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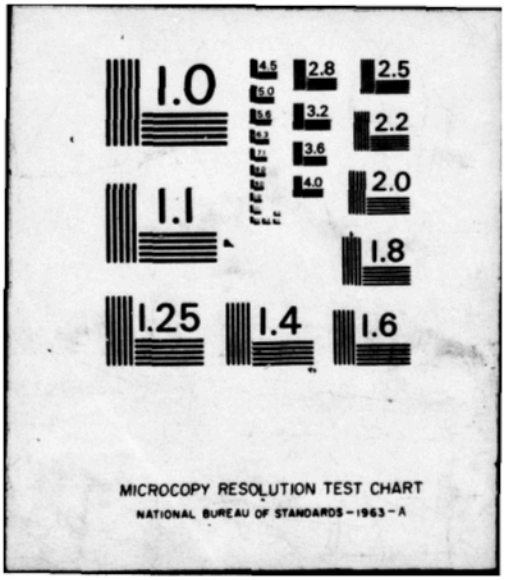
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BIOLOGICAL EFFECTS OF ELECTROMAGNETIC RADIATION

A Digest of Current Literature and a Forum of Communication

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13. ABSTRACT

Biological Effects of Electromagnetic Radiation serves as a vehicle through which current documentation of research highlights on the biological effects and health implications of nonionizing electromagnetic radiation (microwave and radiofrequency radiation) are compiled, condensed and disseminated on a regular basis. BEEMR is intended to be a highly useful current awareness tool for scientists engaged in research or related activities. The great number and diversity of relevant publications make imperative the availability of this service to persons whose work requires that they keep abreast of current developments in the field.

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Security Classification

BIOLOGICAL EFFECTS OF ELECTROMAGNETIC RADIATION

A Digest of Current Literature and a Forum of Communication

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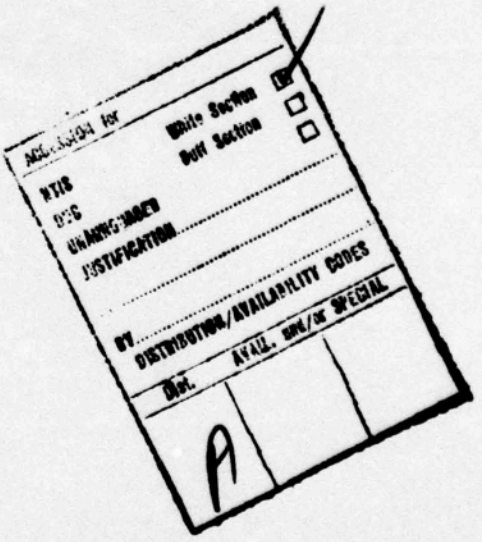
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Biological Effects Electromagnetic Radiation I(1), June 1974 and I(2), September 1974

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Literature Selected and Abstracted

by

THE FRANKLIN INSTITUTE RESEARCH LABORATORIES

Science Information Services

Biomedical Section

Bruce H. Kleinstein, Ph.D., Technical Editor

PREFACE

Due to printing delays, Volume I, issue 1 and Volume I, issue 2 of *Biological Effects of Electromagnetic Radiation* have been condensed and combined into one joint issue. Normally, the digest is published quarterly and will include materials received during the preceding three months. Each issue will include news items and announcements, a listing of meetings and conferences, abstracts of current literature, and a directory of current research. Materials for which full text is not available will be included as citations. When available, a special report section, technical note, book review, or topical retrospective literature survey will be included.

Biological Effects of Electromagnetic Radiation is a publication researched and prepared by the Franklin Institute Research Laboratories, Science Information Services Department, under a grant from the U.S. Army Research Office. The grant is co-sponsored by the Bureau of Radiological Health, Food and Drug Administration; Office of Naval Research; U.S. Navy Bureau of Medicine and Surgery; U.S. Air Force School of Aerospace Medicine; and the Walter Reed Army Institute of Research. The U.S. Environmental Protection Agency is cooperating in this project.

Biological Effects of Electromagnetic Radiation serves as a vehicle through which current documentation of research highlights on the biological effects and health implications of nonionizing electromagnetic radiation (microwave and radiofrequency radiation) are compiled, condensed and disseminated on a regular basis. *Biological Effects of Electromagnetic Radiation* is intended to be a highly useful current awareness tool for scientists engaged in research or related activities. The great number and diversity of relevant publications make imperative the availability of this service to persons whose work requires that they keep abreast of current developments in the field.

Biological Effects Electromagnetic Radiation I(1), June 1974 and I(2), September 1974

MEETINGS and CONFERENCES

**** SEVENTH ANNUAL WINTER CONFERENCE ON BRAIN RESEARCH.

Date: January 19-26, 1974
Place: Steamboat Springs, Colorado
Sponsor: Barrow Neurological Institute
Requests for Information: Barrow Neurological Inst., Michigan State University, East Lansing, Michigan 48823.

Selected Bibliography of Papers Presented:

THRESHOLD EFFECTS OF MICROWAVE RADIATION ON EMBRYO CELL SYSTEMS. F. S. Barnes (Univ. Colorado, Boulder).

AN ANALYSIS OF A HEAT SENSOR VIA MICROWAVE STIMULATION. I. Gamow (Univ. Colorado, Boulder).

TWO VIEWS OF MICROWAVE EFFECTS ON THE CENTRAL NERVOUS SYSTEM: EAST AND WEST. E. Postow (Bur. Med. Surg., Navy, Washington, D. C.).

IMMEDIATE EFFECTS OF LOW INTENSITY MICROWAVES ON ISOLATED NEURONS. H. Wachtel (Duke Univ., Durham, N.C.).

**** SAN DIEGO BIOMEDICAL SYMPOSIUM 1974.

Date: February 6-8, 1974
Place: San Diego, California
Sponsor: American Society for Quality Control; Institute of Electrical and Electronics Engineers; Naval Hospital, San Diego; Naval Undersea Center; San Diego State University
Requests for Information: San Diego Biomedical Symposium, Box 965, San Diego, California 92112

Selected Bibliography of Papers Presented:

EFFECT ON FECUNDITY IN BIRDS EXPOSED TO VARIOUS ELECTROMAGNETIC FIELDS. A. J. Giarola (Texas A & M Univ., College Station, Texas).

**** CONFERENCE ON THE BIOLOGICAL EFFECTS OF NONIONIZING RADIATION.

Date: February 12-15, 1974.
Place: Delmonico Hotel, New York City, New York
Sponsor: The New York Academy of Sciences
Request for Information: Paul E. Tyler, M. D., Conference Chairman, Head, EMR Project Office, Bur. Med. and Surg., Dept. of the Navy, Washington D. C.

Papers from this conference have been abstracted in Volume II, issue 2, of *Biological Effects of Electromagnetic Radiation*.

**** IEE-IMPI (EUROPE) MEETING ON THE MEASUREMENT OF ELECTROMAGNETIC RADIATION HAZARDS AND THEIR BIOLOGICAL EFFECTS.

Date: February 26, 1974
Place: Savoy Place, London, England
Sponsor: IEE/IEERE Medical and Biological Group; International Microwave Power Institute
Request for Information: IMPI, Box 1556, Edmonton, Alberta, Canada

Selected Bibliography of Papers Presented:

BIOLOGICAL EFFECTS OF MICROWAVES. C. R. Ricketts (M.R.C. Res. Unit, Birmingham Accident Hosp., U.K.).

THE ENGINEERING ASPECTS OF MICROWAVE RADIATION. R. B. Smith (Univ. Bradford, Yorkshire, England).

STANDARDS AND LEGISLATIVE ASPECTS OF MICROWAVE RADIATION HAZARDS. J. C. Gallagher (Univ. Bradford, Yorkshire, England).

SERVICES ASPECTS OF MICROWAVE HAZARDS. D. M. Field (R. R. E. Malvern, U. K.).

DIELECTRIC DISPERSION MEASUREMENTS ON BIOLOGICAL SOLUTIONS. E. H. Grant (Queen Elizabeth Coll., London, England).

METALLIC IMPLANTS AND MICROWAVE BLOOD WARNING. H. D. Baille (Ancoats and Crumpsall Hosp., Manchester, England).

THE EFFECTS OF MICROWAVES ON ISOLATED SKIN. J. C. Lawrence (M.R.C. Research Unit, Birmingham Accident Hosp., England).

**** 58TH ANNUAL MEETING OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY.

Date: April 7-12, 1974
Place: Atlantic City, New Jersey
Sponsor: Federation of American Societies for Experimental Biology
Requests for Information: Mrs. H. B. Lemp, FASEB, Atlantic City, New Jersey

Selected Bibliography of Papers Presented:

PHYSIOLOGIC ADJUSTMENTS TO MICROWAVE EXPOSURE. S. M. Michaelson (Univ. Rochester, Sch. Med. Dent., New York).

INCREASED BLOOD FLOW IN GLIAL TUMORS PRODUCED BY MICROWAVE HEATING. C. H. Sutton (Univ. Miami, Sch. Med., VA Hosp., Florida), R. L. Nunnally, F. B. Carroll and K. Kuban.

Biological Effects Electromagnetic Radiation 1(1), June 1974 and 1(2), September 1974

MICROWAVE RADIATION FOR THE ASSAY OF CYCLIC NUCLEOTIDES AND PUTATIVE NEUROTRANSMITTER CONCENTRATIONS IN BRAINS OF MICE AND RATS. C. T. Wang (Natl. Inst. Mental Hlth., Preclin. Pharm., St. Elizabeth's Hosp., Washington D. C.).

HEAT IN MALE CONTRACEPTION (HOT WATER 60°C, INFRARED, ULTRASOUND AND MICROWAVES). M. S. Fahim (Univ. Missouri Med. Ctr., Columbia), D. G. Hall and R. Der.

**** MICROWAVE POWER SYMPOSIUM AND MICROWAVE POWER FOR INDUSTRY. SHORT COURSE.

Date: May 28-31, 1974.
Place: Marquette University, Milwaukee, Wisconsin
Sponsor: International Microwave Power Institute; IEEE Milwaukee Section, Joint Milwaukee Chapter of the IEEE Microwave Theory and Techniques Society; IEEE Electron Devices Group.
Requests for Information: K. W. Hsu, Microwave Power Symposium 1974, Department of Electrical Engineering, Marquette University, Milwaukee, Wisconsin 53233.

Pertinent papers from this symposium have been abstracted in Volume I, issue 2, of *Biological Effects of Electromagnetic Radiation*.

**** SEVENTH ROCHESTER INTERNATIONAL CONFERENCE ON ENVIRONMENTAL TOXICITY: FUNDAMENTAL AND APPLIED ASPECTS OF NONIONIZING RADIATIONS.

Date: June 4-7, 1974.
Place: University of Rochester, School of Medicine and Dentistry, New York
Sponsor: Department of Radiation Biology and Biophysics, University of Rochester
Requests for Information: Mrs. Judy Havalock, Secretary to the Conference Chairman, Dept. Radiation Biology and Biophysics, School of Medicine and Dentistry, University of Rochester, 260 Crittenden Blvd., Rochester, New York 14642.

Selected Bibliography of Papers to be Presented:

PHYSIOLOGICAL RESPONSES TO HEAT. J. Bligh (Agri. Res. Council, Inst. Animal Physiology, Cambridge, England).

DOSIMETRY OF ELECTROMAGNETIC RADIATION. R. R. Bowman (Natl. Bur. Standards, Electromagnetic Div., Boulder, Colorado).

HEMATOLOGICAL EFFECTS. P. Czerski (Natl. Res. Inst. Mother Child, Dept. Human Genetics, Warsaw, Poland).

ANALYSIS OF OCCUPATIONAL EXPOSURE TO MICROWAVE RADIATION. P. Czerski (Natl. Res. Inst. Mother Child, Dept. Human Genetics, Warsaw, Poland).

HAZARDS OF OCCUPATIONAL EXPOSURE TO NONIONIZING RADIATION. Z. V. Gordon (Inst. Gigieny Truda i Professionalnych, Zabolevanii AMN, Moscow, USSR).

ELECTROPHYSIOLOGICAL EFFECTS IN ANIMALS. A. W. Guy (Dept. Physical Med. Rehabil., Univ. Washington Sch. Med., Seattle).

ELECTROPHYSIOLOGICAL EFFECTS ON MAN. E. Klimkova-Deutschova (Univ. Clin., Neurology Dept., Prague, Czechoslovakia).

CONTROL OF OCCUPATIONAL EXPOSURE TO NONIONIZING RADIATION. T. Ely (Eastman Kodak Co., Lab. Industrial Med., Rochester, N.Y.).

PERCEPTION OF MICROWAVES. H. E. von Gierke (Biodynamics and Bionics Div. Aerospace Med. Res. Lab., Wright-Patterson AFB, Ohio) and Dr. Ing.

ELECTROMAGNETIC INCOMPATIBILITY OF MEDICAL PROSTHETIC DEVICES. J. Mitchell (USAF Sch. Aerospace Med., San Antonio, Texas).

PROSPECTS FOR EXPANSION OF INDUSTRIAL AND CONSUMER USES OF MICROWAVES. J. M. Osepchuk (Res. Div., Raytheon, Waltham, Mass.).

SAFETY OF MILITARY USE OF MICROWAVES. L. T. Odland (CMDR USAF Radiol. Hlth. Lab., Wright-Patterson AFB, Ohio).

DIELECTRIC PROPERTIES OF BIOLOGICAL MATERIALS. H. P. Schwan (Dept. Elec. Engineering, Univ. Pennsylvania, Moore Sch. Engineering, Philadelphia).

SELECTIVE HEATING, LOCALIZED HEATING AND SCALING THEORY. H. P. Schwan (Dept. Elec. Engineering, Univ. Pennsylvania, Moore Sch. Engineering, Philadelphia).

OVERVIEW OF STANDARDS FOR SAFETY FROM EXPOSURE TO NONIONIZING RADIATION. M. J. Suess (Reg. Off. Environ. Hlth., WHO, Reg. Hlth. Off. Europe, Copenhagan, Denmark).

**** IEEE S-MTT INTERNATIONAL MICROWAVE SYMPOSIUM.

Date: June 12-14, 1974.
Place: Georgia Inst. Technology, Atlanta, Georgia
Sponsor: Institute of Electrical and Electronics Engineering (S-MTT); Georgia Institute of Technol.
Requests for Information: Registration Clerk, IEEE/S-MTT Symposium, Sch. Elec. Engineering, Georgia Inst. of Technology, Atlanta, Georgia 30332.

Selected Bibliography of Papers to be Presented:

A MICROWAVE DOSIMETRY SYSTEM FOR MEASURING SAMPLED INTEGRAL DOSE RATE. C. L. Christman (Div. Biological Effects, Bur. Radiol. Hlth., FDA, Rockville, Md.), H. S. Ho and S. Yarrow.

MICROWAVE EFFECT ON RABBIT SUPERIOR CERVICAL GANGLION. K. Courtney (Univ. Washington Sch. Med., Seattle), J. C. Lin, A. W. Guy and C. K. Chou.

A SURVEY OF THE POTENTIAL FOR BENEFICIAL APPLICATIONS OF MICROWAVES IN MEDICINE AND BIOLOGY. J. M. Osepchuk (Res. Div., Raytheon Co., Waltham, Mass.).

EXPERIMENTAL MODELS FOR THE EVALUATION OF MICROWAVE BIOLOGICAL EFFECTS. P. Czerski (Natl. Inst. Mother Child, Warsaw, Poland).

BEHAVIORAL CHANGES OF RATS EXPOSED TO MICROWAVE RADIATION. J. C. Lin (Univ. Washington Sch. Med., Seattle), A. W. Guy and L. R. Caldwell.

AN INTERNATIONAL PROGRAM FOR MICROWAVE EXPOSURE PROTECTION. S. M. Michaelson (Univ. Rochester, N.Y.) and M. J. Suess.

THERMOGENETIC AND CARDIODYNAMIC REGULATION IN DOGS CRANIALLY EXPOSED TO 2450 MHz (CW) MICROWAVES. Shin-Tsu-Lu (Univ. Rochester, N.Y.) and M. J. Suess.

ABSORPTION CHARACTERISTICS OF MULTI-LAYERED SPHERE MODELS EXPOSED TO UHF/MICROWAVE RADIATION. C. M. Weil (U.S. EPA, Res. Triangle Park, N.C.).

ORIENTATION AND FREQUENCY EFFECTS ON WHOLE ANIMALS ABSORPTION OF MICROWAVES: LETHALITY EXPERIMENTS. T. D. Hawkins (Dept. Microwave Res., Walter Reed Army Inst. Res., Washington, D. C.).

INSECT CONTROL POSSIBILITIES USING MICROWAVES AND LOWER FREQUENCY RF ENERGY. S. O. Nelson (U.S. Dept. Agriculture, Univ. Nebraska, Lincoln).

NERVE STIMULATION BY IMPLANTED DIODE. C. C. Johnson (Univ. Utah, Salt Lake City, Utah), J. L. Lords and M. A. Coombs.

LIQUID CRYSTAL FIBEROPTIC TEMPERATURE PROBE FOR THE MEASUREMENT OF ELECTROMAGNETIC POWER ABSORPTION IN TISSUE. C. C. Johnson (Univ. Utah, Salt Lake City, Utah), C. H. Durney and J. L. Lords.

ELECTROMAGNETIC FIELDS INDUCED INSIDE OF BIOLOGICAL BODIES. D. Livesay (Michigan State Univ., East Lansing) and Kun-Mu Chen.

MULTI-FREQUENCY ELECTROMAGNETIC THAWING OF FROZEN KIDNEYS. C. P. Burns (Eng. Sta., Georgia Inst. Technol., Atlanta) and C. E. Burdette.

SOME THEORY AND PRELIMINARY EXPERIMENTS ON MICROWAVE RADIOMETRY OF BIOLOGICAL SYSTEMS. J. Bigu del Blanco (Queen's Univ., Kingston, Ontario, Canada) and J. A. Tanner.

MICROWAVE SAFETY AND PROTECTION STANDARDS: PANEL DISCUSSION. Seminar theatre, Sheraton-Biltmore.

**** CONFERENCE ON PRECISION ELECTROMAGNETIC MEASUREMENTS.

Date: July 1-5, 1974.
Place: The Institution of Electrical Engineers, Savoy Place, London, England.
Sponsor: Royal Society; Institution of Electrical Engineers; Union Radio-Scientifique Internationale; The Institution of Electronic and Radio Engineers; The National Physical Laboratory; Scientific Manufacturers' Association.

Selected Bibliography of Papers to be Presented:

AN OPTICALLY LINKED TELEMETRY SYSTEM FOR USE WITH ELECTROMAGNETIC HAZARD PROBES. H. Bassen (Bur. Radiol. Hlth., Rockville, Maryland).

DETERMINATION OF RF POWER ABSORPTION IN MAN EXPOSED TO HF FIELDS BY THERMOGRAPHIC STUDIES ON SCALED PHANTOM MODELS. A. W. Guy (Univ. Washington Med. Sch., Seattle), M. Webb and J. C. Lin.

MEASUREMENT OF ABSORBED POWER PATTERNS IN THE HEAD AND EYES OF RABBITS EXPOSED TO TYPICAL MICROWAVE SOURCES. A. W. Guy (Univ. Washington Med. Sch., Seattle), J. C. Lin, P. Kramar and A. F. Emery.

SOME PROBLEMS IN USING ELECTRIC FIELD INTENSITY DURING INVESTIGATION OF BIOLOGICAL EFFECTS. H. R. Kucia-Korniewicz (Central Res. Inst. Labor Protect., Poland).

COMPARATIVE MEASUREMENT OF DIELECTRIC PROPERTIES OF FRESH MAMMALIAN TISSUES. J. C. Lin (Univ. Washington Sch. Med., Seattle), H. M. Grove and J. C. Sharp.

ON MEASUREMENTS OF THE ELECTROMAGNETIC FIELDS FOR HYGIENIC PURPOSES. J. Musil (Inst. Hygiene Epidemiol., Czechoslovakia).

VOLTAGE INDUCTION BY PULSE-SHAPED EM FIELDS ON

TRANSMISSION LINES, APPLICATION TO INTERFERENCE PROBLEMS IN ELECTRONIC SYSTEMS. H. Naito (Eidgenössische Technische Hochscule Zürich, Switzerland) and A. Shah.

INSTRUMENTATION SYSTEMS FOR LASER POWER AND ENERGY DETERMINATIONS FOR USE UNDER A UNITED STATES LASER REGULATORY PERFORMANCE STANDARD. R. W. Peterson (Bur. Radiol. Hlth., Rockville, Maryland).

THE AUTOMATION OF AN ELECTROMAGNETIC INTERFERENCE MEASUREMENT SYSTEM. C. Sorenson (The Singer Company, USA), B. Meyers and G. U. Sorger.

**** 19TH ANNUAL MEETING OF THE HEALTH PHYSICS SOCIETY.

Date: July 7-11, 1974
Place: Houston, Texas
Sponsor: Health Physics Society
Requests for Information: W. H. Parr, Physical Agents Branch/NIOSH, 1014 Broadway, Cincinnati, Ohio 45202

Selected Bibliography of Papers Presented:

HEATING PATTERNS INDUCED BY 2450 MHz MICROWAVE RADIATION IN A TRILAYERED SPHERICAL PHANTOM. D. L. Conover (Natl. Inst. Occupational Safety and Hlth., Cincinnati, Ohio) and R. J. Vetter.

MICROWAVE LEAKAGE IN HOME MICROWAVE OVENS. STATUS REPORT. M. C. Wukasch (Texas State Dept. Hlth., Div. Occupational Hlth. and Radiation Control, Austin) and J. F. Thiel.

ASSESSING THE POTENTIAL FOR EXPOSURE TO HAZARDOUS LEVELS OF MICROWAVE RADIATION FROM HIGH POWER SOURCES. N. N. Hankin (Off. Radiation Programs, EPA, Silver Springs, Md.), R. A. Tell and D. E. Janes.

THE IN VIVO EFFECTS OF 2.45 GHz MICROWAVE RADIATION ON RABBIT SERUM COMPONENTS. R. T. Wangemann (Laser-Microwave Div., US Army Environ. Hygiene Agency, Aberdeen Proving Ground, Md.).

PERMISSIBLE LEVELS OF EXPOSURE TO MICROWAVE RADIATION. S. K. Ghosh (Dept. Hlth. Welfare, Radiation Protect. Bur., Ottawa, Canada) and A. K. DasGupta.

THE NEW HEALTH AND SAFETY ACT AS IT RELATES TO OCCUPATIONAL RADIATION EXPOSURE. F. H. Ryer (US Dept. Labor, Washington D. C.).

**** 5TH INTERNATIONAL CONGRESS OF RADIATION RESEARCH.

Date: July 14-20, 1974
Place: Seattle, Washington
Sponsor: International Association for Radiation Research; Radiation Research Society
Requests for Information: Dr. W. K. Sinclair, Secretary-general, Argonne National Laboratory, Argonne, Illinois 60439.

Selected Bibliography of Papers Presented:

BEHAVIORAL SUPPRESSION BY 383 MHz RADIATION. R. J. Cunitz (Bur. Radiol. Hlth., Rockville, Md.), W. D. Galloway and C. M. Bermau.

SURVIVAL OF DROSOPHILA EGGS EXPOSED TO MICROWAVE ENERGY AND TO HEAT. F. A. Anderson (Bur. Radiol. Hlth., Rockville, Md.) and T. L. Pay.

MICROWAVE CAVITY IRRADIATION DOSIMETRY. W. P. Edwards (Bur. Radiol. Hlth., Rockville, Md.) and H. S. Ho.

**** 1974 IEEE INTERNATIONAL SYMPOSIUM ON ELECTROMAGNETIC COMPATIBILITY.

Date: July 16-18, 1974
Place: San Francisco, California
Sponsor: Institute of Electrical and Electronics Engineers (G-EMC)
Requests for Information: IEEE, Order Division, 345 E. 47th Street, New York, New York 10017

Selected Bibliography of Papers Presented:

MICROWAVE POWER DENSITY MEASUREMENTS IN THE PRESENCE OF BIOLOGICAL SPECIMENS OF SIZE COMPARABLE TO THE FREE SPACE WAVELENGTH OF THE IMPOSED RADIATION. J. Bigu del Blanco (Dept. Anatomy, Queens Univ., Kingston, Canada).

ABSENCE OF HEART-RATE EFFECTS IN ISOLATED FROG HEART WITH PULSED MODULATED LOW LEVEL MICROWAVE ENERGY. C. Cain (Dept. Electrical Engineering, Univ. Illinois, Urbana).

THE EFFECTS OF FM AND TV BROADCAST STATIONS UPON CARDIAC PACEMAKERS. M. D. Shepherd (Univ. California, San Francisco Medical Center).

**** THE PHYSICS OF NONIONIZING RADIATION.

Date: July 21-26, 1974.
Place: University of Colorado, Boulder, Colorado
Sponsor: American Association of Physicists in Medicine Summer School

Requests for Information: American Association of Physicists in Medicine Summer School, University of Colorado, Boulder, Colorado.

Selected Bibliography of Papers to be Presented:

CLINICAL APPLICATIONS AND BIO-EFFECTS OF MICROWAVES. F. S. Barnes (Univ. Colorado, Boulder) and F. Cenkovich.

FUNDAMENTAL PRINCIPLES OF MICROWAVES. E. L. Chaney (Univ. Colorado Med. Ctr., Denver).

**** BIOLOGICAL EFFECTS, HAZARDS AND MEDICAL USES OF NON-IONIZING RADIATIONS.

Date: July 29-August 2, 1974.
Place: Massachusetts Institute of Technology, Dept. Mechanical Engineering, Cambridge, Mass.
Sponsor: Department of Mechanical Engineering, M.I.T.; Harvard-M.I.T. Program in Health Sciences and Technology.
Requests for Information: Director of the Summer Session, Room E19-356, Massachusetts Inst. Technology, Cambridge, Massachusetts 02139.

Topics to be Covered Include: Physical characteristics and field measurement, dosimetry, electrical properties of biological tissues in constant and varying fields, absorption, thermal effects, non-thermal effects; results and mechanisms in blood, eye, testes, malignant tumors, growth; applications in therapy; health hazards of radar, microwave ovens and safety standards.

**** 27TH ANNUAL CONFERENCE ON ENGINEERING IN MEDICINE AND BIOLOGY.

Date: October 6-10, 1974
Place: Philadelphia, Pennsylvania
Sponsor: Alliance for Engineering in Medicine and Biology
Requests for Information: Hun Sun, Drexel University, Philadelphia, Pennsylvania 19104

Selected Bibliography of Papers to be Presented:

MICROWAVE RADIOMETRY: A NEW TECHNIQUE TO INVESTIGATE THE INTERACTIONS OF MW RADIATION WITH LIVING SYSTEMS. J. Bigu del Blanco (Queens Univ., Kingston, Ontario, Canada).

MEASUREMENT OF CARDIAC PACEMAKER SUSCEPTIBILITY TO ELECTROMAGNETIC FIELDS. J. C. Toler (Georgia Inst. Technol., Atlanta) and W. H. Fleming.

**** WESTERN INDUSTRIAL HEALTH CONFERENCE

Date: October 10-12, 1974
Place: Los Angeles, California
Sponsor: Amer. Industrial Hygiene Assn; Health Phys. Society; Amer. Conference of Govt. Industrial Hygiene; Western Industrial Medical Assn.; Western Assn. of Industrial Nurses
Requests for Information: B. H. Bravinder, Box 201, Alamo, California 94507

**** 7TH AUSTRALIAN INSTITUTE OF NUCLEAR SCIENCE AND ENGINEERING (AINSE) RADIATION CHEMISTRY MEETING

Date: October 14-16, 1974
Place: Lucas Heights, Australia
Sponsor: AINSE
Requests for Information: AINSE, Lucas Heights, Australia

**** INTERNATIONAL SYMPOSIUM ON RADIATION PHYSICS.

Date: December 4, 1974
Place: Calcutta, India
Sponsor: Dept. of Physics, 93/1 Acharya Prafulla
Requests for Information: A. M. Ghose, Dept. of Physics, 93/1 Acharya Prafulla, Chandra Road, Calcutta 700-009, India

**** 1ST ASIAN REGIONAL CONGRESS OF RADIATION PROTECTION.

Date: December 15-20, 1974
Place: Bombay, India
Sponsor: Intl. Radiation Protection Association
Requests for Information: S. D. Soman, Modular Laboratories, Room 1-216H, Bhabha Atomic Research Center, Bombay 400-085 India