIC CURRENTS AND ELECTRON CONTENTS

Contract Title: STUDY OF METHODS OF OBSERVATION OF EARTH SATELLITES

Investigator: Professor L. ROSINO
University of Padova
Padova, Italy

Contract No: AF 61(052)-295

Monitoring Agency: ESD, ESSTN

GEOPHYSICS

Contract Title: TRACKING AND MEASUREMENT OF ARTIFICIAL SATELLITE TRAJECTORIES
Investigator: Dr. C. DE JAGER
University of Utrecht
Utrecht, Holland
Contract No: AF 61(052)-396 Monitoring Agency: ESD, ESSTN
Technical Report April 1962 Monitoring Agency No:
ASTIA Document No:
SATELLITE OBSERVATIONS IN THE NETHERLANDS

Contract Title: IMPROVED PHOTO MAPS OF THE MOON AND PLANETS
Investigator: Professor Z. KOPAL
University of Manchester
Department of Astronomy
Manchester, England
Contract No: AF 61(052)-400 Monitoring Agency: AFCRL, CRZEL
Technical Note March 1962 Monitoring Agency No:
ASTIA Document No:
RESEARCH STUDY AND DEVELOPMENT OF 1 METER-MIRROR FOR MOON TRACKING AND PHOTO-
GRAPHY (Annual Summ. Rept No. 2)
Technical Note 1 Apr 1962 Monitoring Agency No: AFCRL 62-818
ASTIA Document No:
A "SEEING MONITOR" FOR ASTRONOMICAL PHOTOGRAPHY

Contract Title: THERMOMAGNETOELECTRIC EFFECTS IN SEMI-CONDUCTOR COMPOUNDS
Investigator: Professor P. AIGRAIN
Laboratoire Central des
Industries Electriques
Fontenay-aux-Roses (Seine), France
Contract No: AF 61(052)-408 Monitoring Agency: AFCRL, CRZAP
Technical Report 1962 Monitoring Agency No:
ASTIA Document No:
RESEARCH IN THERMOMAGNETOELECTRIC EFFECTS IN SEMI-CONDUCTORS

GEOPHYSICS

Contract Title: STATISTICS OF METEOROLOGICAL VARIABLES
Investigator: Professor C.L. GODSKE
University of Bergen
Bergen, Norway
Contract No: AF 61(052)-416 Monitoring Agency: AFCRL, CRZWA
Technical Note May 1962 Monitoring Agency No: AFCRL 62-1009
ASTIA Document No:
STATISTICS OF METEOROLOGICAL VARIABLES (Summ. Rept No.1)

.....
Contract Title: COMPUTATION METHODS OF LONG WAVE ATMOSPHERIC RADIATION
Investigator: Professor Dr. F. MOLLER
University of Munich
Meteorological Institute
Munich, Germany
Contract No: AF 61(052)-493 Monitoring Agency: AFCRL, CRZCI
Technical Report Jan 1962 Monitoring Agency No: AFCRL 62-1032
ASTIA Document No:
COMPUTATIONAL METHODS OF LONG WAVE ATMOSPHERIC RADIATION

.....
Contract Title: LUNAR TOPOGRAPHY SURVEY
Investigator: Professor Z. KOPAL
University of Manchester
Manchester, England
Contract No: AF 61(052)-496 Monitoring Agency: ACIC, ACOP
Technical Note 2 May 1962 Monitoring Agency No:
ASTIA Document No:
STUDIES IN LUNAR TOPOGRAPHY. No. 9 (LUNAR SHADOW MEASURING TECHNIQUES AND
TABULATED RESULTS FOR THREE CRATERS)

GEOPHYSICS

Contract Title: THEORETICAL SEISMOLOGY
Investigator: Professor C. PEKERIS
The Weizmann Institute of Science
Rehovoth, Israel
Contract No: AF 61(052)-509 Monitoring Agency: AFCRL, CRZTA
Technical Note 4 July 1962 Monitoring Agency No:
ASTIA Document No:
PROPAGATION OF AN SH TORQUE PULSE IN A LAYERED SOLID

Contract Title: STRUCTURE AND DEVELOPMENT OF COMETARY TAILS
Investigator: Professor Dr. K. WURM
Hamburger Sternwarte
Hamburg-Bergedorf, Germany
Contract No: AF 61(052)-583 Monitoring Agency: AFCRL, CRZIP
Technical Note 1 Jul 1962 Monitoring Agency No: AFCRL 62-834
ASTIA Document No:
THE IONIZATION IN COMETS

Contract Title: ULTRAVIOLET RADIATION OF SUN AND SKY
Investigator: Dr. W. MORIKOFER
Physikalisch-Meteorologisches
Observatorium Davos
Davos-Platz, Switzerland
Contract No: AF 61(052)-618 Monitoring Agency : AFCRL, CRZCO
Technical Note 1 Sept 1962 Monitoring Agency No:
ASTIA Document No:
COMPARISON OF MEASURED AND THEORETICAL VALUES OF THE SPECTRAL INTENSITY OF
ULTRAVIOLET SKY RADIATION

G E O P H Y S I C S

Grant Title: ATMOSPHERIC OZONE DISTRIBUTION BY IR SPECTROSCOPY

Investigator: Professor P.A. SHEPPARD
 Imperial College of Science
 and Technology
 Meteorology Department
 London, England

Grant No: EOAR 61-14 Monitoring Agency: AFCRL, CRCZI

Technical Report July 1962 Monitoring Agency No:
 ASTIA Document No:
 THE VERTICAL DISTRIBUTION OF ATMOSPHERIC OZONE BY METHODS OF INFRA-RED
 SPECTROGRAPHY AND RELATED PROBLEM OF THE ATMOSPHERIC CONTINUUM

Grant Title: PHYSICS OF THE UPPER ATMOSPHERE

Investigator: Professor D. BATES
 Queen's University
 Belfast, Northern Ireland

Grant No: EOAR 61-16 Monitoring Agency: AFCRL, CRZA

Technical Note 1962 Monitoring Agency No: AFCRL 62-1049
 ASTIA Document No:
 TEMPERATURE DETERMINATION FROM A CLOUD OF ALKALI VAPOUR IN THE UPPER ATMOSPHERE

Technical Note 1962 Monitoring Agency No: AFCRL 62-1065
 ASTIA Document No:
 ISOTOPE SHIFT IN Li AND B²⁺

Technical Report June 1962 Monitoring Agency No:
 ASTIA Document No:
 RESEARCH ON PHYSICS OF THE UPPER ATMOSPHERE

Grant Title: COLLISION AND RECOMBINATION PROCESSES IN IONIZED GASES

Investigator: Dr. I. HERMAN
 Observatoire de Paris
 Meudon (S & O), France

Grant No: EOAR 61-17 Monitoring Agency: AFCRL, CRZIA

Technical Report 1962 Monitoring Agency No: AFCRL 62-1010
 ASTIA Document No:
 FINAL REPORT

GEOPHYSICS

Grant Title: ANALYSIS OF THE SPECTRUM OF THE NITRIC OXIDE MOLECULE

Investigator: Professor Dr. E. MIESCHER
University of Basel
Basel, Switzerland

Grant No: EOAR 61-19

Monitoring Agency: AFCRL, CRZI

Technical Note 1 May 1962

Monitoring Agency No: AFCRL 62-1016
ASTIA Document No:

NEW ENERGY LEVELS OF THE NO - MOLECULE

Technical Note Sept 1962

Monitoring Agency No:
ASTIA Document No:

ABSORPTION SPECTRUM OF THE NO MOLECULE III. THE HETEROGENEOUS PERTURBATION
 $H^2 + - H^2$

Grant Title: THEORETICAL INVESTIGATION OF DIFFUSION IN RAREFIED GASES

Investigator: Professor V.C.A. FERRARO
University of London
Bedford College
London, England

Grant No: EOAR 61-41

Monitoring Agency: AFCRL, CRZA

Technical Note 1 March 1962

Monitoring Agency No:
ASTIA Document No:

GEOMAGNETIC CONTROL OF DIFFUSION IN THE F_2 REGION OF THE IONOSPHERE.
1. THE FORM OF THE DIFFUSION OPERATOR.

Contract Title: METHODS OF DETERMINING LEVEL SURFACES OF THE EARTH'S GRAVITY FIELD

Investigator: Dr. E. TENGSTROM
University of Uppsala
Uppsala, Sweden

Contract No: AF 61(052)-226

Monitoring Agency: AFCRL, CRZK

Technical Note April 1962

Monitoring Agency No:
ASTIA Document No:

RESEARCH ON METHODS OF DETERMINING LEVEL SURFACES OF THE EARTH'S GRAVITY FIELD
(Summary Report)

GEOPHYSICS

Contract Title: POLARIMETRIC OBSERVATIONS OF PLANETS AND SATELLITES
Investigator: Professor A. DOLLFUS
Observatoire de Paris
Section d'Astrophysique
Meudon (S & O), France
Contract No: AF 61(052)-508 Monitoring Agency: AFCRL, CRZEL
Technical Note June 1962 Monitoring Agency No: AFCRL 62-1035
ASTIA Document No:
POLARIMETRIC OBSERVATIONS OF PLANETS AND SATELLITES (Annual Summ.Rept No. 1)

MATERIALS

Contract Title: ADEQUACY AND ACCURACY OF CREEP INFORMATION OBTAINED UNDER LOW STRESS CONDITIONS
Investigator: Professor F. ODQVIST
Royal Institute of Technology
Stockholm, Sweden
Contract No: AF 61(052)-05 Monitoring Agency: ASD, ASRCMD
Technical Note Aug 1962 Monitoring Agency No:
ASTIA Document No:
EVALUATION OF THE ADEQUCY AND ACCURACY OF CREEP INFORMATION OBTAINED UNDER LOW STRESS CONDITIONS (Annual Summary Report No. 4 - Dec 1960-April 1962)

Contract Title: FATIGUE STRENGTH OF RIVETED JOINTS AT ELEVATED TEMPERATURE
Investigator: Professor M. INAN
Technical University of
Istanbul, Turkey
Contract No: AF 61(052)-53 Monitoring Agency: ASD, ASRCMD
Technical Note June 1962 Monitoring Agency No:
ASTIA Document No:
FATIGUE STRENGTH OF RIVETED JOINTS AT ELEVATED TEMPERATURE

MATERIALS

Contract Title: THERMAL-STRESS ANALYSIS FOR DETERMINATION OF FATIGUE CRITERION

Investigator: Professor H. NEUBER
Technische Hochschule
Institut f. Technische Mechanik
Munich, Germany

Contract No: AF 61(052)-201 Monitoring Agency: ASD, ASRCMD

Technical Note July 1962 Monitoring Agency No:
ASTIA Document No:
HYSTERESIS LOOP MEASUREMENTS DURING THERMAL FATIGUE CYCLING OF NIMONIC 80A AND
PH 15-7 Mo STAINLESS STEEL (Ann. Summ. Rept No.3)

Contract Title: ACOUSTIC FATIGUE

Investigator: Professor E. RICHARDS
University of Southampton
Engineering Laboratory
Southampton, England

Contract No: AF 61(052)-504 Monitoring Agency: ASD, ASRCMD

Technical Note March 1961 Monitoring Agency No:
ASTIA Document No:
RANDOM EXCITATION OF A TAILPLANE SECTION BY JET NOISE

Technical Note December 1961 Monitoring Agency No:
ASTIA Document No:
THE RESPONSE TO NOISE OF A BEAM PINNED AT THREE POINTS AND ALLOWED TO VIBRATE
IN THE FIRST TWO MODES

Technical Note December 1961 Monitoring Agency No:
ASTIA Document No:
THE UNIVERSITY OF SOUTHAMPTON RANDOM SIREN FACILITY

Contract Title: GENERAL STRESS DISTRIBUTION IN IMPELLER WHEELS

Investigator: Dr. Ing. W. DETTMERING
Technische Hochschule
Institut f. Turbomaschinen
Munich, Germany

Contract No: AF 61(052)-520 Monitoring Agency: ASD, ASRCMS

Technical Report March 1962 Monitoring Agency No:
ASTIA Document No:
INVESTIGATION OF THE GENERAL STRESS DISTRIBUTION IN IMPELLER WHEELS

MATERIALS

Contract Title: STATISTICAL EVALUATION OF FATIGUE DATA

Investigator: Professor Dr. W. WEIBULL
Ch.Fontanettaz 15
La Rosiaz s/Lausanne

Contract No: AF 61(052)-522

Monitoring Agency: ASD, ASRCMD

Technical Note 2 Aug 1962

Monitoring Agency No:
ASTIA Document No:

ALGEBRA OF STOCHASTIC QUANTITIES

Contract Title: STRUCTURAL CONFIGURATIONS FOR INCREASING RESONANCE FATIGUE LIFE

Investigator: Dr. G. KURTZE
Grünzweig & Hartmann A.G.
Ludwigshafen a.Rh., Germany

Contract No: AF 61(052)-547

Monitoring Agency: ASD, ASRCMD

Technical Report July 1962

Monitoring Agency No:
ASTIA Document No:

STRUCTURAL CONFIGURATIONS FOR INCREASING RESONANCE FATIGUE LIFE

Grant Title: HYDROGEN OR OXYGEN EVOLUTION UNDER THE INFLUENCE OF ADSORBED
SUBSTANCES

Investigator: Dr. L. KANDLER
Technische Hochschule
Munich, Germany

Grant No: EOAR 61-20

Monitoring Agency: ASD, ASRCMS

Technical Report Sept 1962

Monitoring Agency No:
ASTIA Document No:

STUDIES OF HYDROGEN AND OXYGEN EVOLUTION AND THE INFLUENCE OF ADSORBED SUBSTANCES

MATHEMATICS

Contract Title: RESEARCH ON PROBABILITY THEORY
Investigator: Dr. E.S. ANDERSEN
Aarhus University
Copenhagen, Denmark
Contract No: AF 61(052)-42 Monitoring Agency: AFOSR, SRM
Technical Note 6 July 1962 Monitoring Agency No:
ASTIA Document No:
CHARACTERISTIC SUBSEQUENCES AND LIMIT LAWS FOR WEIGHTED MEANS

Contract Title: RESEARCH IN THE AREA OF MATHEMATICAL ANALYSIS
Investigator: Professor AGMON
Hebrew University
Jerusalem, Israel
Contract No: AF 61(052)-187 Monitoring Agency: AFOSR, SRM
Technical Note 26 March 1962 Monitoring Agency No: AFOSR 2914
ASTIA Document No:
TAUBERIAN CONSTANTS FOR THE ABEL AND CESARO TRANSFORMATIONS
Technical Note 27 May 1962 Monitoring Agency No: AFOSR 2915
ASTIA Document No:
ON THE UNITARY PART OF A CONTRACTION
Technical Note 28 May 1962 Monitoring Agency No: AFOSR 3131
ASTIA Document No:
EXTENSION OF COMPACT OPERATORS I
Technical Note 29 May 1962 Monitoring Agency No: AFOSR 3187
ASTIA Document No:
MIXED PROBLEMS FOR HIGHER ORDER HYPERBOLIC EQUATIONS
Technical Note 30 June 1962 Monitoring Agency No: AFOSR 3189
ASTIA Document No:
COMPLEX FUNCTION THEORY OVER NON-ARCHIMEDEAN FIELDS
Technical Note 31 June 1962 Monitoring Agency No: AFOSR 3132
ASTIA Document No:
EXTENSION OF COMPACT OPERATORS II
Technical Note 32 July 1962 Monitoring Agency No: AFOSR 3133
ASTIA Document No:
EXTENSION OF COMPACT OPERATORS III

MATHEMATICS

Technical Note 33 June 1962

Monitoring Agency No: AFOSR 3134

ASTIA Document No:

CONVEXITY THEOREMS AND LOWER BOUNDS FOR SOLUTIONS OF DIFFERENTIAL EQUATIONS
IN BANACH SPACE

Technical Note 34 June 1962

Monitoring Agency No: AFOSR 3188

ASTIA Document No:

CONTRACTIONS AND THEIR QUADRATIC FORMS

Contract Title: INTERPOLATION PROBLEMS

Investigator: Professor L. CARLESON
 University of Uppsala
 Department of Mathematics
 Uppsala, Sweden

Contract No: AF 61(052)-238

Monitoring Agency: AFOSR, SRM

Technical Report June 1962

Monitoring Agency No: AFOSR 2972

ASTIA Document No:

RESEARCH ON INTERPOLATION PROBLEMS

Contract Title: NON-NORMALITY EFFECTS ON STATISTICAL TESTS AND METHODS

Investigator: Professor H. HYRENIUS
 University of Göteborg
 Göteborg, Sweden

Contract No: AF 61(052)-459

Monitoring Agency: AFOSR, SRM

Technical Note 1962

Monitoring Agency No: AFOSR 3179

ASTIA Document No:

TABLES OF NORMAL AND LOG-NORMAL RANDOM DEVIATES (2 volumes, Part I and II)

Grant Title: COMPLEX ANALYSIS

Investigator: Professor R. Remmert
 University of Erlangen
 Erlangen, Germany

Grant No: EOAR 61-50

Monitoring Agency: AFOSR, SRM

Technical Note 1961

Monitoring Agency No:

ASTIA Document No:

ÜBER KOMPAKTE HOMOGENE KÄHLERSCHE MANNIGFALTIGKEITEN (Repr. fr. Math. Annalen 145,
1962)

METALLURGY

Contract Title: RESEARCH ON METALLIC PHASES IN SYSTEMS OF TRANSITION METALS WITH NON-METALS

Investigator: Professor G. HAGG
University of Uppsala
Uppsala, Sweden

Contract No: AF 61(052)-40

Monitoring Agency: AFOSR, SRPS

Technical Note 32 May 1962

Monitoring Agency No: AFOSR 2785
ASTIA Document No:

BORIDES OR RUTHENIUM, OSMIUM AND IRIIDIUM

Technical Note 33 July 1962

Monitoring Agency No: AFOSR 2993
ASTIA Document No:

X-RAY STUDIES OF MOLYBDENUM AND TUNGSTEN PHOSPHIDES

Contract Title: INVESTIGATION OF CREEP IN POLYCRYSTALLINE METALS

Investigator: Professor N.F. MOTT
University of Cambridge
Cavendish Laboratory
Cambridge, England

Contract No: AF 61(052)-98

Monitoring Agency: AFOSR, SRYS

Technical Note 1962

Monitoring Agency No: AFOSR 2934
ASTIA Document No:

THE DEPENDENCE OF CROSS-SLIP ON STACKING-FAULT ENERGY IN F.C.C. METALS AND ALLOYS (Annual Summ. Report No.3)

Contract Title: STUDY OF CRYSTAL IMPERFECTIONS BY MEASUREMENT OF X-RAY REFLECTING POWER

Investigator: Professor A. GUINIER
Faculte des Sciences
Laboratoire de Physique des Solides
Orsay (S & O), France

Contract No: AF 61(052)-310

Monitoring Agency: AFOSR, SRPS

Technical Report March 1962

Monitoring Agency No: AFOSR 2963
ASTIA Document No:

CRYSTALLINE TEXTURE OF BaTiO₃ CRYSTALS (Part II)

METALLURGY

Technical Report March 1962 Monitoring Agency No: AFOSR 2963
ASTIA Document No:
DYNAMICAL THEORY OF THE REFLECTION OF X-RAYS BY NON-PERFECT CRYSTALS (Part I)

Contract Title: DEFECT STRUCTURE AND DIFFUSION IN METAL OXIDES

Investigator: Dr. P. KOFSTAD
Central Institute for Industrial Research
Blindern-Oslo, Norway

Contract No: AF 61(052)-460 Monitoring Agency: ASD, ASRCMP

Technical Note 7 June 1962 Monitoring Agency No:
ASTIA Document No:
THE REACTION BETWEEN TANTALUM AND NITROGEN AT 800°-1300°C

Technical Note 8 Sept 1962 Monitoring Agency No:
ASTIA Document No:
THE OXIDATION BEHAVIOUR OF TANTALUM AT 700° -1000°C

Technical Note Oct 1962 Monitoring Agency No:
ASTIA Document No:
RESEARCH ON THE BEHAVIOUR OF TANTALUM AT HIGH TEMPERATURES AND RESEARCH ON THE
DEFECT STRUCTURE AND DIFFUSION IN METAL OXIDES

Contract Title: METALLOGRAPHY OF DISPERSION-HARDENED ALLOYS AND ITS RELATION TO
CREEP RESISTANCE

Investigator: Dr. J. NUTTING
AEON Laboratories
Egham, Surrey, England

Contract No: AF 61(052)-463 Monitoring Agency: ASD, ASRCMP

Technical Note 1 July 1962 Monitoring Agency No:
ASTIA Document No:
THE MICROSTRUCTURE OF A 7% ALUMINA-ALUMINUM SINTERED ALLOY (S.A.P.)

METALLURGY

Contract Title: BASIC RESEARCHES IN METAL CORROSION

Investigator: Professor G. BIANCHI
University of Milan
Department of Ind.Chemistry
Milan, Italy

Contract No: AF 61(052)-260 Monitoring Agency: AFOSR, SRC

Technical Note Dec 1961 Monitoring Agency No:
ASTIA Document No:
UBER DAS ELEKTROCHEMISCHE VERHALTEN VON SAUERSTOFF UND WASSERSTOFFSUPEROXID AUF
MAGNETIT-ELEKTRODEN (Repr. fr. Werkstoffe und Korrosion, July 1962, Vol.7)

Technical Note 6 Dec 1961 Monitoring Agency No: AFOSR 2050
ASTIA Document No:
CATHODIC REDUCTION OF OXYGEN AND HYDROGEN PEROXIDE ON PLATINUM, PALLADIUM AND
IRIDIUM SMOOTH ELECTRODES

Technical Note 7 Jan 1962 Monitoring Agency No: AFOSR 2051
ASTIA Document No:
OXYGEN AND HYDROGEN PEROXIDE ELECTROCHEMICAL BEHAVIOUR ON COPPER ELECTRODES

Technical Note 8 Feb 1962 Monitoring Agency No: AFOSR 2052
ASTIA Document No:
OXYGEN AND HYDROGEN PEROXIDE ELECTROCHEMICAL BEHAVIOUR ON CHROMIUM, NICKEL, COBALT
AND STAINLESS STEEL ELECTRODES

Technical Note Jan 1962 Monitoring Agency No:
ASTIA Document No:
CATALYTIC DECOMPOSITION OF ACID HYDROGEN PEROXIDE SOLUTIONS ON PLATINUM, IRIDIUM,
PALLADIUM AND GOLD SURFACES (Repr. fr. Electrochimica Acta, Vol.7)

Technical Report March 1962 Monitoring Agency No: AFOSR 2053
ASTIA Document No:
BASIC RESEARCHES IN METAL CORROSION - ELECTROCHEMICAL BEHAVIOUR OF OXYGEN AND
HYDROGEN PEROXIDE

Contract Title: BINARY MANGANESE-RARE EARTH ALLOYS

Investigator: Professor Dr. F. Lihl
Technische Hochschule
Institut f. Angewandte Physik
Vienna, Austria

Contract No: AF 61(052)-609 Monitoring Agency: ASD. ASRCPT

METALLURGY

Technical Note 1 July 1962 Monitoring Agency No:
ASTIA Document No:
APPARATUS FOR CARRYING OUT THERMAL ANALYSIS OF RARE EARTHS

Technical Note 2 Oct 1962 Monitoring Agency No:
ASTIA Document No:
X-RAY FLUORESCENCE ANALYSIS OF RARE EARTH METALS

Grant Title: SURFACE DEFORMATION IN THE CHEMICAL REACTIVITY OF METALS

Investigator: Dr. L. GRUNBERG
National Engineering Laboratory
East Kilbride
Glasgow, Scotland

Grant No: EOAR 61-27 Monitoring Agency: ASD, ASRCNL

Technical Report July 1962 Monitoring Agency No:
ASTIA Document No:
THE REACTIVITY OF DEFORMED METAL SURFACES

Grant Title: EQUATION OF STATE OF MATERIALS USING X-RAY METHODS

Investigator: Dr. R. SCHALL
Institut Franco-Allemand de
Recherches de St Louis
Saint-Louis (Ht Rhin), France

Grant No: EOAR 61-52 Monitoring Agency: AFSWC, SWR

Technical Report July 1962 Monitoring Agency No:
ASTIA Document No:
FLASH RADIOGRAPHIC MEASUREMENT OF THE SHOCK COMPRESSIBILITY OF MAGNESIUM,
PERSPEX, AND POLYETHYLENE

Contract Title: THREE DIMENSIONAL FLOW EFFECTS ON THIN WINGS
Investigator: Dr. G. DROUGGE
Aeronautical Research Institute
of Sweden (FFA)
Bromma 1, Sweden
Contract No: AF 61(052)-75 Monitoring Agency: AFOSR, SREM
Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
AN INVESTIGATION OF WING-BODY INTERFERENCE EFFECTS AT SUPERSONIC AND HYPERSONIC
SPEEDS (presented at the 3rd Int. Congress in the Aeron.Sciences, Aug 1962,
Stockholm, Sweden)

Contract Title: SUPERSONIC FLOW AROUND THREE DIMENSIONAL POINTED BODIES
Investigator: Professor L.G. NAPOLITANO
University of Naples
Istituto di Aeronautica
Naples, Italy
Contract No: AF 61(052)-82 Monitoring Agency: AFOSR, SREM
Technical Report Aug 1962 Monitoring Agency No:
ASTIA Document No:
SOLUTION OF THE SUPERSONIC FLOW OF A NON PERFECT GAS AROUND POINTED THREE-
DIMENSIONAL BODIES BY THE LINEARIZED CHARACTERISTICS METHOD

Contract Title: HYPERSONIC WIND TUNNEL MODEL DESIGN
Investigator: Professor L. BROGLIO
University of Rome
Rome, Italy
Contract No: AF 61(052)-198 Monitoring Agency: AFOSR, SREM
Technical Report Jan 1962 Monitoring Agency No: AFOSR 2749
ASTIA Document No:
SUMMARY REPORT OF SOME RESULTS ON RE-ENTRY PROBLEMS

MECHANICS

Contract Title: GROSS STRESSES IN THE FLOW OF LIQUIDS
Investigator: Professor M. Reiner
Technion Research and
Development Foundation
Haifa, Israel
Contract No: AF 61(052)-223 Monitoring Agency: AFOSR, SREM
Technical Report Apr 1962 Monitoring Agency No:
ASTIA Document No:
RESEARCH ON GROSS STRESSES IN THE FLOW OF DIFFERENT GASES

.....
Contract Title: BOUNDARY LAYER OSCILLATIONS AND NOISE
Investigator: Professor E.J. RICHARDS
University of Southampton
Southampton, England
Contract No: AF 61(052)-358 Monitoring Agency: ASD, ASRMDD
Technical Note 2 Dec 1961 Monitoring Agency No:
ASTIA Document No:
SPACE TIME CORRELATIONS OF THE BOUNDARY LAYER PRESSURE FIELD IN NARROW FREQUENCY
BANDS
Technical Note June 1962 Monitoring Agency No:
ASTIA Document No:
RESEARCH IN BOUNDARY LAYER OSCILLATIONS AND NOISE

.....
Contract Title: ELECTRON DENSITY, IONIZATION RATE AND THERMAL EQUILIBRIUM
BEHIND SHOCK WAVES
Investigator: Professor W. LOW
The Hebrew University
Jerusalem, Israel
Contract No: AF 61(052)-401 Monitoring Agency: AFOSR, SREM
Technical Note Aug 1962 Monitoring Agency No: AFOSR 4061
ASTIA Document No:
ELECTRON DENSITY, IONIZATION RATE AND APPROACH TO THERMAL EQUILIBRIUM BEHIND
SHOCK WAVES BY MEANS OF MICROWAVE TECHNIQUE (Annual Summ.Rept No.1)

MECHANICS

Contract Title: GROWTH OF TURBULENT FLUCTUATIONS IN FREE SHEAR FLOW
Investigator: Professor Dr. R. WILLE
H. Föttinger Institut
Technische Universität
Berlin-Charlottenburg 2, Germany
Contract No: AF 61(052)-412 Monitoring Agency: AFOSR, SREM
Technical Note May 1962 Monitoring Agency No: AFOSR 3191
ASTIA Document No:
VORTEX DEVELOPMENT IN A SEPARATED BOUNDARY LAYER (Annual Summary Rept No.2)

Contract Title: STRUCTURAL FATIGUE TESTING
Investigator: Dr. A.J. MARK
National Aeronautical
Research Institute (NLR)
Amsterdam, Holland
Contract No: AF 61(052)-439 Monitoring Agency: ASD, ASFE
Technical Note May 1962 Monitoring Agency No:
ASTIA Document No:
STATIC CALIBRATION ON THE SECOND FOKKER F-27 WING TENSION SKIN
Technical Note Aug 1962 Monitoring Agency No:
ASTIA Document No:
FATIGUE CRACKS IN F-27 WING TENSION SKINS SUBJECTED TO RANDOM-LOAD FATIGUE-TESTS
Technical Note Oct 1962 Monitoring Agency No:
ASTIA Document No:
RESULTS OF THE STATIC STRAIN GAUGE MEASUREMENTS ON THE FIFTH F 27 TENSION SKIN

Contract Title: DYNAMICS OF PLATES AND SHELLS UNDER THERMAL STRESSES
Investigator: Professor Dr. F. BUCKENS
University of Louvain
Department of Applied Mechanics
Heverlee-Louvain, Belgium
Contract No: AF 61(052)-499 Monitoring Agency: AFOSR, SREM
Technical Report March 1962 Monitoring Agency No: AFOSR 3195
ASTIA Document No:
DYNAMIC BEHAVIOR OF PLATES UNDER THERMAL STRESS

MECHANICS

Contract Title THE SUPERFICIAL RE-EMISSION LAW IN A FREE-MOLECULE FLOW

Investigator: Professor C. FERRARI
Politecnico di Torino
Laboratorio di Meccanica Applicata
Torino, Italy

Contract No: AF 61(052)-511 Monitoring Agency: AFOSR, SREM

Technical Note 1 Sept 1962 Monitoring Agency No: AFOSR 3780
ASTIA Document No:
THE SUPERFICIAL RE-EMISSION LAW IN A FREE-MOLECULAR FLOW

Contract Title DESIGN, CONSTRUCTION AND TESTING OF MOLECULAR BEAM

Investigator Dr. F.M. DEVIENNE
Laboratoire Mediterranee de
Recherches Thermodynamiques
Nice, France

Contract No: AF 61(052)-561 Monitoring Agency: AFOSR, SREM

Technical Report Aug 1962 Monitoring Agency No: AFOSR 3783
ASTIA Document No:
EXPERIMENTAL RESEARCHES ON CHARGE OR MOMENTUM EXCHANGE BETWEEN IONS AND MOLECULES
IN ORDER TO OBTAIN HIGH SPEED MOLECULAR BEAM

Contract Title: WAKE STRUCTURE OF TWO AND THREE DIMENSIONAL BODIES AT SUPER AND
HYPERSONIC SPEEDS

Investigator: Dr. J. ROM
Technion Research and
Development Foundation Ltd
Haifa, Israel

Contract No: AF 61(052)-576 Monitoring Agency: ARL, ARF

Technical Note 1 May 1962 Monitoring Agency No: ARL 62-454
ASTIA Document No:
THEORY FOR SUPERSONIC TWO-DIMENSIONAL LAMINAR-BASE TYPE FLOWS USING THE CROCCO-
LEES MIXING CONCEPTS

MECHANICS

Grant Title THE INTERACTION OF SOUND AND TRUBULENCE
Investigator Prof. Dr. W. TOLLMIEH
Max-Planck Institut
f. Strömungsforöschung
Göttingen, Germany
Grant No: EOAR 61-5 Monitoring Agency: AFOSR, SREM
Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
EXPERIMENTELLE UNTERSUCHUNGEN UBER DIE STREUUNG VON SCHALL IN TURBULENTER
STROMUNG

.....
Grant Title: PRACTICAL NUMERICAL METHODS FOR THREE DIMENSIONAL SUPERSONIC
FLOWS
Investigator: Professor Dr. R. SAUER
Technische Hochschule München
Mathematisches Institut
Munich, Germany
Grant No: EOAR 61-21 Monitoring Agency: AFOSR, SREM
Technical Report June 1962 Monitoring Agency No: AFOSR 3190
ASTIA Document No:
FINITE-DIFFERENCE METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS

.....
Grant Title: CONTROL OF LAMINAR BOUNDARY LAYERS IN COMPRESSIBLE FLOW
Investigator: Professor Dr. H. SCHLICHTING
Technische Hochschule
Braunschweig, Germany
Grant No: EOAR 61-45 Monitoring Agency: AFOSR, SREM
Technical Report July 1962 Monitoring Agency No: AFOSR 3715
ASTIA Document No:
AN APPROXIMATE METHOD FOR CALCULATING THE COMPRESSIBLE LAMINAR BOUNDARY LAYER
WITH CONTINUOUSLY DISTRIBUTED SUCTION

MECHANICS

Grant Title: STEADY AND UNSTEADY MOTION IN MAGNETO-FLUIDYANMICS

Investigator: Prof. D.C. PACK
Royal College of
Science and Technology
Glasgow, Scotland

Grant No: EOAR 61-49 Monitoring Agency: AFOSR, SREM

Technical Note 1962 Monitoring Agency No: AFOSR 3781
ASTIA Document No:
MAGNETO-GAS-DYNAMIC SHOCK WAVES IN A GAS WITH VARIABLE CONDUCTIVITY (Reprint
fr. The Physics of Fluids, Vol.5, No.6, June'62)

Technical Report July 1962 Monitoring Agency No:
ASTIA Document No:
STEADY AND UNSTEADY MOTION IN MAGNETOGASDYNAMICS (Part I)

Technical Report July 1962 Monitoring Agency No:
ASTIA Document No:
THE NUMERICAL SOLUTION OF THE SINGULAR INTEGRAL EQUATION FOR DIFFRACTION BY
A SOFT STRIP (Part II)

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Grant Title: LAMINAR SEPARATION IN SUPERSONIC FLOW

Investigator: Professor J.J. GINOUX
Training Center for
Experimental Aerodynamics
Rhode St Genese, Belgium

Grant No: EOAR 62-52 Monitoring Agency: AFOSR, SREM

Technical Report Sept 1962 Monitoring Agency No:
ASTIA Document No:
LAMINAR SEPARATION IN SUPERSONIC FLOW

.....

Grant Title: BUCKLING OF CONICAL SHELLS UNDER EXTERNAL PRESSURE AND COMBINED
LOADING

Investigator: Dr. J. SINGER
Technion Research and
Development Foundation
Haifa, Israel

Grant No: EOAR 62-61 Monitoring Agency: AFOSR, SREM

MECHANICS

Technical Note 1 September 1962 Monitoring Agency No: AFOSR 3782
ASTIA Document No:
BUCLING OF ORTHOTROPIC CONICAL SHELLS UNDER EXTERNAL PRESSURE

.....

Grant Title: PRACTICAL NUMERICAL METHODS OF THREE-DIMENSIONAL SUPERSONIC FLOWS

Investigator: Professor Dr. R. SAUER
Technische Hochschule
München, Germany

Grant No: EOAR 62-94 Monitoring Agency: AFOSR, SREM

Technical Note March 1962 Monitoring Agency No: AFOSR 4058
ASTIA Document No:
NUMERICAL TREATMENT OF THE INITIAL VALUE PROBLEM FOR SYSTEMS OF QUASILINEAR
PARTIAL DIFFERENTIAL EQUATIONS OF FIRST ORDER (Repr. fr. Numerische Mathematik
4, 1962)

.....

PHYSICS

Contract Title: THERMODYNAMICS OF IRREVERSIBLE PROCESSES

Investigator: Professor Dr. S.R. DE GROOT and Dr. P. MAZUR
University of Leiden
Leiden, The Netherlands

Contract No: AF 61(052)-16 Monitoring Agency: AFOSR, SRYP

Technical Report May 1962 Monitoring Agency No: AFOSR 2976
ASTIA Document No:
RESEARCH ON STATISTICAL MECHANICS AND THERMODYNAMICS OF IRREVERSIBLE PROCESSES

.....

Contract Title: INVESTIGATION OF NUCLEAR REACTIONS INDUCED BY HEAVY ION
BOMBARDMENT

Investigator: Professor I. BERGSTROM
Nobel Institute of Physics
Stockholm, Sweden

Contract No: AF 61(052)-118 Monitoring Agency: AFOSR, SRYN

Technical Report June 1962 Monitoring Agency No: AFOSR 2976
ASTIA Document No:
INVESTIGATION OF NUCLEAR REACTIONS INDUCED BY HEAVY ION BOMBARDMENT AND OF
EXCITED LEVELS IN HEAVY NUCLEI

PHYSICS

Contract Title: BASIC INVESTIGATION INTO PARAMAGNETIC PROPERTIES OF RARE EARTH IONS IN GARNET STRUCTURES

Investigator: Dr. W.P. WOLF
University of Oxford
Clarendon Laboratory
Oxford, England

Contract No: AF 61(052)-125 Monitoring Agency: AFRL, CRCS

Technical Note 12 August 1962 Monitoring Agency No:
ASTIA Document No:

INVESTIGATION INTO THE ORIGIN OF CRYSTALLINE ELECTRIC FIELD EFFECTS ON RARE EARTH IONS I. CONTRIBUTION FROM NEIGHBOURING INDUCED MOMENTS

Contract Title: ELECTRON SCATTERING AND OSCILLATIONS IN PLASMA

Investigator: Professor K.C. EMELEUS
Queen's University of Belfast
Belfast, Northern Ireland

Contract No: AF 61(052)-132 Monitoring Agency: ARL, ARH

Technical Note Nov 1961 Monitoring Agency No:
ASTIA Document No:

NOTES ON THE EFFECT OF NOISE ON LANGMUIR PROBE CHARACTERISTICS (Repr. fr. Proceedings of the Physical Society, Vol.79, Part 3, No.509, 1962)

Technical Note 1961 Monitoring Agency No:
ASTIA Document No:
SPECTROSCOPIC STUDY OF OSCILLATING LOW-PRESSURE DISCHARGES (Repr. fr. Proceedings Fifth Intern.Conf. on Ionization Phenomena in Gases, Munich 1961, N.Holland Publ. Co. Amsterdam)

Technical Report July 1962 Monitoring Agency No:
ASTIA Document No:

PLASMA OSCILLATIONS

Contract Title: INVESTIGATION IN FIELD OF ELECTRONIC STRUCTURE AND ENERGY LEVELS OF MANY-ELECTRON ATOMS

Investigator: Professor E.A. HYLLEAAS
University of Oslo
Blindern-Oslo , Norway

Contract No: AF 61(052)-134 Monitoring Agency: ARL, ARC

PHYSICS

Contract Title: EFFECTIVE TEMPERATURE IN PLASMA USING SCHOCK WAVE MEASUREMENTS
Investigator: Professor K.H. HOCKER
Technische Hochschule
Stuttgart, Germany
Contract No: AF 61(052)-199 Monitoring Agency: ARL, ARH
Technical Report Jan 1962 Monitoring Agency No:
ASTIA Document No:
TRANSIENT DISCHARGES IN DENSE PLASMAS

Contract Title: THEORETICAL RESEARCH STUDIES OF REACTING PLASMAS
Investigator: Professor Dr. G. LUDWIG
Free University of Berlin
Berlin-Dahlem, Germany
Contract No: AF 61(052)-239 Monitoring Agency No: AFOSR 2962
ASTIA Document No:
THE IDEA OF MACROSCOPICAL OBSERVABLES IN CLASSICAL MECHANICS AND A GENERALIZATION
OF BOLTZMANN EQUATION (Part II)

Contract Title: THEORETICAL INVESTIGATION OF NUCLEAR SYMMETRY PROBLEMS
Investigator: Professor Dr. W. Thirring
University of Vienna
Vienna, Austria
Contract No: AF 61(052)-265 Monitoring Agency: AFOSR, SRPN
Technical Note 14 May 1962 Monitoring Agency No: AFOSR 2978
ASTIA Document No:
THE PRESENT STATUS OF THE NEW RESONANCES
Technical Note 15 June 1962 Monitoring Agency No: AFOSR 3100
ASTIA Document No:
ON A POSSIBLE E - RESONANCE
Technical Report August 1962 Monitoring Agency No: AFOSR 3761
ASTIA Document No:
SYMMETRIES OF FUNDAMENTAL PARTICLE INTERACTIONS

PHYSICS

Contract Title: SOUNDING BALLOON MEASUREMENTS OF SOLAR SYSTEM IONIZING RADIATION

Investigator: Professor Dr. PFOTZER
Max-Planck Institut für Aeronomie
Institut f. Stratosphären Physik
Lindau/Harz, Germany

Contract No: AF 61(052)-372 Monitoring Agency: AFOSR, SRPN

Technical Report Aug 1962 Monitoring Agency No: AFOSR 3440 Prt A
ASTIA Document No:
TIME PATTERN OF IONIZING RADIATION IN BALLOON ALTITUDES IN HIGH LATITUDES
(Part A, Text)

Technical Report Aug 1962 Monitoring Agency No: AFOSR 3440 Prt B
ASTIA Document No:
TIME PATTERN OF IONIZING RADIATION IN BALLOON ALTITUDES IN HIGH LATITUDES
(Part B, Figures and Diagrams)

Contract Title: HIGH ENERGY ON CERN 28 Bev ACCELERATOR

Investigator: Professor W.E. THIRRING
University of Vienna
Institute for Theoretical Physics
Vienna, Austria

Contract No: AF 61(052)-433 Monitoring Agency: AFOSR, SRPN

Technical Note June 1962 Monitoring Agency No: AFOSR 3159
ASTIA Document No:
HIGH ENERGY PHYSICS (Annual Summary Report No. 1)

Technical Note 4 May 1962 Monitoring Agency No: AFOSR 2977
ASTIA Document No:
DETERMINATION OF THE SLOPE OF THE POMERANCHUK-TRAJECTORY FROM HIGH ENERGY ELASTIC
SCATTERING

Technical Note 5 June 1962 Monitoring Agency No: AFOSR 3102
ASTIA Document No:
ELASTIC SCATTERING OF NEGATIVE PIONS AT 16 BeV/c

PHYSICS

Contract Title: RESEARCH PROGRAM IN RELATIVITY PHYSICS

Investigator: Professor H. BONDI
Department of Mathematics
University of London
Kings College
London, England

Contract No: AF 61(052)-457

Monitoring Agency: ARL, ARP

Technical Note 6 May 1962

Monitoring Agency No:
ASTIA Document No:

GRAVITATIONAL RADIATION

Contract Title: STUDY OF THEORETICAL PARTICLE POLARIZATION IN HIGH ENERGY PHYSICS

Investigator: Professor L. MICHEL
University of Paris
Faculte des Sciences Orsay
Orsay, France

Contract No: AF 61(052)-474

Monitoring Agency: AFOSR, SRPN

Technical Note 6 July 1962

Monitoring Agency No: AFOSR 3104
ASTIA Document No:

HYPERFINE STRUCTURE OF μ -MESIC ATOMS

Technical Note 7 July 1962

Monitoring Agency No: AFOSR 3105
ASTIA Document No:

THOMAS'S CLASSICAL THEORY OF SPIN

Technical Note 8 July 1962

Monitoring Agency No: AFOSR 3543
ASTIA Document No:

ASYMPTOTIC CONVERGENCE OF RENORMALIZED PERTURBATIVE EXPANSIONS

Contract Title: THREE BODY PROBLEM IN ATOMIC PHYSICS

Investigator: Professor C. PEKERIS
The Weizmann Institute of Science
Rehovot, Israel

Contract No: AF 61(052)-510

Monitoring Agency: AFOSR, SRPP

Technical Note Dec 1961

Monitoring Agency No:
ASTIA Document No:

$1^1S, 2^1S, \text{ AND } 2^3S$ STATES OF Li^+ (Repr. fr. The Physical Review, Vol. 126,
No. 1, Apr 1962)

PHYSICS

Technical Note Feb 1962 Monitoring Agency No:
ASTIA Document No:
MULTIPOLARITE DE LA TRANSITION DE 2.14 MeV DANS LE ¹¹B. (Repr. fr. Physics Letters
Vol.1, No.1, Apr'62)

Contract Title: THE KINETIC EQUATION FOR A PLASMA

Investigator: Professor G. KALMAN
Laboratoire des Hautes Energies
Orsay, France

Contract No: AF 61(052)-613 Monitoring Agency: ARL, ARH

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
STATISTICAL PLASMA THEORY. Part I: COLLECTIVE MOTIONS IN A PLASMA

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:
STATISTICAL PLASMA THEORY. Part II. STOCHASTIC PROCESSES IN A PLASMA

Grant Title: USE OF A TIME-OF-FLIGHT SPECTROMETER TO STUDY NUCLEAR REACTIONS

Investigator: Dr. K.G. MALMFORS
Nobel Institute for Physics
Stockholm, Sweden

Grant No: EOAR 61-8 Monitoring Agency: AFOSR, SRPN

Technical Report July 1962 Monitoring Agency No: AFOSR 3161
ASTIA Document No:
INVESTIGATIONS OF GAMMA RADIATION FROM NUCLEAR REACTIONS

Grant Title: SPECTROSCOPIC TEMPERATURE DETERMINATIONS IN PLASMAS

Investigator: Prof. W. LOCHTE-HOLTGREVEN
University of Kiel
Institute for Experimental Physics
Kiel, Germany

Grant No: EOAR 61-29 Monitoring Agency: ARL, ARH

Technical Report June 1962 Monitoring Agency No: ARL 62-460
ASTIA Document No:
DEVELOPMENT OF METHODS FOR QUANTITATIVE SPECTROSCOPIC TEMPERATURE DETERMINATION
OF PLASMAS

PHYSICS

Grant Title: PERTURBATION THEORY IN CLASSICAL MECHANICS USING SOME QUANTUM TECHNIQUES

Investigator: Professor L. GARRIDO
University of Zaragoza
Zaragoza, Spain

Grant No: ECAR 61-33 Monitoring Agency: AFOSR, SRPP

Technical Note 1961 Monitoring Agency No: AFOSR 2979
ASTIA Document No:
MECANICA CLASICA EN EL ESPACIO DE HILBERT (Repr. fr. Collectanea Mathematica
Vol.XII, Fasc 3 - 1961)

Technical Report July 1962 Monitoring Agency No:
ASTIA Document No:
QUANTUM MECHANICAL APPLICATIONS TO CLASSICAL PERTURBATION THEORY

Grant Title: METHODS OF DESCRIBING THE NON-EQUILIBRIUM OF REACTING GASES

Investigator: Professor Dr. G. LUDWIG
Free University of Berlin
Institute for Theoretical Physics
Berlin, Germany

Grant No: EOAR 61-48 Monitoring Agency: AFOSR, SRPP

Technical Report July 1962 Monitoring Agency No:
ASTIA Document No:
THEORETICAL RESEARCH STUDIES BY REACTING PLASMAS

Grant Title: VERY HIGH ENERGY NUCLEAR INTERACTIONS DUE TO PRIMARY COSMIC RAYS

Investigator: Professor S. VON FRIESEN
Lund University
Lund, Sweden

Grant No: EOAR 61-37 Monitoring Agency: AFOSR, SRPN

Technical Report June 1962 Monitoring Agency No: AFOSR 3177
ASTIA Document No:
THE RELATIVE ABUNDANCE OF NUCLEI HEAVIER THAN LITHIUM IN PRIMARY COSMIC RADIATION

PHYSICS

Grant Title: NON-EQUILIBRIUM STATISTICAL MECHANICS

Investigator: Professor I. PRIGOGINE
Free University of Brussels
Brussels, Belgium

Grant No: EOAR 62-16 Monitoring Agency: AFOSR, SRPP

Technical Note 1962 Monitoring Agency No:
ASTIA Document No:

KINETIC EQUATION FOR AN UNSTABLE PLASMA

Technical Note 1962 Monitoring Agency No: AFOSR 3944
ASTIA Document No:

CORRELATIONS IN A NON-ISOTHERMAL PLASMA

Technical Note 1962 Monitoring Agency No: AFOSR 3945
ASTIA Document No:

APPROACH TO EQUILIBRIUM OF A MANY-PARTICLE SYSTEM

Grant Title: THEORY OF NON-EQUILIBRIUM PROCESSES IN REACTING GASES AND
QUANTUM FIELD THEORY

Investigator Professor G. LUDWIG
Free University of Berlin
Institute f. Theoretical Physics
Berlin, Germany

Grant No: EOAR 62-66 Monitoring Agency: AFOSR, SRPP

Technical Note July 1962 Monitoring Agency No:
ASTIA Document No:

RESEARCH IN QUANTUM FIELD THEORY

Grant Title: HIGH ENERGY PHYSICS AND ELEMENTARY PARTICLE THEORY

Investigator: Professor A. SALAM
Imperial College
London, England

Grant No: EOAR 62-87 Monitoring Agency: AFOSR, SRPP

Technical Note March 1962 Monitoring Agency No:
ASTIA Document No:

FIELDS SATISFYING THE ASYMPTOTIC CONDITION (Repr. fr. Il Nuovo Cimento, Serie X,
Vol.25)

PROPULSION

Contract Title: EFFECT OF PRESSURE ON FLAME PROPAGATION

Investigator: Professor Dr. JOST
University of Göttingen
Göttingen, Germany

Contract No: AF 61(514)-1142

Monitoring Agency: ARL, ARC

Technical Note February 1962

Monitoring Agency No: ARL 62-435
ASTIA Document No:

THE PYROLYSIS AND OXIDATION OF HYDRAZINE IN SHOCK WAVES (Summ.Rept No.3)

Contract Title: KINETICS HYDROGEN-OXYGEN, HYDROCARBON-OXYGEN REACTIONS AFFECTED BY INHIBITORS

Investigator: Dr. R.R. BALDWIN
Hull University
Hull, England

Contract No: AF 61(052)-62

Monitoring Agency: AFOSR, SREP

Technical Note 1962

Monitoring Agency No:
ASTIA Document Nos

HOMOGENEOUS GAS-PHASE DECOMPOSITION OF HYDROGEN PEROXIDE (Repr. fr. Eight Symp. on Combustion, Baltimore, Md, 1962)

Technical Note 1962

Monitoring Agency No:
ASTIA Document Nos

THE DISSOCIATION OF HYDROGEN PEROXIDE AND ITS ROLE IN THE HYDROGEN-OXYGEN REACTION (Repr. fr. Eight Symp. (Int.) on Combustion, Baltimore, Md, 1962)

Contract Title: COMBUSTION OF SPRAYS, DROPLETS AND FLAMES

Investigator: Professor G. MILLAN
Instituto Nacional de Tecnica
Aeronautica "Esteban Terradas"
Madrid, Spain

Contract No: AF 61(052)-221

Monitoring Agency: AFOSR, SREP

Technical Note 5 March 1962

Monitoring Agency No: AFOSR 2836
ASTIA Document No:

ON THE INFLUENCE OF CHEMICAL KINETICS ON THE COMBUSTION OF FUEL DROPLETS

Technical Report May 1962

Monitoring Agency No: AFOSR 3197
ASTIA Document No:

COMBUSTION OF SOLID AND LIQUID PROPELLANTS AND FLAME THEORY

PROPULSION

Contract Title: COMBUSTION OF SOLID PROPELLANTS AND FLAME STRUCTURE
Investigator: Dr. C. SANCHEZ TARIFA
Instituto Nacional de Technica
Aeronautica "Esteban Terradas"
Madrid, Spain
Contract No: EOAR 62-90 Monitoring Agency: AFOSR, SREP
Technical Note 1 July 1962 Monitoring Agency No: AFOSR 3196
ASTIA Document No:
ON THE STRUCTURE OF PREMIXED AND DIFFUSION LAMINAR SPHERICO-SYMMETRICAL FLAMES

.....

SOLID STATE SCIENCES

Contract Title: RESEARCH ON ELECTROLUMINESCENCE
Investigator: Professor A. LUYCKX
University of Louvain
Faculte des Sciences
Louvain, Belgium
Contract No: AF 61(052)-166 Monitoring Agency: RADC, CRZCI
Technical Note 2 Dec 1961 Monitoring Agency No:
ASTIA Document No:
PHOTOMAGNETOELECTRIC EFFECT OF CdS SINGLE CRYSTALS AND OF BISMUTH ROLLED FOILS.
THERMOMAGNETOELECTRIC EFFECT OF CONTACTS Bi-Cu, Ge-Cu AND Si-Cu
Technical Note 3 Oct 1962 Monitoring Agency No:
ASTIA Document No:
ELECTRIC POLARIZATION OF CdS SINGLE CRYSTALS AND PHOTOMAGNETO-ELECTRIC EFFECTS

.....

Contract Title: RELATIONSHIPS BETWEEN MAGNETIC AND PHYSICAL PROPERTIES OF SULFIDES
Investigator: Professor T.W.F. Barth
Mineral-Geological Museum
Oslo, Norway
Contract No: AF 61(052)-178 Monitoring Agency: ARL, ARZ
Technical Report February 1962 Monitoring Agency No:
ASTIA Document No:
X-RAY AND MAGNETIC STUDY OF THE VANADIUM SULFIDE PHASES V_5S_4 AND VS_{1+x} (Part I)

SOLID STATE SCIENCES

Contract Title: STUDY OF NOVEL METHODS OF CALCULATION APPLIED TO SEMI-CONDUCTOR PHYSICS

Investigator: Professor E. CAIANIELLO
Istituto di Fisica Teorica
University of Naples
Naples, Italy

Contract No: AF 61(052)-434

Monitoring Agency: AFOSR, SRPS

Technical Note 7 July 1962

Monitoring Agency No: AFOSR 3103
ASTIA Document No:

SELF-COUPLED MESON FIELD: EQUATIONS FOR SINGLE PROPAGATORS, THEIR SOLUTIONS FOR A NUMERICAL MODEL, CONSIDERATIONS ON THE CONVERGENCE OF PERTURBATIVE EXPANSIONS

Technical Note 8 August 1962

Monitoring Agency No: AFOSR 3714
ASTIA Document No:

THE RENORMALIZATION GROUP

Technical Report Sept 1962

Monitoring Agency No: AFOSR 3769
ASTIA Document No:

NOVEL METHODS OF CALCULATION APPLIED TO SEMICONDUCTOR PHYSICS

Contract Title: MAGNETIC PROPERTIES USING THE MOSSBAUER EFFECT

Investigator: Dr. P. HILLMAN
The Weizmann Institute of
Science
Rehovoth, Israel

Contract No: AF 61(052)-621

Monitoring Agency: AFOSR, SRPS

Technical Note 1 June 1962

Monitoring Agency No:
ASTIA Document No:

THE ANTIFERROMAGNETIC CURIE POINT IN α -Fe₂O₃

Technical Note 2 Sept 1962

Monitoring Agency No:
ASTIA Document No:

MOSSBAUER EFFECT IN Kr⁸³ TRAPPED IN A CLATHRATE COMPOUND

SPECIAL PROJECTS

Contract Title: PRESENTATION OF RESEARCH IN ASTRONAUTICAL SCIENCES

Investigators: Mr. A. HJERSTRAND
11th Intern. Astronautical Congress
P.O.BOX 5045
Stockholm 5, Sweden

Contract No: AF 61(052)-444

Monitoring Agency: AFCRL, CRZPE

Technical Report 1961

Monitoring Agency No:

ASTIA Document No:

SPACE MEDICAL SYMPOSIUM (Held in conjunction with the XIITH INTERN. ASTRONAUTICAL CONGRESS, Stockholm, Aug 1960) (Repr. fr. Astronautick, Vol.2, No.4, 1961)

ADDITIONAL INFORMATION TO THE
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Technical Note 1961

Monitoring Agency No: AFOSR 2902
ON THE ELECTRORETINOGRAPHIC "PERSONAL EQUATION"

Technical Note 1961

Monitoring Agency No: AFOSR 2900
PERIPHERAL DIFFERENTIAL THRESHOLD UNDER PROLONGED
FIXATION(Reprint)

Technical Note 1961

Monitoring Agency No: AFOSR 2901
TRAINING AND ELECTRORETINOGRAPHIC RESPONSES(Repr.)

Technical Note 1961

Monitoring Agency No: AFOSR 2899
SPEED OF READING UNDER RED AND WHITE ILLUMINATIONS

Technical Note 1961

Monitoring Agency No: AFOSR 2881
SPECTRA OF LIGHT SCATTERED IN THE ATMOSPHERE AT
THE HEIGHTS OF 5 AND 16 KM (Reprint)

Contract AF 61(052)-107

Technical Note 1961

Monitoring Agency No: AFOSR 2827
ACTIVITY OF SINGLE UNITS IN THE PRIMARY OPTIC CORTEX
IN THE UNANAESTHETIZED RABBIT DURING VISUAL, ACOUSTIC,
OLFACTORY AND PAINFUL STIMULATION (Reprint)

Technical Note 1961

Monitoring Agency No: AFOSR 2829
ENHANCEMENT OF CORTICAL RESPONSES TO SHOCKS DELIVERED
TO LATERAL GENICULATE BODY. (Reprint)

Technical Note 1961

Monitoring Agency No: AFOSR 2826
ATTIVITA' TONICA DELLA RETINA REGISTRATA CON SEMIMI-
CROELETTRODI (Reprint)

Contract AF 61(052)-119

Technical Note 1961

Monitoring Agency No: AFOSR 2907
QUANTITATIVE BESTIMMUNG DES BLUTSTROMES IN EINEM NERVUS
ISOLIERTEN RINDENLAPPEN DER KATZE (Reprint)

Technical Note 1961

Monitoring Agency No: AFOSR 2909
THE TRANSFER OF OPTIC INFORMATION THROUGH THE LATERAL
GENICULATE BODY OF THE RABBIT

Contract AF 61(052)-121

Technical Note 3

Monitoring Agency No: AFOSR 2835
THE STRUCTURING OF SOCIOLOGICAL SPACES

Contract AF 61(052)-300

Technical Note 8

Monitoring Agency No: AFOSR 2744
A COMPARISON OF THE METHOD OF RATIO ESTIMATION AND
THE METHOD OF MAGNITUDE ESTIMATION

Technical Note 9

Monitoring Agency No: AFOSR 2830
A SUBJECTIVE SCALE AND THE THRESHOLD OF VELOCITY

Contract AF 61(052)-309

Technical Note 1961

Monitoring Agency No: AFOSR 3447
UPTAKE OF CATECHOLAMINES BY ADRENERGIC NERVE GRANULES
(Repr.)

Technical Note 1961

Monitoring Agency No: AFOSR 3448
STUDIES ON CATECHOLAMINE-CONTAINING GRANULES OF
SPECIFIC CELLS IN CYCLOSTOME HEARTS (Reprint)

CHEMISTRY

Contract AF 61(052)-276

Technical Note Apr 1961

Monitoring Agency No: AFOSR 2716
CRYSTALLOGRAPHIC STUDY OF $\text{Ca}_2\text{BASi}_3\text{O}_9$

ELECTRONICS

Contract AF 61(514)-1141

Technical Report Dec 1961

Monitoring Agency No: AFCRL 62-93
DOPPLER EFFECT OF ARTIFICIAL SATELLITES

Contract AF 61(514)-1183

Technical Note 11

Monitoring Agency No: AFOSR 2931
ASTIA Document No: AD 277 626
GENERATION AND USE OF PULSED MAGNETIC FIELDS

Contract AF 61(052)-139

Technical Note 9

Monitoring Agency No: AFCRL 62-395
SPORADIC-E IONIZATION OBSERVED BY THE BACKSCATTER
TECHNIQUE

Contract AF 61(052)-154

Technical Note Sept 1961

Monitoring Agency No: RADC TDR 62-23
ASTIA Document No: AD 271 925
ABSORPTION AND TRANSMISSION OF ELECTROMAGNETIC WAVES.
Phase K: MULTI-LAYER ABSORBER

Contract AF 61(052)-261

Technical Note March 1962

Monitoring Agency No: AFCRL 62-531
OBSERVATIONS MADE AT ATHENS IONOSPHERIC INSTITUTE DURING
THE SERIES OF NUCLEAR WEAPON TESTS AT ZEMLYA

Contract AF 61(052)-442

Technical Note Nov 1961

Monitoring Agency No: AFCRL 62-377
SPACE DIVERSITY RECEPTION IN TROPOSPHERIC SCATTER
FIELD MEASUREMENTS (Summary Rept)

Contract AF 61(052)-451

Technical Note 25

Monitoring Agency No: AFCRL 62 124
ASTIA Document No: AD 274 723
THE INTERACTION BETWEEN AN OBLIQUELY INCIDENT PLANE
ELECTROMAGNETIC WAVE AND AN ELECTRON BEAM IN THE
PRESENCE OF A STATIC MAGNETIC FIELD OF ARBITRARY
STRENGTH

Technical Note 27

Monitoring Agency No: AFCRL 62 451
DYNAMIC NON-LINEAR WAVE PROPAGATION IN IONIZED MEDIA.
2. THE MAGNETO-IONIC MEDIUM

Contract AF 61(052)-490

Technical Note Dec 1961

Monitoring Agency No: AFCRL 62-378
ON THE PROPAGATION OF VLF WAVES IN SOLIDS

Contract AF 61(052)-498

Technical Report Jan 1962

Monitoring Agency No: AFCRL 62 316 II
STUDY OF IONOSPHERIC ABSORPTION DURING A SOLAR ECLIPSE.
Part II: SATELLITE CONFERENCE

Contract AF 61(052)-503

Technical Note 2

Monitoring Agency No: AFCRL 62 384
THE SKY-WAVE FIELD FROM A VERTICAL DIPOLE OVER AN
INHOMOGENEOUS, FLAT EARTH CONSISTING OF TWO MEDIA

Contract AF 61(052)-526

Technical Note 1

Monitoring Agency No: AFCRL 1133
THE DETERMINATION OF D-REGION ELECTRON DENSITIES FROM
OBSERVATIONS OF CROSS MODULATION

Technical Note 2

Monitoring Agency No: AFCRL 62-382
AURORAL LUMINOSITY AND ABSORPTION OF COSMIC RADIO
NOISE

Contract AF 61(052)- 555

Technical Note 1

Monitoring Agency No: AFCRL 62-544
ABSORPTION OF AUDIO-FREQUENCY ELECTROMAGNETIC WAVES
TRAVERSING THE IONOSPHERE IN THE MAGNETO-IONIC MODE

GEOPHYSICS

Contract AF 61(514)- 1312

Technical Note 11

Monitoring Agency No: AFCRL 62 674
STORM SUDDEN COMMENCEMENTS AND INCONSPICUOUS
UNIVERSAL TIME VARIATIONS

Technical Note 12

Monitoring Agency No: AFCRL 62-675
COSMIC RAY INTENSITY VARIATIONS DURING 1961

Technical Report

Monitoring Agency No: AFCRL 62-652
GEOPHYSICAL ASPECTS OF COSMIC RAYS

Contract AF 61(052)-24

Technical Report March '62

Monitoring Agency No: AFCRL 62-625
RESEARCH ON RELATIONS BETWEEN COMETARY, SOLAR AND
UPPER ATMOSPHERIC PHYSICS

Contract AF 61(052)-26

Technical Note 15

Monitoring Agency No: AFCRL 62-616
TABLES AND GRAPHS FOR USE IN AEROSOL PHYSICS.
PART II.

Contract AF 61(052)-32

Technical Report

Monitoring Agency No: AFCRL 62-626
THE TRIPLET STATE

Contract AF 61(052)-131

Technical Note 1962

Monitoring Agency No: AFCRL 62-679
ELECTRON COOLING IN THE D REGION

Contract AF 61(052)-186

Technical Note 15

Monitoring Agency No: AFCRL 62 619
A PHOTOELECTRIC CONTOUR DENSITOMETER

Contract AF 61(052)-191

Technical Report

Monitoring Agency No: AFCRL 62-860
RESEARCH ON ELECTRONICALLY EXCITED STATES AND THEIR REACTIONS

Contract AF 61(052)-237

Technical Note Oct 1961

Monitoring Agency No: AFCRL 62-401
AN AUTOMATIC DIGITAL RECORDING AND REDUCING SYSTEM FOR GEOMAGNETOMETER DATA

Contract AF 61(052)-246

Technical Report

Monitoring Agency No: AFCRL 62 624
INVESTIGATION OF THE INFRARED EMISSION SPECTRUM OF THE ATMOSPHERE AND EARTH

Contract AF 61(052)-252

Technical Note 3

Monitoring Agency No: AFCRL 62 617
THE TIME DELAY OF THE RED [OI] LINES IN THE AURORA

Technical Note 4

Monitoring Agency No: AFCRL 62 618
LUMINOSITY CURVES OF HIGH AURORAE

Contract AF 61(052)-279

Technical Note 2

Monitoring Agency No: AFCRL 62 861
A METHOD FOR DETERMINATION OF THE OPTICAL CONSTANTS OF THIN ABSORBING LAYERS

Technical Note 4

Monitoring Agency No: AFCRL 62 649
ANALYSIS OF ELLIPTICALLY POLARISED LIGHT

Contract AF 61(052)-295

Technical Note May 1961

Monitoring Agency No: ESD TDR 62-209
PHOTOGRAPHIC TRACKING OF ARTIFICIAL SATELLITES WITH A K-37 AERIAL CAMERA

Contract AF 61(052)-299

Technical Report Nov 1961

Monitoring Agency No: AFCRL 62-623
A THEORETICAL DISCUSSION OF DIFFUSION AND DRIFT IN THE F2 REGION

Contract AF 61(052)-325

Technical Report

Monitoring Agency No: AFCRL 62-325
RESEARCH ON ATMOSPHERIC OPTICAL RADIATION TRANSMISSION

Contract AF 61(052)-334

Technical Note March 1961

Monitoring Agency No: AFCRL 424
ASTIA Document No: AD 267 992
CHLORINE 36 AS SPALLATION PRODUCT OF THE COSMIC RAYS
IN METEORITES AND THE EXPOSURE AGE OF IRON METEORITES

Contract AF 61(052)-346

Technical Note 1

Monitoring Agency No: AFCRL 62-611
THE SCALE OF NON-ADIABATIC HEATING AS A FACTOR IN
CYCLOGENESIS

Technical Note 2

Monitoring Agency No: AFCRL 62-612
A MOUNTAIN WAVE THEORY INCLUDING THE EFFECT OF THE
VERTICAL VARIATION OF WIND AND STABILITY

Technical Note 3

Monitoring Agency No: AFCRL 62-613
NUMERICAL TESTS OF A METHOD FOR DYNAMIC ANALYSIS IN
REGIONS OF POOR DATA COVERAGE

Technical Note 4

Monitoring Agency No: AFCRL 62-614
ON THE EFFECT OF FRICTION IN BAROCLINIC WAVES

Contract AF 61(052)-369

Technical Note 3

Monitoring Agency No: AFCRL 62-650
VIBRATION-ROTATION ENERGIES OF POLYATOMIC MOLECULES
IN THE CASE OF FIRST ORDER ANHARMONIC RESONANCE
BETWEEN THREE NON DEGENERATE VIBRATION FREQUENCIES

Contract AF 61(052)-395

Technical Report Oct 1961

Monitoring Agency No: AFCRL 62 654
RESEARCH STUDY AND DEVELOPMENT OF SOLAR PHOTOGRAPHIC
FILTERS

Contract AF 61(052)-416

Technical Note 1961

Monitoring Agency No: AFCRL 62-689
CONTRIBUTION TO STATISTICAL METEOROLOGY. 1. ON THE
APPLICATION OF NON STATIONARY TIME SERIES TO THE
STUDY OF NORWEGIAN AIR TEMPERATURES

Contract AF 61(052)-417

Technical Note 3

Monitoring Agency No: AFCRL 62-656
STUDIES ON SOLUTIONS CONTAINING RHODIUM IN THE
OXIDATION STATE 5, Rh(V) (Reprint)

Contract AF 61(052)-488

Technical Note 1

Monitoring Agency No: AFCRL 62-673
INVESTIGATION OF THE INFRARED EMISSION SPECTRUM OF
THE ATMOSPHERE AND EARTH

Contract AF 61(052)-496

Technical Note 1

Monitoring Agency No: ACIC-291-L2
THE METHODS AND PROCEDURE OF LUNAR PHOTOGRAPHY AT
PIC-DU-MIDI

Contract AF 61(052)-497

Technical Report Apr 1961

Monitoring Agency No: AFCRL 62-655
ATOMS AND FREE RADICALS SPECTROSCOPY

Contract AF 61(052)-509

Technical Note 3

Monitoring Agency No: AFCRL 62-615
EFFECT OF THE RIGIDITY OF THE INNER CORE ON THE
FUNDAMENTAL OSCILLATION OF THE EARTH

Grant EOAR 61-9

Technical Report 1961

Monitoring Agency No: AFCRL 62-426
RESEARCH ON NIGHT SKY EMISSIONS

Grant EOAR 61-16

Technical Note 1961

Monitoring Agency No: AFCRL 62-661
DIELECTRONIC RECOMBINATION TO NORMAL NITROGEN AND
OXYGEN IONS

Technical Note 1961

Monitoring Agency No: AFCRL 62-660
ELECTRON SCATTERING BY ATOMIC HYDROGEN IN THE 1S, 2S,
OR 2 P STATE

MATERIALS

Contract AF 61(052)-332

Technical Note July 1960

Monitoring Agency No: WADD TR 61-97
ON INFLUENCE FUNCTIONS IN THE THEORY OF FORCED
VIBRATIONS OF MEMBRANES

MATHEMATICS

Contract AF 61(052)-42

Technical Note Aug 1961

Monitoring Agency No: AFOSR 2134
INVESTIGATIONS ON FLUCTUATIONS OF SUMS OF RANDOM
VARIABLES

METALLURGY

Contract AF 61(052)-144

Technical Note 6

Monitoring Agency No: ASD TN 61-73
RESEARCHES ON HYDROGEN OVERVOLTAGE ON METALLIC
SINGLE CRYSTALS: ZINC

Contract AF 61(052)-338

Technical Report Feb 1962

Monitoring Agency No: ASD TDR 62-593
IONIC THINNING OF SPECIMENS FOR ELECTRON MICROSCOPY

Grant EOAR 61-42

Technical Report Apr 1962

Monitoring Agency No: ARL 62-397
RESEARCH ON THE BEHAVIOUR OF TANTALUM AND TANTALUM
BASE ALLOYS AT HIGH TEMPERATURES

PHYSICS

Contract AF 61(052)-134

Technical Note June 1961

Monitoring Agency No: ARL 62 258
ZUR PRAKTISCHEN LOSUNG DER RELATIVISTISCHEN EIN-
ELEKTRONENGLEICHUNG II (Reprint)

Technical Note July 1961

Monitoring Agency No: ARL 62-259
THE ERIKSEN TRANSFORMATION IN THE CASE OF PARTICLES
WITH SPIN 0 AND 1 (Reprint)

Contract AF 61(052)-474

Technical Note 5

Monitoring Agency No: AFOSR 2933
WEAK-ELECTROMAGNETIC AND PIONIC DECAY OF HYPERONS

Contract AF 61(052)-549

Technical Note 1

Monitoring Agency No: AFCL 62-627
SPONTANEOUS EMISSION OF PHONONS AND SPECTRAL LINE
WIDTHS OF SOME RARE EARTH IONS

Technical Note 2

Monitoring Agency No: AFCL 62-628
ABSORPTION SPECTRUM OF YTTERBIUM IN SINGLE CRYSTAL OF
CALCIUM FLUORIDE

Contract AF 61(052)-598

Technical Note 1961

Monitoring Agency No: AFOSR 2932
DOUBLE GAMMA EMISSION IN THE 6.06 MeV MONOPOLE
TRANSITION OF O^{16} (Repr.)

Grant EOAR 62-89

Technical Note 1961

Monitoring Agency No: AFOSR 2930
ACTION PRINCIPLE FOR CLASSICAL MECHANICS (Reprint)

PROPULSION

Contract AF 61(052)-398

Technical Note May 1962

Monitoring Agency No: ARL 62-379
ION PRODUCTION AND CONCENTRATION IN FLAMES

SOLID STATE SCIENCES

Contract AF 61(514)-1248

Technical Report Aug 1961

Monitoring Agency No: AFOSR 2090
INVESTIGATION OF HEAT VIBRATIONS IN SOLIDS BY USING
X-RAYS

Contract AF 61(052)-347

Technical Note Jan 1962

Monitoring Agency No: AFOSR 2929
A STUDY OF THE INTERNAL FIELDS ACTING ON NUCLEI IN
SOLIDS USING THE TECHNIQUES OF THE MOSSBAUER ABSOR-
PTION AND PERTURBATION OF γ - γ CASCADES

Contract AF 61(052)-423

Technical Note 2

Monitoring Agency No: AFOSR 2717
EFFICIENCY OF THE VARLEY MECHANISM FOR VACANCY
PRODUCTION IN ALKALI HALIDES

Contract AF 61(514)-1248

Technical Note Jan 1961

Monitoring Agency No: AFOSR 840
INVESTIGATION OF HEAT VIBRATIONS IN SOLIDS BY USING
X-RAYS

ERRATA

SOLID STATE SCIENCES

Contract AF 61(514)-1248

Technical Report Aug'1961: "INVESTIGATION OF HEAT VIBRATIONS IN SOLIDS BY USING
X-RAYS" DELETE No: AFOSR 840 and replace by AFOSR 2090