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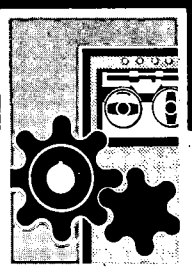

TECHNICAL REPORT

NINTH SUPPLEMENT to BIBLIOGRAPHY of MICROWAVE and RF BIOLOGIC EFFECTS

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
National Institute for Occupational Safety and Health

BIBLIOGRAPHY OF REPORTED BIOLOGICAL PHENOMENA ('EFFECTS') AND CLINICAL MANIFESTATIONS ATTRIBUTED TO MICROWAVE AND RADIO-FREQUENCY RADIATION

Ninth Supplement
to
Bibliography of Microwave and RF Biologic Effects

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November 1977

DISCLAIMER

The opinions, findings, and conclusions expressed herein are not necessarily those of the National Institute for Occupational Safety and Health, nor does mention of company names or products constitute endorsement by the National Institute for Occupational Safety and Health.

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DHEW (NIOSH) Publication No. 78-126

PREFACE

(REPRINTED FROM THE SEVENTH SUPPLEMENT)

It is the hope of the author that the updating of this Bibliography will continue to provide guidance to the diffuse and often conflicting literature on the biological responses to electromagnetic radiation (EMR) at radio and microwave-frequencies, with particular reference to the effects of concern to humans. Such guidance is needed in the formulation and appraisal of criteria and limits of human exposure to "non-ionizing" electromagnetic radiation (EMR), and in the planning and conduct of future research.

My original plans for the Bibliography were to categorize and key the literature citations to the "outline of biological and clinical effects" (Chapter 1 of the initial report). This proved to be a much more difficult and time-consuming task than anticipated, and was actually completed at the time for only 400 papers. Since then, a much more extensive classification of the literature has been accomplished, using Keysort cards punched on the four axes to indicate: the research area, organ system, frequency, power level, species used, experimental data, and a summary of the results. This will be the subject of a future report.

The standard format used throughout the Bibliography is: author, (date), journal, volume, (issue): page, "title". The citations are alphabetized by author, and in chronological order. Multiple authored articles are also alphabetically ordered according to the second, third, etc., author. Inclusive pagination is given where possible, as is the original language of the citation. Report accession and translation numbers (some of the sources were listed in Appendix A of the initial report), and alternate sources are listed when known. The title of books is underlined. When the title of the report was not available (or not given), a short (one line) description of the paper is listed whenever possible. Reports in which the name of the author was not given are listed chronologically using the format, "title", reference, source, (date). In many cases the citation was obtained from secondary (and tertiary) sources. For this reason it was impossible to put every citation into a consistent format.

The original intent for the Bibliography was to limit the citations to those papers describing bio-effect studies using electromagnetic radiation at radio- and microwave-frequencies. Some broadening of scope has occurred, so that this Supplement includes a few references to recently issued relevant reports on biological studies involving pure electric or magnetic fields (alternating or static), extremely low frequency (ELF) fields, and a citation to ultrasound (which, although it is not electromagnetic radiation, is in some respects similar to RF radiation). Other citations include such topics as bio-medical studies using electromagnetic pulse radiation (EMP), high voltage (Kirilian) photography, biological dosimetry, effects of EMR on implanted electronic cardiac pacemakers, some therapeutic applications of EMR (including wound healing and bone regeneration), microwave exposure limits, regulations and standards, and such diverse applications as tissue fixation, insect control, and electroanesthesia.

The use of square brackets for explanatory notes and comments has been increased. The listing of relevant presentations made at technical meetings (especially in view of the sometimes considerable time lag before the paper appears in print) has been expanded.

The author continues to solicit comments and criticism regarding form, content, omissions, etc., as well as information on new papers/manuscripts so that updating, revision, and corrections can be made.

ABSTRACT

Approximately 575 additional references on the biological responses to radio frequency (RF) and microwave radiation, published up to September 1977, are included in this continuing bibliography of the world literature. This Supplement brings to more than 4600 the number of listed references. Particular attention has been paid to the effects on humans of non-ionizing radiation at RF and microwave frequencies. The citations are arranged alphabetically by author (where possible), and contain as much information as possible so as to assure effective retrieval of the original documents. Soviet and East European literature is included in detail.

This report is the ninth supplementary "up-dated" bibliographic listing to Naval Medical Research Institute (NMRI, Bethesda, Maryland, 20014) Research Report No. 2, completed under Research Work Unit MF12.524.015-0004B, October 1971, by the senior author and available from the National Technical Information Service (NTIS, Springfield, Virginia, 22151). See Appendix I.

Considerable interest has been expressed for the continuation of this bibliographic series. That, coupled with the NIOSH plans to prepare a criteria document concerned with occupational exposure to radio frequency and microwave radiation, strengthened our commitment to continue to prepare these bibliographic supplements.

Relevant presentations (and, as yet, unpublished) made at technical meetings are included in a separate section of this Supplement. Another section contains unsigned reports and articles arranged in chronologic order.

Listed in an appendix to this Supplement is a chronology of the previous supplements (and the addenda and revisions), the Navy office issuing the report, the date of appearance of the report, the inclusive citation numbers, and the order number (AD number) by which the report is obtainable from NTIS.

In September 1976, an alphabetical Compilation and Integration of the first 3725 references was prepared. These citations consisted of the original bibliography and the first seven supplements, plus the alphabetical addenda (appended to the original bibliography). The "outline of the bio-effects" which appeared in the original bibliography was also included as an appendix.

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SUPPLEMENT NUMBER 9: ALPHABETIC LISTING

4056. AARONSON, S. (1974), The Sciences (N.Y. Acad. of Sciences), 14(2):6-10, (Mar.), "The sun also changes; then what happens on the earth?", [Solar flares which produce intense RF/emissions (among other things), and produce perturbations in the earth's magnetic field, are felt to have an influence on the incidence of general psychiatric disturbance, cardiovascular effects, etc.].

4057. ABDULLINA, Z.M. (1975), "Kyrgystan," Frunze, 134 pp. (in Russ.). Biological Action of Magnetic Fields on a Living Organism. [Reviewed in: Neuroelectric News, 6(2):p ? ,(Nov. 1976)].

4058. ABRIKOSOV, I.A. (1958), Pub. by "Medqiz", (in Russ.) Pulsed Electric UHF Fields.

4059. ACETO, H., Jr., TOBIAS, C.A., & SILVER, I.L. (1970), IEEE Trans. on Magnet., MAG-6:368-373, "Some studies on the biological effects of magnetic fields."

4060. ADAMS, R.L., & WILLIAMS, R.A. (1976), Rept., Defense Intelligence Agency, Medical Intelligence and Information Agency (MIIA), Office of the Surgeon General, Dept. of the Army, ST-CS-01-74-74 (unclassified report), DST-1810S-074-76, DIA TASK PT-1810-02-75, (March), [information cut-off date October 10, 1975], "Biological effects of electromagnetic radiation (radiowaves and microwaves)-Eurasian communist countries (U)."

4061. ADEY, W.R., SCHMITT, F.O., SCHNEIDER, D.M., & CROTHERS, D.M. (1975), In: Functional Linkage in Biomolecular Systems, (ADEY,W.R.,ed), Raven Press, NY, pp325-342, "Evidence for cooperative mechanisms in the susceptability of cerebral tissue to environmental and intrinsic electric fields."

4062. ADEY, W.R., & BAWIN, S.M. (eds.) (1977), Neurosciences Research Program (NRP) Bulletin 15(1):136 pp. (Jan.), Brain Interactions with Weak Electric and Magnetic Fields. [Based on NRP Work Session held Nov. 10-12, 1974 (see citation #3377, this Biblio.) and updated by participants]. [Available only by Vol. @$35/ Vol. from NRP, 165 Allandale St., Jamaica Plain Station, Boston, MA 02130]. (Contains sections (cited individually) by: BULLOCK, T.H.; KEETON, W.T.; GAVALAS-MEDICI, R. & ADEY, W.R.; WEVER, R.; SEAMAN, R.L.; CZERSKI, P.; KACZMAREK, L.K.; LITTLE, W.A.; ILLINGER, K.H.; FROHLICH, H.; GRODSKY, L.T.; GUY, A.W.; SCHWAN, H.P.; MICHAELSON, S.M.; and BEISCHER, D.E.).

4063. ADEY, W.R., BAWIN, S.M., & MEDICI, R.G. (1975), Presented at COSPAR Meeting Varna, Bulgaria (May), "Influences of weak environmental electromagnetic fields on brain and behavior in vertebrates."

4064. AKOYEV, G.N., et al.(1971), Uspekhi fiziologicheskikh nauk, 2(3): 123-142 (in Russ.), "Modern views on electroreception." [Abstr. in: Neuroelectric News, 2(3):7 only (1972)].

4065. ALBRECHT, R. (1974), J. of the Air Pollution Control Assoc., 24( ): 128-129 (Feb), [invited discussion of McREE, D.I.], "Biological effects of microwave radiation."

4066. ALEKSANDROVSKAYA, M.M., & KHOLODOV, Y.A. (1966), Doklady Biol. Sci., 170(2):705-708 (in Engl.), (Transl. of Dokl. Akad. Nauk SSR, 170(2); 482-485 (in Russ.), [Reviewed in: Foreign Science Bull., 5(2):p. ? (1969)], "Possible role of the neuroglia in the bioelectrical reaction of the brain to a constant magnetic field."

4067. ALI, J.S. (1972), Rept., Twinbrook Research Laboratory (Rockville, MD), 45pp. (June), [Avail. NTIS, #PB-210-351], "A microwave power controller for a radiation bio-effects exposure facility."

4068. ALLEN, S.J. (to be published, 1977), "Preliminary investigation of the RF exposure of clinical personnel using 13.56 MHz diathermy equipment."

4069. ALLIS, J.W., WEIL, C.M., & JANES, D.E., Jr. (1975), Review of Scientific Instrum., 46(10):1344-1349 (Oct.), "Crossed-beam apparatus for simultaneous spectrophotometric observation and microwave exposure of biochemical samples."

4070. ANDERSON, J. (1972), The Pittsburgh Press, Merry-Go-Round Column (12 Nov.), p. E-2, "50 getting microwaves as Navy...?"

4071. ANDERSSON, S.A., et al.(1973), Brain Research, 63( ):393-396, "Electro-acupuncture: Effect on pain threshold measured with electrical stimulation of teeth."

4072. ANNINOS, P.A., ZENONE, S., & MELAS, C. (1976), Biophysical J., 16(2): A175- "Detection of electromagnetic radiation from brain."

4073. ANTCZAK, K., MINECKI, L,, & WIECEK, E. (1962), Abst. Ref. VI Krajowa Konferencja Medycyny Pracy, Gdansk, (June 14-17), p. 10, "Cholinesterase activity changes in the blood and internal organs of while mice subjected to microwaves (S band)."

4074. ANTIMONY, G.D., BADIKOV, V.I., KEL, A.A., KRASNOV, E.A., & SUDAKOV, S.K. (1976) Bull. of Experimental Biology and Medicine. _( ):1163-1165, (Oct.), (In Russ. with Engl. abstr.) "Changes in the self-stimulation reaction in rats under the action of modulated electromagnetic field", [at 2, 7, and 50 Hz].

4075. ARISTARKOV, V.M., et al.(1974), Izvestiya Akademii Nauk SSSR, seriya biologicheskaya, __(3):429-432 (in Russ.), "Changes in iron content in organs and tissues of healthy and tumor-bearing animals under the influence of a permanent magnetic field." [Abstract in: Neuroelectric News, 5(1):10 only (Mar. 1975)].

4076. ARISTARKHOV, V.M., PIRUZIAN, L.A., & TSYBYSHEV, V.P. (1974), Izv. Akad. Nauk SSSR (Biol.), _(6):917-920 (in Russ), "Effect of a uniform magnetic field on absorption spectra of proteins from ascities tumor S-37 and hemoglobin from normal and tumor-bearing animals in vitro."

4077. ASLAN, E. (1971), J. of Microwave Power, 6(2):169-177, "Electromagnetic leakage survey meter."

4078. ATKINS, P. (1976), Chemistry in Britain, 12(7):214-218 & 228 (July), "Magnetic field effects: The study of the effect of magnetic fields on chemical reactions has long been a romping ground for charlatans. Contributions to the literature of the subject range over the span of scientific competence, from the benignly insane to whatever lies at the other extreme removed by a hair's breath from the first. Disentanglement of the science from the deceit is hardly the task of an article of this nature, for it requires further careful experiments rather than armchair journalism. There is, however, a body of modern literature which seems reliable, and this will be our domain."

4079. AUG, S.M. (1977), The Washington (DC) Star (newspaper), 13 Jan., p. A-4 only, "Behind Soviet radio signals [3-30 MHz]: Wireless power transmission?'

4080. AVERBECK, D., DARDALHON, M., & BERTEAUD, A-J. (1976), J. of Microwave Power 11(2):143-144, "Microwave action in procaryotic and eucaryotic cells, and a possible interaction with x-rays (Symposium Summary)", [Previously listed as citation #4053 (Session 2A), this Biblio.].

4081. BACHURINA, T.I. (1974), Fiziologicheskiy zhurnal im. Sechenova, (4)91-498 (in Russ.), "The effect of short infrasonic stimuli on the brain bio-electrical activity." [EEG changes in 0-20 Hz range], [Abstr. in: Neuroelectric News, 4(4):7 only (1974)].

4082. BAETJER, A.M. (1965), In: MAXCY & ROSENAU's Preventive Medicine and Public Health 9th Ed., (SARTWELL, P.E., ed.), Appleton-Century-Crofts, NY, Chapt. 25 entitled 'Radiation,' p. 734 only, "The biologic effects of microwaves."

4083. BAILLIE, H.D., HEATON, A.G., PAL, D.K., (1969), Non-ionizing Radiation 1:( ):120-, "Effects of metallic inductions in a microwave field."

4084. BALCOM, G.J., LENOX, R.H., & MEYERHOFF, J.L. (1975), J. of Neurochemistry, 24( ):609-613, "Regional gamma-aminobutyric acid levels in rat brain determined after microwave fixation."

4085. BALLESTE, G.F., & ZINGANO, A.G. (1962), Riv. Med. Aeron., 14( ): 3, "Medical aspects of the operation of radar and similar apparatus."

4086. BANKOV, V.I. (1972), Biulleten Eksperimentalnoi Biologii i Meditsiny, 74(9):14-16 (Sept.), (in Russ., with Engl. abstr.), "Induction of experimental sleep in cats by the action of low-frequency modulated electromagnetic field." [5 to 7 Hz, up to 300 Oe intensity]. [Abstr. in: Neuroelectric News, 3(3):10-11 (Apr. 1973)].

4087. BANSHCHIKOV, V.M., et al.(1970), Sovetskaya meditsina, __(2):124-128 (in Russ.), "Low-frequency pulse current in the therapy of eczema." (Rectangular pulses, freq.=1-20 Hz), [Abstr. in: Neuroelectric News, 1(12):11 only (1971)].

4088. BARANSKI, S., & CZERSKI, P. (1976), Pub. by Dowden, Hutchinson & Ross, Inc., Stroudsburg, Pa., 234 pps, [LC Card #74-7837, ISBN #0-87933-145-3], Biological Effects of Microwaves.

4089. BARANSKI, S., DEBIEC, H., KWARECKI, K., & MEZYKOWSKI, T. (1976), J. of Microwave Power 11(2):146-147, "Influence of microwaves on genetical processes of Aspergillus nidulans (Symposium Summary)", [Previously listed as citation #4053 (Session 3A) this Biblio.]

4090. BARNOTHY, M.F., & BARNOTHY, J.M. (1970), Nature, 225:1146-1147 (21 Mar.), "Magnetic fields and the number of blood platelets."

4091. BARRON, C.I., & DREHER, J.J. (1964), Aerospace Med., 35( ):20-23, "Effects of electric fields and negative ion concentrations on test pilots."

4092. BARTHAKUR, N. (1975), J. of Microwave Power, 10(4):441-449, "Use of microwave radiation to study plant environment interactions."

4093. BAWIN, S.M., & ADEY, W.R. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 36-38, "Amplitude modulated VHF E-fields."

4094. BECKER, R.O. (1974), Annals of the New York Academy of Sciences, 238:236-241, (Oct. 11), "The basic biological data transmission and control system influenced by electrical forces."

4095. BECKER, R.O. (1969), In: Biological Effects of Magnetic Fields, Vol. 2, (BARNOTHY, M.F., ed.), Plenum Press, NY, pp. 207-214, "The effect of magnetic fields upon the central nervous system."

4096. BEDELL, L.R. (1976), Bull. of the American Physical Soc., 21(2):185- "Differential adiabatic thermistor probe for microwave dosimetry in biological tissue."

4097. BEECH, K. (1977), The Washington Post (newspaper) ?(?):p. ? (Sun., May 8), "Effect of (microwave) radiation at U.S. embassy (Moscow) will be studied."

4098. BEISCHER, D.E. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 100-102, "Bio-significance of zero-magnetic field conditions and perturbations of microwave fields by living organisms."

4099. BEISCHER, D.E. (1969), Progress Rept., Nov. 1968 - Jan. 1969 (NASA CR-99767; N69-18293), "Research on the effects of very strong magnetic fields and of magnetic field-free environments on man and animals."

4100. BELLOSSI, A., DUCLOS, M., & BELLOSSI, G. (1974), Bull. Soc. Med. Afr. Noire Lang. Fr., 19(2):192-195 (in Fr.), "Effect of a uniform magnetic field on leucocytes. Study of phagocytosis."

4101. BELLOSSI, A., DUCLOS, M., & de CERTAINES, J. (1974), Bull. Soc. Med. Afr. Noire Lang. Fr., 19(3):251-253, (in Fr.), "Combined effect of a uniform magnetic field and nonionizing radiation on leukocytes."

4102. BELLOSSI, A., & DEMAILLE, J. (1974), Bull. Soc. Med. Afr. Noire Lang. Fr., 19(3):275-276 (in Fr.), "Effects of a uniform magnetic field on serum and plasma. Electrophoretic study of the proteins."

4103. BELLOSSI, A., & CASTETS,? , (1974), Bull. of the Soc. Med. Afr. Noire Lang. Fr., 19(3):342-345 (in Fr.), "Preliminary study of the effect of a constant magnetic field on Proteus mirabilis."

4104. BERMAN, E. (1975), Presented at ERMAC/OTP Seminar on Genetic Effects of Nonionizing EMR, Washington, DC (Aug. 21-22), "Teratological effects of nonionizing electromagnetic radiation."

4105. BERNARDI, P., & GIANNINI, F. (1976), Alta Frequenza (High Frequency), 45(3):167-176 (Mar.), (A76-29033) (In Ital.), "Analysis of models for the study of the interaction between electromagnetic fields and biological tissues in order to determine exposure risks."

4106. BERNARDI, P., GIANNINI, F., & SORRENTINO, R. (1976), J. of Microwave Theory & Techniques, MTT-24(9):621-625, "Effects of the surroundings on electromagnetic-power absorption in layered-tissue media."

4107. BIELEC, M., & SZMIGIELSKI, S. (1976), J. of Microwave Power 11(2): 152-153, "Use of thermography for quantitation of energy absorption in animals irradiated with microwaves (Symposium Summary)", [Previously listed as citation #4053 (Session 3A), this Biblio.].

4108. BIGU DEL BLANCO, J., & ROMERO-SIERRA, C. (1975), In: Electromagnetic Compatability; Proceedings of the First Symposium and Technical Exhibition, Montreaux, Switzerland (May 20-22), p. 127-133, [A76-40726, 20-32] "Microwave pollution of the environment, and the ecological problem."

4109. BIGU del BLANCO, J., & ROMERO-SIERRA, C. (1975), Proceedings of Internat. Conf. on Biomedical Transducers, pp. 127-132, "The properties of bird feathers as piezoelectric transducers and as receptors of microwave radiation."

4110. BILES, G.W. (1976), Rept. written for a graduate course entitled, "Industrial Communications", San Francisco State Univ. Calif., "Neural manipulation by remote radar." [author's address: 20 Eastwood Drive, San Mateo, CA 94403].

4111. BISPING, H-J., & IRNICH, W. (1976), Dtsch. Med. Wochenschr., 101 (17):669-672, (in Ger.), "Influence of radio and television sets on implanted cardiac pacemakers."

4112. BLAIR, R.D.G., LEE, R.G., & VANDERLINDEN, G. (1975), Arch. of Neurol., 32(12):826-829, "Dorsal column stimulation. Its effect on the somatosensory evoked response."

4113. BLAKEMORE, R. (1975), Science, 190(4212):377-379, "Magnetotactic bacteria."

4114. BLAYVAYS, A.S. (1972), Fiziologicheskiy zhurnal SSR im. I.M. Sechenova, 58(10):1633-1636 (in Russ.), "A method of stimulating cerebral pathways by electrical current."

4115. BLUMENFEL'D, L.A., et al.(1974), Biofizika, 19(1):87-90 (in Russ.) "On the nature of the microwave photoconductivity of photosynthetic systems."

4116. BODEM, F., REIDENBACH, H.D., NEHLS, M., BRAND, H., & FRUHMORGEN, P. (1975) Biomedizinische Technik. 20(6):238-239, "Suitability of 2.45 GHz microwave-heating for endoscopic coagulation therapy."

4117. BOGACH, P.G., et al.(1971), Fiziologichnyy zhurnal AN Ukr. SSR, 17(6):760-764 (In Ukr.), "Effect of constant magnetic field on membrane potential in the isolated ganglia of Planorbis corneus mollusk."

4118. BOSISIO, R.G., NACHMAN, M., & NORBERT, R. (1975), J. of Microwave Power, 10(2):223-232, "A simple method for determining the electric field distribution along a microwave applicator."

4119. BOWMAN, R.R. (1975), IEEE Trans. on Microwave Theory and Techniques, 24(1):43-45 (Jan.), "A probe for measuring temperatures in radiofrequency heated material."

4120. BOWMAN, R.R., LARSEN, E.B., & JESSEN, W.E. (1975), Letter Rept. RD-76-5-LR, under contract I.A.A. DOT-FA73WAI-388 (May), "Exploratory field intensity surveys near FAA transmitting antennas."

4121. BOWMAN, R.R., LARSEN, E.B., & JESSEN, W.E. (1975), Letter Rept. RD-76-3-LR, under contract I.A.A. DOT-FA73WAI-388 (April), "Description and calibration of probes used for exploratory FAA field intensity surveys."

4122. BOWMAN, R.R. (1972), Digest of Papers, Joint Army/Georgia Inst. of Technology sponsored 'Microwave Dosimetry Workshop', 1-2 June, (citation #2630, this biblio.), pp 53-55, "Isotropic electric field probes for complicated fields".

4123. BOWMAN, R.R. (1972), Proc. of the Microwave Power Symp., May, p.29-30, "Two isotropic electric-field probes for complicated fields".

4124. BRAVER, G. (1975), Presented at ERMAC/OTP Seminar on Genetic Effects of Nonionizing EMR, Washington, DC (Aug 21-22), "Effects of electromagnetic fields on genetic phenomena."

4125. BRENT, R.L., & HAMI, D. (1975), Pediatr. Res., 9(4):386, "The increased effectiveness of cancer chemotherapeutic agents when combined with simultaneous microwave irradiation."

4126. BREVET, A., PINTO, E., PEACOCK, J., & STOCKDALE, F.E. (1976), Science, 193(4258):1152-1154 (Sept. 17), "Myosin systhesis increased by electrical stimulation (low frequency) of skeletal muscle cell [of chick embryo] cultures."

4127. BRIDGES, J.E., & BRUESCHKE, E.E. (1970), Proc. of the 1970 IEEE EMC Symposium (Anaheim, CA), (July 14-16), p. 173, "Hazardous electromagnetic interaction with medical electronics."

4128. BRIDGES, J.E., BRUESCHKE, E.E., KAYE, M.P., MILLER, D.A., & PORT, C.D. (1971), IIT Research Inst. (Chicago, IL), Rept. #IITRI-E6185-1, (AD #737-237), Apr., "Susceptibility of cardiac pacemakers to ELF magnetic fields (method and criterion for evaluating ELF magnetic field interference effects on cardiac pacemaker function)." [SANGUINE]

4129. BRIGHTON, C.T. (1972), Naval Research Reviews (NAVSO P-510), 25(10): 1-8, (Oct), "Electric currents hasten bone fracture healing", [using microamps of D.C.].

4130. BRITAIN, V.A. (1974), FDA Consumer, DHEW Publication No. (FDA) 75-8014, (Sept), "Radiation (including RF and microwave): Benefit vs. risk."

4131. BRODEUR, P. (1976), The New Yorker (Magazine), In the section entitled 'A reporter at large,' Part I, Dec. 13, beginning on p. 50 and rambling over approx. 50 pages; Part II, Dec. 20, between p. 43 and p. 83, "Microwaves" [An extremely thorough, chronologic development of the U.S. microwave/RF bioeffects program, containing dates, places and names of participants of most of the important events]

4132. BRODWIN, M.E., TAFLOVE, A., & MATZ, J.E. (1976), IEEE Trans. on Microwave Theory & Techniques, MTT-24(8):514-521, "A passive electrodeless method for determining the interior (E) field of biological materials", [at microwave frequencies].

4133. BRODWIN, M.E. (1976), J. of Microwave Power 11(2):151-152, "Passive telemetry for in vivo measurement of fields in biological materials (Symposium Summary)", [Previously listed as citation #4053 (Session 3A) this Biblio.].

4134. BROWN, G.R., et al.(1974), Doklady AN SSSR, 216(1):232-234 (in Russ.), "On the ability of the electroreceptor system of Black-Sea rays for magnetic field perception."

4135. BRUCKNER, A.P., AUTH, D.C., & TOKUDA, A.R. (1975), Final Rept. under Air Force Contract F41609-75-C-0001 (June), "Development of optical evaluation techniques for use in the human eye after RF exposure."

4136. BULL, J.M., & CHRETIEN, P.B. (1976), J. of Amer. Med. Assoc., 235 (20):2223-2224 (17 May), Editorial: "Heat as cancer therapy." [Comments on various reports of hyperthermia, including the paper by LeVEEN, et al, citation #3867, this Biblio.].

4137. BULLOCK, T.H. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 17-21, "Electromagnetic sensing in fish."

4138. BURLAKOVA, V., et al.(date?), Biophysical Dept. of the Moscow State Univ., "Formation of free radicals during electrical blocking of nerve conduction." (Alternating currents (700-4,000 Hz and DC), [Abstract in: Neuroelectric News, 1(1):7 only (1970)].

4139. BUSBY, D.E. (1968), Space Life Science, 1(1):23-63, "Space biomagnetics."

4140. BUSH, D. (1975), Health Physics, 29(3):431, "Health hazards from microwave exposure."

4140a. BUSH, D. (1976), Annual Rev. of Med., 27( ):431-, "Health hazards from microwave exposure (Letter to Editor)."

4141. BUTCHER, S.G., & BUTCHER, L.L. (1974), Proc. West. Pharmacol. Soc., 17 ( ):37-39, "Acetylcholine and choline levels in the rat corpus striatum after microwave irradiation".

4142. BYELOKRINITSKIY, V.S. (1971), Zhurnal vysshey nervnoy deyatel'nosti, 21(3):525-534 (May-June), (in Russ.), "The influence of large-dosage SHF electromagnetic-field irradiation on the nervous system of animals during conditioned-reflex activity." [Abstr. in: Neuroelectric News, 2(4): 17 only (July 1972)].

4143. CARPENTER, R.L. (1975), Presentation at the U. of New Orleans School of Engineering short course on 'The Biological Effects of Microwave Radiation: Sense and Nonsense' (Feb. 18-21), "Cataractogenic effects of microwave radiation."

4145. CARPENTER, R.L. (1975), Seminar at NY Univ. Medical Ctr., Inst. of Environmental Medicine, Sterling Forest, Tuxedo, NY (Apr), "A rabbit looks at microwaves."

4146. CASSIANO, O., BECCARIA, A., & SABBATINO, M. (1966), Minerva Anest., 32( ):32-34 (in Ital.), "Some vasomotor responses of man exposed to the action of a magnetic field."

4147. CATER, D.B., SILVER, I.A., & WATKINSON, P.A. (1964), Acta Radiol., 2 ( ):321-336, "Combined therapy with 220 kV Roentgen and 10 cm microwave heating in rat hepatoma."

4148. CATRAVAS, G.N., KATZ, J.B., TAKENAGA, J., & ABBOTT, J.R. (1976), J. of Microwave Power 11(2):147-148, "Biochemical changes in the brain of rats exposed to microwaves of low power density (Symposium Summary)", [Previously listed as citation #4053 (Session 3A) this Biblio.].

4149. CAYLOR, R., (19??) National Enquirer, vol?: page?, "Govt. working on machine that can read your mind."

4150. CHAMAY, A., RICHEZ, J., & BIELER, L. (1972), Revue de Chirurgie Orthopedique, 58(5):389-397 (July-Aug), (in Fr., with Engl. summary), "The influence of electrical impulses in osteogenesis."

4151. CHEN, K.C., & LIN, C.J. (1976), J. of Microwave Power 11(2):140-141, "Cytotoxic effects of electromagnetic radiation on Chinese hamster cells in culture (Symposium summary)", [Previously listed as citation #4053 (Session 2A) this Biblio.].

4152. CHEN, T.F. (1975), Ph.D. Dissertation, U. of Oklahoma, "Heat absorption via electromagnetic fields in Drosophila melanogaster.

4153. CHERNYSHEV, V.B. (1968), Zh. Obshch, Biol., 29(6):719-722 (in Russ., with Engl. summary). "Disturbances of the magnetic field of the earth and biological rhythms of the beattle Trogoderma."

4154. CHERNOVETZ, M.E., JUSTENSEN, D.R., KING, N.W., & WAGNER, E. (1975), J. J. of Microwave Power, 10(4):393-409, "Teratology survival and reversal learning after fetal irradiation of mice by 2450 MHz microwave energy."

4155. CHOU, C.K. & GUY, A.W. (1975), Ph.D. Thesis (Washington Univ., Seattle), 129 pp., [Univ. Microfilms #76-17430] "The effects of elecelectromagnetic fields on the nervous system."

4156. CHOU, C.K. GALAMBOS, R., GUY, A.W., & LOVELY, R.H. (1975), J. oof Microwave Power, 10(4):361-367 (Dec.) "Cochlear microphonics generated by microwave pulses."

4157. CHOU, C.K. GUY, A.W., & GALAMBOS, R. (1976), J. of Microwave Power 11(2):171-173, "Microwave-induced cochlear microphonics in cats (Symposium Summary)", [Previously listed at citation #4053 (Session 6A) this Biblio.].

4158. CIACCIA, A., MALACARNE, P., PIFFANELLI, P., & DELLA PICOLLA, A. (1976), Minerva Med., 67(24):1557-1560, (in Ital.), "Chromosome studies of radar center staff exposed to electromagnetic radiation."

4159. CLEARY, S.F. (1975), Annual Summary Rept. #3 under Army contract DADA 17-72-C-2144, "Effect of low intensity microwave radiation on mammalian serum proteins."

4160. CONOVER, D.L. (1975), Lecture for the 'Nonionizing Radiation Seminar' Univ. of Cincinnati (OH) Medical Center (May 19), "Microwave/RF monitoring measurements and instrumentation."

4161. CONOVER, D.L. (1976), Health Physics, 30(1):152-153 (Jan), Review of "Biologic effects and health hazards of microwave radiation."

4162. COPSON, D.A. (1975), (includes a chapter on "Radiation Biology of Microwaves"), 2nd edition, 615 pps., AVI Publishing Co., Inc., Westport, CN., Microwave Heating.

4163. CORSON, S.L., & BOLOGNESE, R.J. (1974), J. of the Amer. Med. Assoc., 227 ( ):1261- , (18 Mar.), "Electrosurgical hazards in laparoscopy."

4164. CORY, W.E., & FREDERICK, C.L. (1975), In: EleElectromagnetic Compatibility, Proceedings of the First Symposium and Technical Exhibition,

Montreaus, Switzerland (May 20-22), p. 469-474, [A76-40726;pps. 20-32] "Electromagnetic compatibility [EMC] as a determining factor in biological effects caused by electric and magnetic fields."

4165. COURTNEY, K.R., LIN, J.C., GUY, A.W., & CHOU, C.K. (1975), IEEE Trans. on Microwave Theory & Tech., MTT-23(10):809-813 (Oct.), "Microwave effect on rabbit superior cervical ganglion."

4166. CRAWFORD, M.L. (1975), National Bureau of Standards Rept. NBSIR 75-804 (Jan.), "Generation of standard EM fields for calibration of power density meters: 20 KHz to 1000 MHz."

4167. CZERSKI, P. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 49-53, "Responses of biosystems to chronic microwave exposure."

4168. CZERSKI, P. (1977), In: "Overviews on Nonionizing Radiation", Rept. by the Working Group on Nonionizing Radiation Protection of the International Radiation Protection Association (Apr.), pps. 4-29, "Microwave and radiofrequency radiation protection standards."

4169. DAELS, J. (1976), J. of Microwave Power 11(2):166-168, "Microwave health of the uterine wall during parturition (Symposium Summary)", [Previously listed as citation #4053 (Session 5A) this Biblio.].

4170. DALRYMPLE, G.V. (1973), In: DALRYMPLE, G.V., GAULDEN, M.E., KOLLMORGEN, G.M., & VOGEL, H.H., JR. (eds.), Medical Radiation Biology, W.B. Saunders Co., Philadelphia, PA, pp. 262-263, "Biologic effects of microwaves."

4171. DANILOV, Yu.Ye. (ed.) (1971) 232 pp. (in Russ.), Problems of High-, Ultrahigh-, and Superhigh-Frequency Electrotherapy.

4172. DAVIS, L.D., PAPPAJOHN, K., & PLAVNEIKS, I.M. (1962), Proceeding of the Federation of American Societies for Experimental Biology (Washington, D.C.), (Sept-Oct), Supplement No. 12, 38 pp., "Bibliography of the biological effects of magnetic fields."

4173. DAVIS, G.R. (ed), (1976), Microwaves, 15(9):14 & 16 (Oct.), "Microwaves score TKO in fight against cancer."

4174. DAVYDOV, B.I., ANTIPOV, V.V., & TIKHONCHUK, V.S. (1974), Transl. from Kosmicheskie Issledovaniya 12(1):129-133, (Jan-Feb), [in Engl., p114-117, A74-22625], "Biological interaction between radiofrequency electromagnetic waves and ionizing [Co-60] radiation."

4175. DEB, A.K. (1975), Electro-Technol. (India), 19(1):1-11, "Biological effects of microwave irradiation--A re-examination."

4176. DECAREAU, R.V. (1977), Microwave Energy Applications Newsletter, 10(2): 13-19, "Do microwaves make food more nutritious?" [Answer appears to be "yes"!]

4177. DECAREAU, R.V. (1975), IMPI Trans., 4( ):69-81, "Microwave cooking and nutrition."

4178. DeCORPO, J.J., et al.(1975), Applied Spectroscopy, 29(1):85-87, "Power variations in microwave exposure resulting from different source gases."

4179. DEFICIS, A. DUMAS, J.C., LAURENS, S., & PLURIEN, G. (1976), J. of Microwave Power 11(2):137-138, "Effect of electromagnetic energy on the formation of triglycerides: Frequency influence (Symposium summary)", [Previously listed as citation #4053 (Session 1A) this Biblio.].

4180. DEFICIS, A., & PRIOU, A. (1976), J. of Microwave Power 11(2):148-149, "Non-perturbing microprobes for measurement in electromagnetic fields (Symposium summary)", [Previously listed as citation #4053 (Session 3A) this Biblio.].

4181. DEFICIS, A., DUMAS, J.C., LAURENS, S., & PLURIEN, G. (1976), J. of Microwave Power 11(2):136-137, "Variation of serum triglycerides formation rate under the action of electromagnetic waves: Power level influence (Symposium summary)", [Previously listed as citation #4053 (Session 1A) this Biblio.].

4182. DEGEN, I.L., POTASHNIK, V.Ya. (1970), Vrachebnoye delo, __(7):45-49 (in Russ.), "Changes in coagulation in a constant magnetic field." (Enhancement of blood coagulation was observed at 1,500 Oe), [Abstr. in: Neuroelectric News, 1(3):9 only (1971)].

4183. de GOER, A.M., & CHALLIS, L.J. (1973), Solid State Commun., 13(7): 745-758, "The effect of dispersion on the thermal conductivity of dielectrics containing resonant scattering centres".

4184. deLORGE, J., & MARR, M.J. (1974), In: ELF and VLF Electromagnetic Field Effects (PERSINGER, M.A., ed.), Plenum Publishing Corp., NY, "Operant methods assessing the effects of ELF electromagnetic fields."

4185. DENCH, E.C. (1973), IMPI Trans., 1( ):1-4, "Advantages of microwave processing."

4186. DENISIEWICZ, R., DZIUK, R., & SIEKIERZYNSKI, M. (1970), Polskie Archiwum Medycyny Wewnetrznej, __(45):19- , (in Pol.), "Evaluation of thyroid function in persons occupationally exposed to microwave radiation."

4187. DERNOV, A.I., et al.(1968), Voyenno-meditsinskiy Zhurnal, __(3):43-48 43-48 (in Russ.), [Reviewed in Foreign Science Bull., 5(2):p ?. (1969)], "Biological effects of magnetic fields."

4188. DODGE, C.H. (1977), Congressional Research Service, Library of Congress, Rept., "The FDA (Bureau of Radiological Health) Symposium on Biological Effects and Measurements of RF/Microwaves, 16-18 February 1977: A Summary."

4189. DODGE, C., & KASSEL, S. (1966), Surveys of foreign scientific and technical literature, ATD Rept. #66-133, 33 pps., "Soviet research on the neural effects of microwaves." [Previously cited as #318, this Biblio., title not given].

4190. DODGE, C.H. (1975), Rept. prep. for Cell Physiology course at Catholic Univ. (Spring) "The influence of low-intensity microwaves on cellular function and morphology (A review of the literature and suggested experimentation)."

4191. DOLMIERSKI, R., & NITKA, J. (1976), Bull. of the Institute of Marit. Trop. Med. Gdynia, 27(1):57-61, "Estimation of the occurrence of neurotic disorders in maritime workers exposed to the action of electromagnetic waves."

4192. DURNEY, C.H., JOHNSON, C.C., & MASSOUDI, H. (1975), IEEE Trans. on Micorwave Theory and Techniques, MTT-23(2):246-253, (Feb), "Long-wavelength analysis of plane wave irradiation of a prolate spheroid model of man."

4193. DVORAK, T. (1975), Proceedings of the First Symposium and Technical Exhibition, Montreaux, Switzerland (May 20-22), (Sponsored by IEEE and URSI), 564 pps. "Electromagnetic compatibility."

4194. ECKER, H.A., (1972), Digest of Papers, Joint Army/Georgia Inst. of Technology Microwave Dosimetry Workshop, 1-2 June, p. 91-95, "Potential medical and biological applications of electromagnetic radiation".

4195. ECKER, H.A. (1975), Progress Rept. #1 under Army Contract DAHC 04-75-G-0182 (Sept. 30), "In vivo determination of energy absorption in biological tissue."

4196. EFFERT, S. (1975), Presented at 3rd International Colloquium of the International Section of ISSA for the Prevention of Occupational Risks Due to Electricity, held in Marbella Spain, 27-29 Oct. 1975, "The effect of electric and electromagnetic fields on the organism."

4197. EGYPTIEN, H. (1975), Elektrotechnische Zeitschrift, Ausgabe B., 27(26):729-730, [Conference in Paris, (1974)], "Effects of electrical and electromagnetic fields on organisms."

4198. EICHERT, E.S., & FREY, A.H. (1976), J. of Microwave Power 11(2):141 only, only, "Human auditory system response to lower power density pulse modulated electromagnetic energy: A search for mechanisms (Symposium summary)." [Previously listed as citation #4053(Session 2A) this Bibliography].

4199. ELDER, J.A. (1975), Presented at the Joint US/USSR 'Symposium on the Comprehensive Analysis of the Environment,' Honolulu, Hawaii, (Oct.), "Biological effects of nonionizing radiation."

4200. ELDER, J.A. & HUANG, A.T. (1975), Presented at OTP/ERMAC Seminar on 'Genetic Effects of Nonionizing EMR,' Washington, DC (Aug. 21-22), "Cytogenetic and immunological studies of microwave irradiated animals."

4201. ELDER, R.L., & EURE, J.A. (1973), IMPI Trans. 1( ):74-85, "Radiation leakage control of industrial microwave power devices."

4202. EMERY, A.F., SHORT, R.E., GUY, A.W., KRANING, K.K., & LIN, J.C. (1976) ASME (Amer. Soc. Mechanical Engineers), Transactions, Series C/J. of

Heat Transfer, 98( ):284-291 (May), "The numerical thermal simulation of the human body when undergoing exercise or nonionizing electromagnetic irradiation."

4203. EMERY, A.F., KRAMAR, P., GUY, A.W., & LIN, J.C. (1975), J. of Heat Transfer __( ):123-128 (Feb) "Microwave induced temperature rises in rabbit eyes in cataract research."

4204. EMLEN, S.T. (1970), Animal Behavior, 18( ):215-224, "The influence of magnetic information on the orientation of the indigo bunting, Passerina cyanea."

4205. FAYTEL'BERG-BLANK, V.R., & KUTSENKO, P.YA. (1971), Fiziologichnyy Zhurnal AN Ukr. SSR, 17(6):813-819 (in Ukr.), "Effects of microwaves on the resorptive activity of alimentary apparatus."

4206. FAYTEL'BERG-BLANK, V.R. (1970), 171 pps. (in Russ.) Physiological Mechanisms During the Action of High-Frequency Physical Agents on Digestion.

4207. FORMANEK, V.C. (1976), Rept., Illinois Inst. of Technology, Tech. Rept. #2 (IIT) Research Inst. (Chicago, IL). Project #E6249 for U.S. Naval Electronic Systems Command, (Washington, D.C.) 181 pps [AD #A023-094], (N76-31893), (April), "ELF electromagnetic field effects on life forms. Bibliography."

4208. FRANKEL, B.L. (1974), Amer. J. of Psychiatry, 131(1):95-98 (Jan.), "Research on cerebral electrotherapy (electrosleep): Some Suggestions."

4209. FRAZER, J.W., & BARNES, F.S. (1975), Presented at ERMAC/OTP Seminar on 'Genetic Effects of Nonionizing EMR' (Washington, DC), (Aug. 21-22), "Pulsed field effect on genetic development."

4210. FRAZER, J.W., MITCHELL, J.C., GASS, A.E., & HURT, W.D. (1972), Digest of Papers, Joint Army/Georgia Inst. of Technol. Microwave Dosimetry Workshop, 1-2 June. p 56-73, "Ghosts and witchcraft in RF measurements, or power absorption measurements in fields".

4211. FREY, A.H., FRASER, A., SIEFERT, E., & BRISH, T. (1968), Physiol. Behav., 3( ):363-364, "A coaxial pathway for recording from the cat brain stem during illumination with UHF energy."

4212. FROHLICH, H. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 67-71, "Possibilities of long- and short-range electric interactions of bio-systems."

4213. GALLOWAY, D., BAWIN, S.M., FRAZER, J., STAVINOHA, W., GUY, A., LOVELY, R. HAWKINS, D., SCHROT, J., THOMAS, J.R., JUSTESEN, D.R., HUNT, E.L., FREY, A., SEAMAN, R., & DESANTIS, M. (1975), J. of Microwave Power, 10(2):127-140, "A summary of the ERMAC/OTP work session on nervous system and behavioral effects of non-ionizing electromagnetic radiations."

4214. GALTON, S. (1975), The Washington Post [newspaper], Parade Magazine section, pp. 12-13 (24 Dec.), "Dramatic successes with electromedicine."

4215. GANDHI, O.P. (1975), Quarterly Repts. under Army Contract DAMD 17-74-C-4092:#3 (Mar. 31), #4 (June 30), #5 (Sept. 30), "Behavioral and biological effects of resonant electromagnetic absorption in rats."

4216. GAROLA, A.J., et al. (1974), Proceedings of the 1974 San Diego Biomedical Symposium (Feb. 6-8), "Effect on fecundity in birds exposed to various e/m fields."

4217. GAVALAS-MEDICI, R. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 27-35, "Effects of weak E-fields on behavior and EEG of laboratory animals."

4218. GERLING, J.E. (1973), IMPI Trans., 1( ):159-170, "Microwave heating patents."

4219. GERLING, J.E. (1973), IMPI Trans., 1( ):144-158, "[Microwave] Applicators and their design."

4220. GESSLER, A.E., McCARTY, K.S., PARKINSON, M.C., & CONKLIN, L.H. (1950) Exp. Med. & Surg., 8( ):143- , "Eradication of spontaneous mouse tumors by high frequency radiation."

4221. GIAROLA, A.J., KREUGER, W.F., FANGUY, R.C., & SHREKENHAMER, A. (1974), Proc. of the Microwave Power Symp., May 29-31, pp. B2-3/1 to B2-3/7, "Exposure of Gallus domesticus to various electromagnetic fields".

4222. GINSBURG, K., & CHOLET, P. (1954), Progress Rept. (for the period 1 Jan. '53 to 31 Dec. '53), NONR #119-204 (20 Jan.), "The effect of low frequency radio waves on biological materials."

4223. GLASER, Z.R., & BROWN, P.F. (1976), Naval Medical Research Institute (Bethesda, MD), Rept. (August), [AD #A029-430], "Eighth supplement to bibliography of reproted biological phenomena ('effects') and clinical manifestations attributed to microwave and radio-frequency radiation."

4224. GLASER, Z.R., BROWN, P.F., & BROWN, M.S. (1976), Naval Medical Research Institute (Bethesda, MD), Rept. (Sept.), [AD#], "Bibliography of reported biological phenomena ('effects') and clinical manifestations attributed to microwave and radio-frequency radiation: Compilation and integration of report and seven supplements."

4225. GOGSHIDZE, N.Sh., GUGUSHVILI, D.F., ZHGENTI, T.G., KHOMASURIDZE, K.N., & TSAGARELI, S.N. (1969), Zh. Vyssh. Nerv. Deiat., 19( ):172-173 (in Russ.), [Transl. in: Soviet Neurol. Psychiatr., 3( ):74-78 (1970)], "The effect of a low-frequency alternating magnetic field on the development of conditioned electrodefensive reflexes in white rats."

4226. GOLOBOKIY, N.K., & KROTOV, A.V. (1973), Vrachebnoye delo, (6):12-14 (in Russ.), "Influence of short exposures to a magnetic field on ESR signal in healthy and sick humans." [400 Oe, 50 Hz], [Abstr. in: Neuroelectric News, 4(2):3 only (1974)].

4227. GONCHAROVA, N.N., & MISHCHENKO, L.I. (1973), Gig. Tr. Prof. Zabol., __ (7):22-25, (in Russ.), "Effect of an electromagnetic field in the meter range on the nervous system of animals (rats) on the basis of physiological and biochemical studies".

4228. GOODMAN, E.M., et al.(1975), Tech. Rept., U. of Wisconsin at Parkside (1 Apr), "Effects of extremely low frequency electromagnetic fields on growth and differentiation of Physarum polycephalum. Phase I: Continuous Wave."

4229. GOODMAN, E.M. GREENEBAUM, B., & MARRON, M.T. (1976), Radiation Research, 66(3):531-540, "Effects of extremely low frequency electromagnetic fields on Physarum polycephalum."

4230. GORDON, Z.V. (1972), In: Encyclopedia of Occupational Health and Safety, Vol. 2 (of the Internat. Labour Office), McGraw-Hill Book Co., N.Y., p.1186 only, "Radio and television broadcasting", [Hazards, health & safety aspects].

4231. GORSHENINA, T.I. (1965), Materials of the Scientific Conference, Tomsk, pp.353-356 (in Russ.), [Reviewed in Foreign Science Bull., 5(2):p ? (1969)], "Experimental morphological characteristic of the effect of a constant magnetic field."

4232. GOSPODARCHUK, R.N., et al.(1970), Vrachebnoye delo, __(10):110-111 (in Russ.), "Influence of electromagnetic factors on blood coagulation in healthy and sick humans."

4233. GOTTLIEB, N.D., & CALDWELL, W.E. (1967), J. of Genetic Psychol., 111 (1):85-102, "Magnetic field effects on the compass mechanism and activity level of the snail Helisoma duryi endiscus."

4234. GREENE, F.M. (1976), National Bureau of Standards Final Rept. to USAF School of Aerospace Medicine, Brooks AF Base, on NBS Project 2761433 (Jan.), "Development of an RF near-field exposure synthesizer (10 to 70 MHz)." (Capable of simulating the exposure conditions commonly encountered in the work environment. Report covers the design, fabrication, and testing of the complete facility. The synthesizer design enables exposures to be generated for bioeffects laboratory studies, as well as for calibration of RF exposure monitors essential for conducting biological research. Requirements necessitated the capability to independently generate the electric and magnetic fields. The ratio of the electric to the magnetic field can be adjusted to reproduce actual occupational exposure conditions).

4235. GREENBURG, B. (1975), Final Rept., U. of Illinois at Chicago Circle (March), contract no. N00039-73-0030, 16 pp., "Oxygen consumption and respiratory quotient in five animal populations naturally exposed to SANGUINE electromagnetic fields."

4236. GRIBBLE, R.E., JR. (1975), Rept., U.S. Naval Academy (Annapolis, MD), USNA-TSPR-68, 132 pp. [AD #A016-255], (in Russ.), "The effect of ELF EM field on the circadian biorhythms of Swiss Webster mice."

4237. GRIGOR'YEVA, V.D. (1973), Sovetskaya meditsina, __(2):75-79 (in Russ.), "Basic mechanism of the therapeutic action of decimeter waves." [Abstr. in: Neuroelectric News 4(1):10 only (Nov. 1973)].

4238. GRIGOR'EVA, V.D., ZOL'NIKOVA, A.I., KUBLI, S.Kh., et al.(1973), Vopr. Kurortol. Fizioter. Lech. Fiz. Kult., 38(6):488-490 (Nov. - Dec.), (in Russ.). "Effects of decimetric waves on the functional status of the hypophysical-adrenocortical system of rabbits."

4239. GRODSKY, L.T. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 72-80, "Biophysical basis of tissue interactions."

4240. GRUNNER, O. (1975), Activitas Nervosa Superior, 17(4):294-, (in Engl.) "Differential effects of electromagnetic fields in treatment of neuroses and depression."

4241. GRUODIS,__., GUTMAN,__., KURAS,__., MIDAZHIS,__., MILIUKAS,__., et al. (1972), Proceedings of the (Soviet) Academy of Science, 204(5):1246-1249 (in Russ.), (title ?).

4242. GUIDOTTI, A., CHENEY, D.L., TRABUCCHI, M., DOTEUCHI, M., WANG, C., & HAWKINS, R.A. (1974), Neuropharmacology, 13(12):1115-1122, (in Engl.), "Focussed microwave radiation: A technique to minimize post mortem changes of cyclic nucleotides, dopa and choline, and to preserve brain morphology."

4243. GULYAYEV, P.I., et al.(1974), Biofizika, 19(2):290-294 (in Russ.), "Aural electrical field of isolated nerve and muscle." [Abstr. in: Neuroelectric News, 5(1):11 only (1975)].

4244. GUNDAKER, W.E., MOORE, T.M., & COPPOLA, S.A. (1970), U.S. DHEW Publication #BRH/DEP 70-30 (Dec.), 109 pps., "A study to determine the necessity for the development of standards for the use of selected nonmedical electronic products for commercial and industrial purposes."

4245. GUS'KOVA, A.K. & KOCHANOVA, E.M. (1976), Gig. Tr. Prof. Zabol., _(3): 14-18 (in Russ.), "Some aspects of etiological diagnosis in occupational diseases due to the action of microwave radiation."

4246. GUY, A.W. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 81-87, "Problems of dosimetry and dosimetric techniques."

4247. GUY, A.W. (1975), J. of Microwave Power, 10(4):358-359, "Correspondence on D.R. JUSTESEN'S 'Prescriptive grammar for the radiobiology of non-ionizing radiation'."

4248. GUY, A.W., WEBB, M.D., & SORENSEN, C.C. (1976), IEEE Trans. on Biomed. Engr., BME-23(5):361-370 (Sept.), "Determination of power absorption in man exposed to high frequency electromagnetic fields by thermographic measurements of scale models."

4249. GUY, A.W. (1978), Guest editor of IEEE Transactions on Microwave Theory & Techniques (MTT), Special issue (planned) on "Microwaves in medicine, with accent on the application of electromagnetics to cancer treatment."

4250. GUY, A.W., HARRIS, C., KRAMER, P.O., & EMERY, A.F. (1976), J. of Microwave Power 11(2):134-135, "Study of the effects of chronic low level microwave radiation on rabbits (Symposium Summary)," [Previously listed as citation #4053 (Session 1A) this Biblio.].

4251. HAMRICK, P.E., & McREE, D.I. (1975), J. of Microwave Power, 10(2):211-221, (July), "Exposure to the Japanese quail embryo to 2.45 GHz microwave radiation during the second day of development."

4252. HANAI, T., KOIZUMI, N., & IRIMAJIRI, A. (1975), Biophysics of Structure and Mechanism (Berlin), 1(4):285-294, "Method for determining dielectric-constant and conductivity of membrane-bound particles of biological relevance."

4253. HANZON, K. (1975), Elektro (Norway), 88(21):24-25 (27 Nov.), "Biological effects of electromagnetic fields."

4254. HAR-KEDAR, I., & BLEEHEN, N.M. (1976), Adv. in Radiat. Biol., 6( ):229-266, "Experimental and clinical aspects at hyperthermia applied to the treatment of cancer with special reference to the role of ultrasonic and microwave heating."

4255. HARRIS, H.S. (1976), J.B. Lippincott Co., Phila. Electrosurgery in Dental Practice, [contains a chapter dealing with injuries, hazards, and misconceptions connected with the use of radio frequency radiation].

4256. HARRIS, P. (ed.) (1976), Microwaves, 15(8):19 only (Aug.), "OTP [Office of Telecommunications Policy] study [4th Report, June 76] updates radiation hazards."

4257. HARRIS, P. (1976), Microwaves, 15(9):21 (Oct), Editorial "More flak on danger [to personnel] from Moscow's microwaves."

4258. HARRIS, P. (ed) (1977), Microwaves, 16(1):18 only (Jan), "Soviets are studying microwave effects on health: Scientists from the Soviet Union know plenty about the biological effects of low-level microwave radiation, knowledge that could lead to methods for causing disoriented human behavior, nerve disorders or even heart attacks, says the Pentagon's Defense Intelligence Agency (DIA). A classified report*--parts of which have been made available to the news media--claims Soviet researchers have found that people exposed to low-level microwave radiation 'experience more neurological, cardiovascular and hemodynamic disturbances than do their unexposed counterparts.' The White House Office of Telecommunications Policy is ramroding similar studies but few results have been turned in to date." [*by R.L. ADAMS & R.A. WILLIAMS, cited in this Report]

4259. HARRISON, E.A. (1975), Rept., 117 pp., (Avail. from NTIS (Springfield, VA), #PS-75/384/8WJ), "Biological effects of microwaves."

4260. HARTE, C. (1975), Mutat. Res., 29(1):71-75, "Mutagenesis by radiowaves in Antirrhinum majus L."

4261. HAUF, R. (1976), Elektrotechnische Zeitschrift, Ausgabe B, 28(6-7):181-183, "Latest studies on effect of electromagnetic-fields on human subjects."

4262. HENDREN, W.H., & HALE, J.R. (1975), New Engl. J. of Med. 293(9):428-432 (Aug. 28), "Electromagnetic bougienage to lengthen esophageal segments in congenital esophageal atresia [with some comments on bio-effects of magnetic fields]".

4263. HENNEBERG, G., BOROWSKI, H., HELLER, S., LISCHKA, K-D., & JORDANSKI, H. (1972), Abl. Bakt. Hyg., I. Abt. Orig. A., 221:367-375, (in Ger., with Engl. abstr.), "Experiments on the effect of electromagnetic waves on the reactivity of cells and tissues."

4264. HEYNICK, L.N. (1975), Quarterly Rept. #2 under Army Contract DAMC 17--74-C-4135 (Jan), "Investigation of ocular effects of chronic exposure of primates to microwave radiation at 2.45 GHz; Phase I."

4265. HIROSE, T., ABE, I., KOHNO, M., SUSUKI, T., OSHIMA, K., & OKAKURA, T. (1975) (1975) J. of Microwave Power, 10(2):181-190, "The use of microwave heating to control insects in cigarette manufacture."

4266. HO, H.S. (1976), Health Physics, 31 ( ):97-108, (Aug.), "Energy absorption patterns in circular triple-layered tissue cylinders exposed to plane wave sources", [calculated for sources of 433, 750, 918, and 2450 MHz].

4267. HO, H.S. (1975), J. of Microwave Power, 10(4):421-432, "Dose rate distribution in triple-layered dielectric cylinder with irregular cross section irradiated by plane wave sources", [calculated for sources of 433, 750, 918, and 2450 MHz]

4268. HO, H.S., HAGAN, G.J, & FOSTER, M.R. (1975), IEEE Trans. on Microwave Theory & Techniques, MTT-231(12):1058-1061 (Dec.), "Microwave irradiation design using dielectric lenses [for biological experiments]."

4269. HO, H.S., & YOUMANS, H.D. (1975), Health Physics, 29( ):325-329 (Aug), "Development of dosimetry for RF and microwave radiation. III: Dose rate distribution in tissue spheres due to measured spectra of electromagnetic plane wave."

4270. HOPEWOOD, P.S. (1976), New Engl. J. of Med., 294(9):501-502, "Electromagnetic forces and circadian rhythms (Letter to Editor)."

4271. HOUK, W.M. (1976), U.S. Naval Aerospace Medical Res. Inst. Rept. No. 1225, 17 pps. (Mar), "The continuing medical surveillance of personnel exposed to extremely low frequency (ELF) electromagnetic fields."

4272. HU, C.J., & BARNES, F.S. (1975), Radiation and Environmental Biophysics, 12( ):71-76, "A simplified theory of pearl chain effects."

4273. HUNT, E.L. (1975), Presented at Seminar, Dept. of Rehabilitation Medicine, School of Medicine, Univ. of Washington, Seattle (May 15), "Activation of the rat in a pulsed microwave field."

4274. IIDA, H. (1975), Safety Digest, 21(4):166-176 (in Jap.), "Laser radiation and microwaves: Their impairment of the human body and the measures for protection."

4275. ILLINGER, K.H. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 64-66, "Atomic and molecular mechanisms underlying bio-interactions with electromagnetic radiation."

4276. IVANOV-MUROMSKIY, K.A. (1972), "Naukova Dumka", publisher, Kiev, 137 pps., (in Ukr.), Electromagnetic Biology (Effects of electromagnetic fields and electrical currents on living beings.), [Abstr. in: Neuroelectric News, 3(3):1 only (1973)].

4277. IVANOV-MUROMSKIY, K.A., & LIKHACHEV, A.I. (1967), Kiyev, "Naukova Dumka" (in Russ.), [Reviewed in Foreign Science Bull., 5(2):p ? (1969)], "The effect of a constant (permanent) magnetic field on the blood and CNS of man and animals." [Engl. Summary in: USSR Scientific Abstracts, Biology and Medicine, __(56):188-, (1968)].

4278. JANES, D.E., HANKIN, N.N., ATHEY, T.W., & TELL, R.A. (1975), Presented at OTP/ERMAC Seminar on 'Environmental Measurements of Nonionizing EMR,' Washington, DC (Feb. 6), "EPA nonionizing radiation measurements program."

4279. JANES, D.E. (1975), Presented at Westinghouse International School for Environmental Management, Colorado State Univ. (July), "Electric effects of extra-high voltage and ultra-high voltage transmission lines."

4280. JANKY, D.M., & OBLINGER, J.L. (1976), Poultry Science, 55(4):1549-1553 (July), "Microwave versus water-bath precooking of turkey rolls."

4281. JITARIU, P., SCHNELLER-PAVELESCU, C., & CHERA, E. (1971), Rev. Roum. Biol.-Zoologie, 16(4):273-276 (in Engl.), "Modifications of the peripheral leukogram by the interaction of the bio-field and artifical electromagnetic field."

4282. JOHNSON, C.C., & SHORE, M.L. (eds.) (1976), Biological Effects of Electromagnetic Waves: Selected Papers of the USNC/URSI Annual Meeting, (Boulder, (Coulder, CO, in the 20-23 Oct. 1975), Vol. I (HEW Pub. No. FDA #77-8010), & Vol. II (#77-8011), (Dec).

4283. JOHNSON, C.C., GANDHI, O.P., & ROZZELL, T.C. (1975), Microwave J., 18(8):55-59 (Aug.), "A prototype liquid crystal fiberoptic probe for temperature and power measurements in RF fields."

4284. JOHNSON, C.C., DURNEY, C.H., BARBER, P.W., MASSOUDI, H., ALLEN, S.J., & MITCHELL, J.C. (1976), Interim Rept #SAM-TR-76-35, [for the period 01 Jan-31 July 76], prepared for USAF School of Aerospace Medicine (Brooks AFB, TX) by U. of Utah (Salt Lake City), (Sept), 125 pp., "Radiofrequency radiation docsimetry handbook", [for biological experimentation].

4285. JONES, A.S., Jr. (1975), Ph.D. Dissertation, Univ. of Alabama, 79 pps., 79 pps., (Univ. MIcrofilms, Ann Arbor, Mich. Order #76-4822), "A direct determination of the microwave magnetic field."

4286. KACZMAREK, L.K. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 54-60, "Cation binding models for the interaction of membranes with electromagentic fields."

4287. KAMAL, A.A., AL-BADWAIHY, K., & HASHISH, E. (1976), J. of Microwave Power 11(2):159-160, "An upper bound on coefficient of transmission of microwave leakage into biological tissues (Symposium summary)." [Previously listed as citation #4053 (Session 4A) this Biblio.]

4288. KANTOR, G., & WITTERS, D.M., Jr. (1976), J. of Microwave Power 11 (2):164-165, "A comparative performance study of spaced applicators in microwave diathermy (Symposium Summary)", [Previously listed as citation #4053 (Session 5A) this Biblio.]

4289. KAPLAN, J.N. (1976), SRI Quarterly Progress Report No. 5, prepared for EPA (RTP, N.C.), SRI Project #LSU-4407, Contract #68-02-2248, "Behavioral and electroencephalographic responses of squirrel monkeys exposed in utero to 2450 MHz electromagnetic radiation."

4290. KEETON, W.T. (1977), In: Brain Interactions with Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 22-26, "Biological sensitivity to magnetic fields in orientational responses."

4291. KENT, M. (1975), J. of Microwave Power, 10(1):37-48, "Time domain measurements of the dielectric properties of frozen fish."

4292. KHOLODOV, Yu.A. (1975), Moscow, "Nauka," 205 pp. (in Russ.), Reactions of the Nervous System to Electromagnetic Fields. [Reviewed in: Neuroelectric News, 6(1):11-14 (July 1976)].

4293. KHOLODOV, Yu.A. (1971), In: Prospectives, Hypotheses, Unsolved Problems, Annual issue #4 (ETINGOF, Ye.B., ed.), 365 pp. (in Russ.), Pub. by "Znaniye", pp. 191-213, "Electromagnetic fields as new irritants." [Abstr. in: Neuroelectric News, 2(4):9-10 (July, 1972]

4294. KHOLODOV, Yu.A., ALEXANDROVSKAYA, M.M., LUKJANOVA, S.N., & UDAROVA, N.S. (1969), In: Biological Effects of Magnetic Fields, Vol. 2 (BARNOTHY, M.F., ed.), New York, Plenum Press, pp. 215-225, "Investigations of the reactions of mammalian brain to static magnetic fields."

4295. KHOLODOV, Yu.A. (1966), Transl. of Priroda (Moscow), __(4):114-115 (in Russ.), (N66-32602), "Aerospace biology and the magnetic field."

4296. KHOLODOV, Yu.A. (1965), Materials of the Scientific Conf, Tomsk Univ., pp. 309-313 (in Russ.), [Reviewed in Foreign Science Bull., 5(2):p (1969)], "Advances in modern magnetobiology."

4297. KINCAID, C.B. (1976), HEW Publication (FDA) 77-8007, [This publication

supersedes HEW Publication (FDA) 76-8005 of July, 1975, and Revision of of November, 1975, (previously cited as # 3507, this Biblio.)] "Radiation safety handbook for ionizing & nonionizing radiation", [Microwave and RF radiation safety procedures, p. 24-26].

4298. KINNEN, E., BOGARDUS, R., LU, S., & MICHAELSON, S. (1975), Natl. Electron. Cong. Proc., 30( ):233-236, "Physiological responses to microwave exposure."

4299. KOEGLER, R.R., et al.(1971), Diseases of the Nervous System, 32( ): 100-104 (Feb.), "Medical and psychiatric use of electrosleep."

4300. KOERNER, H.J. (1967), Zent. Arbeitsmed. Arbeitsschutz., 17( ):1-5, "Potential radiation hazard in radar installations."

4301. KOGAN, A.B., et al.(1972), Neyrofiziologiya, 4(3):280-285 (in Russ.), "Effects of polarizing electrical current upon the activity of neurons in the respiratory center." [DC intensity 1x10exp.-9 to 1x10exp.-8 amp.], [Abstr. in: Neuroelectric News, 3(2):9 only (1973)].

4302. KOIKE, R., & TAJIMA, I. (1974), Proc. of the IEEE 121(1):28-32, (Jan) "Thin-film thermoelectric transducer for measurements of low-level power between 0 and 11 GHz."

4303. KORBEL, S.F., JOHNSON, K.D., & ROWLAND, P.S. (1971), Psychonom. Sci., 23( ):50-51, "After effects of low intensity UHF radiation."

4304. KRAMER, P., GUY, A.W., EMERY, A.F., & HARRIS, C. (1976), J. of Microwave Power 11(2):135-136, "Acute microwave irradiation and cataract formation in rabbits and monkeys (Symposium summary)", [Previously listed as citation #4053 (Session 1A) this Biblio.]

3405. KRITIKOS, H., & SCHWAN, H.P. (1975), IEEE Trans. on Biomedical Engineering, BME-22(6):457-463 (Nov), "The distribution of heating potential inside lossy spheres."

4306. KRUGER, B. (1972), Naval Engineers Journal, __( ):73-80, (June), "Project SANGUINE: FBM [Fleet Ballistic Missile (submarine)] Command and control communication", [includes brief comments on the environmental impact].

4307. KRYLOV, V.A., & YUCHENKOVA, T.B. (1972), (in Russ.), 216 pps., Protection From Electromagnetic Radiation [Cited in: Neuroelectric News, 4(2):19 only (Mar. 1974)].

4308. KUCHERENKO, A.E., & SHEVCHUK, V.I. (1975), Vrach. Delo, _(7):124-125, (in Russ), "Experience with magnetotherapy for painful neuromas in stumps of the extremeties."

4309. KULCZYCKA, B., & FURGALSKI, T. (1970), Klin. Oczna., 40(6):839-844, (in Pol., with Engl. summary), "Lens transparency in radio and television workers."

4310. KULIKOVSKAYA, Ye.L. (1971), 147 pp., Protection From the Effect of

Radio Waves (in Russ.), [cited in: Neuroelectric News, 2(2):21 only (1972)].

4311. KUZIN, M.I. (1974), Meditsinkaya tekhnika, __(1):60-62 (in Russ.), "Electroanesthesia for treatment of arrythmia." [Treatment of heart arrythmia using electroimpulse therapy and employing electroanesthesia rather than barbiturate narcosis. The proposed system consists of a defibrillator, electroanesthesia equipment, and synchronization unit.].

4312. LANCRANJAN, I., MAICANESCU, M., RAFAILA, E., KLEPSCH, I., & POPESCU, H.I. (1975), Health Physics, 29(3):381-383, "Gonadic function in workmen with long-term exposure to microwaves."

4313. LARSEN, E.B., ANDREWS, J.R., BALDWIN, E.C., & JESSEN, W.E. (1975), National Bureau of Standards Rept. 75-819 (Sept.), "Sensitive isotropic antenna with fiber-optic link to a conventional receiver."

4314. LAWINSKI, C.P., SHEPHARD, J.C., & GRANT, E.H. (1975), J. of Microwave Power, 10(2):147-162 (July), "Measurement of permittivity of solutions of sof small biological molecules at radiowave and microwave frequencies."

4315. LEBEDEV, V. (1966), Nauka i Tekhnika (Latvain SSR), __(3):19-23 (in Russ.), [Transl. as : Tech Trans., 17(3):NCH-206-465 (1967)], "Human behavior in space, free of magnetic field."

4316. LEHMANN, J.F., DELATEUR, B.J., & STONEBRIDGE, J.B. (1975), Archives of Physical and Medical Rehabilitation, 56(10):442-448, "Heating patterns produced in humans by 433.92 MHz round field applicator and 915 MHz contact applicator."

4317. LENKOV, D.N., & PIROGOV, A.A. (1972), Doklady AN SSSR, 205(3):745-748 (in Russ.)"Postsynaptic responses of cat motor cortex neurons during varimodal stimulation", [Abstr. in: Neuroelectric News, 3(3):3 only (Apr. 1973)].

4318. LENOX, R.H., WRAY, H.L., BALCOM, G.J., HAWKINS, T.D., & MEYERHOFF, J.L. (1975), Presented at Society of Neurosciences, New York, NY (Nov), "Regional brain levels of cyclic nucleotides, GABA and glutamate during chronic barbiturate ingestion and withdrawal."

4319. LEVINSON, D.M., JUSTESEN, D.R., & WARD, L.B. (1975), Bulletin of the Psychronomic Society, 5( ):, "Hypothermal response to salicylate as a function of species, pigementation and gender," (abstract).

4320. LEWIS, P. (1976), The Washington Star [newspaper], Food Section, pp. C-1 & C-15 (15 Dec.), "Some come to love microwave ovens.". [for cooking: contains section on radiation safety hazard]

4321. LEWIS, H.W., (1973), Advanced Research Projects Office, #AD-762-370, "Study of the interaction of electromagnetic radiation with matter".

4322. LIMOGE, A., DEBRAS, D., COEYTAUX, R., & CARA, M. (1974), Rept., Univ. of Paris (France), 140 pp. [AD #A016-640], "Point electroanesthesia (general electropharmaceutical anesthesia for major urological human surgery)",

[Abstr. in: Neuroelectric News 6(1):22 only (July 1976)]

4323. LIMOGE, A., DEBRAS, C., LOUVILLE, Y., ATINAULT, A., LEPRESLE, E., MANNE, DEGOS, J-D., & BOISGONTIER, M-T. (1976), U.S. Army Medical Research & Development Command Rept., pp.13-55 (Feb), [AD#A025-075], "Point electo-anesthesia: Report III: General electropharmaceutical anesthesia."

4324. LIN, J.C. (1975), IEEE Trans. on Biomed. Engr., BME-22(6):542-546, "Induction thermocoagulation of the brain - Quantitation of absorbed power."

4325. LIN, J.C. (1975), Proc. IEEE, 63(10):1530, "Noninvasive microwave measurement of respiration."

4326. LIN, J.C. (1976), IEEE Trans. on Biomed. Engr., BME-23(5):371-375 (Sept.) "Interaction of two cross-polarized electromagnetic waves with mammalian cranial structures."

4327. LIN, J.C., & WU, C-L (1976), IEEE Trans. on Microwave Theory & Techniques, MTT-24(4):219-223, "Scattering of microwaves by dielectric materials used in laboratory animal restrainers."

4328. LIN, J.C. & JACOBI, J.H. (1975), In: Proceedings of the Microwave Power Symposium 1975, Waterloo, Ontario, Canada (May 28-30), pp. 265-271, "Computer-controlled measurement of microwave properties of biomaterials."

4329. LIN, J.C. (1975), Natl. Electron. Cong. Proc., 30( ):224-232, "Biomedical effects of microwave radiation--A review."

4330. LIPA, B.J., STURROCK, P.A., & ROGOT, E. (1976), Nature, 259( ):302-304, "Search for correlation between geomagnetic disturbances and mortality."

4331. LITTLE, W.A. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 62-63, "The physical characteristics of EMF interaction with molecular systems."

4332. LOBANOVA, Ye.A., & GONCHAROVA, A.V. (1968), Gig. Tr. Prof. Zabol., USSR, (3):76-80, (in Russ.), "The effect of radio-frequency electromagnetic fields in the 191 and 155 Mc ranges on the conditioned reflexes of animals."

4333. LORMAN, S. (1962), New York State J. of Med., 62( ):307-308, "Radiation [including short-wave diathemy] cataractogenesis."

4334. LOWE, J.F. (1975), Design News, 30(17):62-63, "Disinfecting process hertz only insects."

4335. LUCZAK, M., SZMIGIELSKI, S., JANIAK, M., KOBUS, M., & deCLERQ, E. (1976), J. of Microwave Power 11(2):173-174, "Effect of microwaves on virus multiplication in mammalian cells in vivo and in vitro (Symposium summary)", [Previously listed as citation #4053 (Session 6A) this Biblio.]

4336. MacGREGOR, R.J. (1970), Rept., Rand Corp., Santa Monica, CA, [AD #712-694], 14 pp. (Sept.), "A brief survey of literature relating to the influence of low intensity microwaves on nervous function."

4337. MAGGI, G., CARRESCIA, V., & RIDOLFI, C. (1972), 2nd Internat. Colloquium of the Internat. Sect. of the ISSA for the Prevention of Occupational Risks due to Electronic Equipment, Cologne, Germany 30 Nov.-01 Dec., Internat. Social Security Assoc., Geneve, Switzerland, "Effects of electromagnetic fields on man."

4338. MAHLUM, D.C. (1976), U.S. Energy Research and Development Administration, Rept., BNWL 1973/uc-20 (Feb.), "Biomagnetic effects: A consideration in fusion reactor development."

4339. MALOV, N.N. (1940), Voprosy Primeneniya Korotkikh i Ultrakorotkikh Voln V Meditsine, Moscow (in Russ.), (Questions on the Applications of Microwaves and Ultrasonic Waves in Medicine).

4340. MAMONTOV, S.G., & IVANOVA, L.N. (1971), Byulleten' eksperimental'noy biologii i meditsiny, __(2):95-96 (in Russ.), "Influence of a low-frequency electric field on cellular propagation in mouse tissue." [600 V, 50 Hz], [Abstr. in: Neuroelectric News, 2(1):7 only (1971)].

4341. MANINA, A.A. (1971) 200 pps. (in Russ.), Ultrastructural Changes and Regeneration Process in the CNS Under Various Influences.

4342. MANVELYAN, L.R., et al. (1971), Byulleten' eksperimental'noy biologii i meditsiny, 69(5):14-18 (in Russ.), "The relation of blood flow in auxotonically contracting gastrocnemias muscle to the frequency of electrical stimulation." (0.12-256 Hz; critical value, 16 Hz), [Abstr. in: Neuroelectric News, 2(1):7 only (1971)].

4343. MARCHESI, G.F., CIANCHETTI, C., CASOTTO, A., & ANGELERI, F. (1972), Boll. Soc. Ital. Biol. Sper., 48(19):535-539, (In Ital.), "Effect of radiofrequency radiation exposure on strichnine-induced epileptogenic foci in the cat". [4 MHz, high power levels]

4344. MARK, N. (1976) Article in Penthouse (magazine) 8(4):104-106, & 170, (Dec.), "Smile, you're on" [Humorous description of undercover/spy use of microwave radiation to recharge batteries in microphone amplifiers, the mysterious cooking of a roast on an uncovered plate following removal from the refrigerator, and the report of tooth fillings feeling warm following suspected irradiation with microwaves].

4345. MARKUZE, I.I., et al. (1971), Izvestiya AN SSSR, seriya biologicheskaya, __(2):268-272 (in Russ.), "Variations in the concentration of K, Na, and Ca ions in the ascitic fluid of tumor-affected animals as an after-effect of the action of a constant magnetic field." (5,000 Oe), [Abstr. in: Neuroelectric News, 3(2):10 only (1973)].

4346. MARRON, M.T., GOODMAN, E.M., & GREENBAUM, B. (1975), Nature, 354(5495): 66-67 (Mar 6), "Mitotic delay in slime mold Physarum polycephalum induced by low intensity 60 and 75 Hz electromagnetic fields."

4347. MASON, J.L., & MACKAY, N.A.M. (1976), IEEE Trans. on Biomed. Engr., BME-23(5):405-409 (Sept.), "Pain sensations associated with electrocutaneous stimulation."

4348. MASSOUDI, H. (1976), Ph.D Thesis (Utah Univ. Salt Lake City), 217 pp., [Univ. Microfilms #76-15572] "Long-wavelength analysis of electromagnetic power absorption by prolate spheroidal and ellipsoidal models of man."

4349. MATS, V.N. (1970), Doklady AN SSSR, 190(3):733-735 (in Russ.), "Changes in the size of nuclei of satellites of the spinal motorneurons during an ortodrom electrical stimulation." (Freq. = 1 Hz), [Abstract in: Neuroelectric News, 1(2):11 only (1971)].

4350. MATTSSON, J.L., & OLIVA, S.A. (1976), Aviat. Space Environ. Med., 47(6): 644-648, "Effect of electromagnetic pulse on avoidance behavior and electroencephalogram of a Rhesus monkey."

4351. McCLENON, D. (1976), Naval Engineers J., 88(4):33-40 (Aug.), "ELF communications." [with discussion of the SEAFARER/SANGUINE Systems, and comments and references to work on the bio- and environmental-compatability].

4352. McNIVEN, D.R., & WYPER, D.J. (1976), J. of Microwave Power 11(2):168-170, "Microwave therapy and muscle blood flow in man (Symposium summary)", [Previously listed as citation #4053 (Session 5A) this Biblio.].

4353. McREE, D.I., WALSH, P.J., & MATHEWS, R. (1975), Review of Scientific Instruments, 46(3):253-256 (Mar), "Variable frequency exposure system for small biological specimens."

4354. McREE, D.I. (1976), Annu. Rev. of Med., 27( ):109-115, (in Engl.), "Potential microwave injuries in clinical medicine."

4355. MEDYANIK, I.A. (1971), Fiziologichnyy zhurnal, 17(1):26-32 (in Russ.), "Effect of direct current on functioning of the symmetric cortex areas in irradiated animals." [Abstr. in: Neuroelectric News, 2(1):8 only (1971)].

4356. MENDECKI, J., FRIEDENTHAL, E., & BOTSTEIN, C. (1976), Cancer Res., 36(6):2113-2114 (in Engl.), "Effects of microwave-induced local hyperthermia on mammary adenocarcinoma in C3H mice."

4357. MEREDITH, R.J. (1974), IMPI Trans, 2( ):69-75, "Applications at 900 MHz."

4358. MERRITT, J.H. (1975), USAF School of Aerospace Medicine Rept., TR-75-28 (Aug.), "Effect of 19 MHz RF radiation on neurotransmitters in mouse brain."

4359. METAXAS, A.C. (1974), IMPI Trans. 2( ):19-47, "Properties of materials at microwave frequencies."

4360. MICHAELSON, S.M. (1975), In: Foundations of Space Biology (Joint US/USSR Publication), Vol. II (Book Two) entitled, 'Ecological and Physiological Foundations of Space Biology and Medicine,' Part 3 entitled 'Effect of Radiant Energy from Space

on the Organism.' National Aeronautics and Space Administration, Washington, D.C. (NASA Special Pub. #374), Chapt. 10, pp. 409-452, "Radio frequency and microwave energies, magnetic and electric fields."

4361. MICHAELSON, S.M. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 98-99, "CNS responses to microwave-induced heating."

4362. MICHAELSON, S.M. ( ), Univ. of Rochester, Atomic Energy Project, Rept. #UR-3490-189, "Occupational aspects of non-ionizing radiant energy exposure--thresholds and standards."

4363. MICHAELSON, S.M. (1976), Federation Proceedings, Federation of Amer. Soc. for Experimental Biol., 35(3):845-, "Influence of microwave exposure on neuroendocrine function."

4364. MICHAELSON, S.M., GUILLET, R., CATALLO, M.A., SMALL, J., INAMINE, G., HEGGENESS, F.W. (1976), J. of Microwave Power 11(2):165-166, "Influence fo 2450 MHz CW microwaves on rats exposed in utero (Symposium Summary)", [Previously listed as citation #4053 (Session 5A) this Biblio.].

4365. MIKOLAJCZYK, H. (1972), In: Encyclopedia of Occupational Health and Safety, Vol. 2 (of the Internat. Labour Office), McGraw-Hill Book Co., N.Y., pps-1176-1179, "Radiation, non-ionizing (radiofrequency)," [including a section on biological effects].

4366. MILLS, L.F. (1976), BRH/FDA In-house rept., 12 pp., "Shortwave and microwave diathermy: A brief review."

4367. MINENKO, V.I., & PETROV, S.M. (1962), Teploenergitika, (9):63-66 (in Russ.), [Reviewed in Foreign Science Bull., 5(2):p ? (1969)], "Physicochemical principles of magnetic water treatment."

4368. MIROSHNICHENKO, F.D., & STADMICK, A.D. (1976), Biofizika, 21(1):178-179 (in Russ.), "Effect of constant magnetic fields on macromolecules."

4369. MISCHENKO, L.I., & KOLODUB, F.A. (1975), Ukr. Biokhim. Zh., 47(4):528-531 (in Ukr.), "Effect of ATP and glutamic acid on oxidative phosphorylation and nitrogen metabolism in the brain and liver of rats exposed to a pulsed electromagnetic field."

4370. MITCHELL, J.C. (1975), Presented at ERMAC/OTP Seminar on 'Environmental measurements of nonionizing EMR,' (Washington, DC), (Feb. 6), "Interpretation of EMR field measurements for hazard assessment."

4371. MITCHELL, J.C. (1970), Rept., USAF School of Aerospace Medicine, Brooks AFB, TX, (AD #712-663), 15 pp. (July), "A radiofrequency radiation exposure apparatus." [Gives details of system design, checkout, and operation.]

4372. MITTLER, S. (1976), Environmental Research, 11(3):326-330 (June), "Failure of 2- and 10-meter radio waves to induce genetic damage in Drosophila melanogaster", [Transmitters used by radio amateurs at 146 MHz and 29 MHz did not produce significant differences in X or Y chromosomes,

nondisjunction, or the induction of sex-linked lethals.].

4373. MITTLER, S. (1975), Mutation Research, 31(5):316-, "Non-thermal radiowaves and genetic damage in Drosophila melanogaster."

4374. MODAK, A.T., WEINTRAUB, S.T., McCOY, T.H., & STAVINOHA, W.B. (1976), J. of Pharmacol. & Exp. Ther., 197(2):245-252, "Use of 300-msec microwave irradiation for enzyme inactivation: A study of the effects of pentobarbital on acetylcholine concentration in mouse brain regions."

4375. MOGENDOVICH, M.R., & SHERSTNEVA, O.S. (1947), Byull. Eksperim. Biol. i Med., __(12):459- , "Gravitational effects of blood in a magnetic field."

4376. MOGENDOVICH, M.R. (1965), Materials of the Scientific Conf., Tomsk Univ. pp. 314-316 (in Russ.), [Reviewed in Foreign Science Bull., 5(2):p (1969)], "Magnetic field and physiological functions."

4377. MOIDEL, R.A., WOLFSON, S.K., Jr., SELKER, R.G., & WEINER, S.B. (1976) J. of Biomedical Materials Research, 10(3):327-334, "Materials for selective tissue heating in a radiofrequency electromagnetic field for the combined chemothermal treatment of brain tumors."

4378. MOTHIRON, J.C., VIALARD-GOUDOU, A., & MAUPAS, P. (1976), J. of Microwave Power, 11(2):200-201, (in Engl.), "Use of an industrial prototype machine for drying and sterilizing pharmaceutical ampoules by microwaves at 2.45 GHz (Symposium summary)".

4378a. MURASHOV, G.F., KRASNOBAEV, P.E., GOBAN, V.L., & ROMANUSHKO, V.A. (1975) Gig. Tr. Prof. Zabol., _(3):36-38 (in Russ.), "Adrenocorticotrophic activity of the pituitary under the effect of a UHF field."

4379. NAZARYAN, O.A. (1974, Zhurnal vysshey nervonoy deyatel'nosti im. I.P. Pavlova, 24(1):183-185 (in Russ.), "The action of a constant magnetic field on the stability of conditioning in planaria." (30, 300, and 3,500 Oe), [Abstr. in: Neuroelectric News, 4(4):6 only (1974)].

4380. NELSON, S.O. (1973), Trans. of the American Society of Agricultural Engineers (ASAE), 16(2):21 pp., Special Publication SP-05-73, "Electrical properties of agricultural products (A critical review)."

4381. NELSON, S.O., & STETSON, L.E. (1974), J. of Economic Entomology, 67(5): 592-595 (Oct.), "Comparative effectiveness of 39- and 2450-MHz electric fields for control of rice weevils in wheat."

4382. NELSON, S.O. (1974), Proceedings of the First International Working Conf. on Stored-Product Entomology, Savannah, GA (Oct. 7-11), pp 325-340, "Radiofrequency, infrared, and ultraviolet radiation for control of stored-product insects: Prospects and limitations."

4383. NELSON, S.O., (1976), J. of Microwave Power, 11(4):299-303, "Microwave dielectric properties of insects and grain kernels."

4384. NELSON, S.O. (1977), [unpublished], List of available publications on EMR Investigations, Agricultural Research Service, U.S. Dept. of Agriculture, 8 pps., "Research on use radiofrequency energy for insect control and conditioning of of farm products."

4385. NELSON, S.O. (1974), Proc. Eur. Microwave Power Symp. (Belgium), pp. 1-4, (Section C.14.5), "Potential insect control applications for microwaves".

4386. NELSON, S.O. (1973), Proc. 1973 Microwave Power Symp. (Eng.), Sept. 11-13, pp. 6B/1-6B1/2, "Dielectric properties of agricultural products".

4387. NEMIROVICH-DANCHENKO, Ye.N., et al.(1974), Biologicheskiye nauki, __(7):65-69 (in Russ.), Change of the mitotic activity of the meristem of shoots under the influence of constant magnetic fields on dry seeds."

4388. NEUKOMM, P.A. (1976), Presented at the 3rd Internat. Symposium on Biotelemetry, Pacific Grove, CA, 17-20 May, "Body-mounted transmitting antennas: Radiation patterns and design of helical dipole antennas."

4389. NEUKOMM, P.A. (1976), Presented at the 3rd Internat. Symposium in Biotelemetry, Pacific Grove, CA, 17-20 May, "Health hazards from telemetry RF exposure? A review of the interactions between electromagnetic fields and biosystems."

4390. NOVITSKIY, Yu.I. (1968), Vestnik AN SSSR, __(9):92-96 (in Russ.), [Reviewed in Foreign Science Bull., 5(2):p ? (1969)], "The effect of a constant magnetic field on plants."

4391. O'MEARA, J.P (1973), IMPI Trans., 1( ):5-16, "What can be expected from microwave energy."

4392. ORINGER, M.J. (1975), W.B. Saunders Co., 2nd. Edition, Phila., Electrosurgery in Dentistry.

4393. ORLOVA, T.N. (1971) In: Cerebral Mechanisms of Mental Illness (Kazan), pp. 16-18, "Clinical aspects of mental disorders following exposure to super high frequency electromagnetic waves."

4394. ORLOWSKI, A. (1970), Electron. Med. 55(4):3-8 (in Fr.), "Biologic effects of short- and ultra-short electromagnetic waves."

4395. OSEPCHUK, J.M. (1973), Part of the AHAM Presentation to TEPRSSC (HEW Advisory Committee), Nov. 1973, and published in the Microwave Energy Applications Newsletter, 6:p.11-(Nov. - Dec.), "A computation of typical operator exposure to microwave oven leakage."

4396. OSNOS, P. (1977), The Washington (DC) Post (newspaper), Sunday, Jan. 23, p. A-16 only, "American doctor: [Duty in] Moscow imposes psychic stresses", [including fear of microwave radiation exposure].

4397. OVERGAARD K., & OVERGAARD, J. (1972), Europ. J. of Cancer, 8( ):65-78, "Investigations on the possibility of a thermic tumor therapy. I: Short-wave treatment of a transplanted isologous mouse mammary carcinoma."

4398. PAETZOLD, J., & SCHAEFER, H.B. (1948), Nat. Sci. & Med. in Germany (1934-1946), 22(2):17-19 (Wiesbaden), "Biophysical foundations of the therapeutic aspects of high frequency electrical fields."

4399. PASHKO, D.I., & NOVIK, L.V. (1975), Mat. Model. and Teor. Elektr. Tsepei (USSR), __(13):112-118, "Electronic model of heat balance for evaluating an industrial microclimate."

4400. PAUTRIZEL, R., & PRIORE, A. (1974), Personal Communication with PLURIEN, G. at the N.Y. Acad. of Sciences "Conf. on Bio-Effects of Non-Ionizing Rad.", (12-15 Feb.), "Effects of PRIORE'S apparatus [which uses modulated non-ionizing EMR and pulsed magnetic fields] on three biological models: Trypanosomes in the mouse and in the rabbit, and on induced athero-sclerosis caused by hypercholesterol diet in rabbits".

4401. PAVLOVICH, S.A., OSIPOV, G.P., TOFILO, P.P., & VORONKINA, M.I. (1975), Gig. Sanit., _(8):110-111 (in Russ.), "Effect of pulsed electrial discharges in microorganisms in water."

4402. PAZDEROVA-VEJLUPKOVA, J., & FRANK, Z. (1976), J. Microwave Power 11(2):139 139 only, "Influence of pulsed microwaves on haematopoiesis of adolescent rats (Symposium summary)", [Previously listed as citation #4053 (session 2A) this Biblio.]

4403. PEDERSEN, P.C. (1976), Ph.D. Thesis, (Utah Univ., Salt Lake City), 178 pp., [Univ. Microfilms #76-16574] "Diagnostic application of microwave radiation."

4404. PEDERSEN, P.C., JOHNSON, C.C., DURNEY, C.H., & BRAGG, D.G. (1975), Univ. of Utah, paper submitted to IEEE Trans. on Engineering in Medicine and Biology (April), "Medical diagnostic applications of microwave radiation."

4405. PEDERSEN, P.C., JOHNSON, C.C., DURNEY, C.H., & BRAGG, D.C. (1976), IEEE Trans. on Biomed. Engr., BME-23(5):410-411 (Sept.), "An investigation of the use of microwave radiation for pulmonary diagnostics."

4406. PENNER, K.K., & BOWERS, J.A. (1974), J. of Food Sci., 38( ):553-555, "Flavor and chemical characteristics of conventionally and microwave reheated pork."

4407. PERSILY, L. & LEHMANN, P. (1974), Job Safety & Health, 2(2):5-10, (Feb) "The hospital: Hazardous haven. A haven for the ill and injured, a hospital is full of potential hazards for the men and women who work there", [includes comments on potential hazards to food service workers who use microwave ovens].

4408. PERSINGER, M.A. (1971), Psychol. Rep., 28( ):435-438, "Prenatal exposure to an ELF rotating magnetic field, ambulatory behavior, and lunar distance at birth: A correlation."

4409. PETELINA, V.V., & BURDO, D.T. (1972), Physiologicheskiy zhurnal SSSR I.M. Sechenova, __(5):673-678 (in Russ.), "Condition of different brain formations and their interaction under the influence of a static electric field." (1,300 V/cm), [Abstr. in: Neuroelectric News, 3(2):9 only (1973)].

4410. PHILLIPS, R.D., RICHARDSON, R.L., KAUNE, W.T., HJERESEN, D.L., & BEAMER, J.L. (1976), Final Rept., Battelle Pacific Northwest Labs (Richland, WA), (Feb.), [PB-251-632/6] 165 pp., "Effects of electric fields on large animals. A feasibility study."

4411. PHILLIPS, R.D., & KAUNE, W.T. (1977), Rept., Battelle-Pacific Northwest Laboratories, (Richland, WA), #BNWL-2262, UC-41, 35 pp. (Apr. 12), "Biological effects of static and low-frequency electromagnetic fields: An overview of United States literature."

4412. PHLAK, M., SERVUS, V., & SCHUBERTOVA, J. (1969), Vojenske Zdravotnicke Listy, 38(1):7-9, "Hazards of microwave radiation and proposals for screening radar technicians."

4413. PIERLUISSI, J.H. (1975), Rept., Univ. of California, Lawrence Livermore Lab. #UCRL-51880 (15 Aug.), 16 pp., "Effects of electromagnetic fields below 30 MHz on animal biology."

4414. PILYAVSKIY, A.I., LIAMANSKIY, Yu.P., & GURA, Ye.V (1972), Neyrofiziologiya, 4(3):272-279 (In Russ.), "Monosynaptic excitation of facial motoneurons during electrical stimulation of the red nucleus." [Abstr. in: Neuroelectric News, 3(3):3 only (Apr. 1973)].

4415. PIRAZYAN, L.A., et al.(1974), Izvestiya AN SSSR. Seriya biologicheskaya, __(4):597-599 (in Russ.), "Influence of electrostatic field on oxyhemoglobin of white mice."

4416. PIRUZYAN, L.A., et al.(1972), Izvestiya AN SSSR, seriya biologicheskaya, __(1):142-145 (in Russ.), "Influence of a constant magnetic field on the state of the blood system in mice." (5,000 Oe), [Abstr. in: Neuroelectric News, 3(2):9 only (1973)].

4417. PIRUZYAN, L.A., et al.(1970), Izvestiya AN SSSR, seriya biologicheskaya, __(4):535-539 (in Russ.), "The mechanism of biological action of constant magnetic fields." [Abstr. in: Neuroelectric News, 1(3):10 only (1971)].

4418. PIRUZYAN, L.A., et al.(1971), Izvestiya AN SSSR, seriya biologicheskaya, __(1):128-132 (in Russ.), "Influence of a constant magnetic field on the concentration of free radicals in organs and tissues of mice." (5,000 Oe), [Abstr. in: Neuroelectric News, 1(4):10 only (1971)].

4419. PLOTKIN, V.I., & MESHKOVA, A.G. (1972), Kazanskiy meditsinskiy zhurnal, __(1):47-49 (in Russ.), "Analgesic action of prolonged electrization using transistorized generators." (800-1,000 Hz (rectangular pulse) or 30-40 Hz (sine-shaped trains), [Abstr. in: Neuroelectric News, 3(1):8 only (1972)].

4420. PODSHIBYAKIN, A.K., et al. (1967), Geofizika i astronomiya, __(11): 209-214 (in Russ.), [Reviewed in Foreign Science Bull., 5(2):p ? (1969)], "Correlation between the magnitude of changes of physiological indices in man and animals, and the degree of perturbation of the Earth's magnetic field."

4421. POPE, J.W., GARGIULO, A.W., STAFFILENO, H., & LEVY, S. (1968), Periodontics, 6:30- , "Effects of electrosurgery on wound healing in dogs."

4422. POTAPOV, S.L. (1975), Rept., 76 pp., [Avail. from JPRS (Arlington, VA), #64532] "Effects of non-ionizing electromagnetic radiation."

4423. PROSHINA, I.V., et al.(1974), Meditsinskaya tekhnika, __(2):52-53 (in Russ.), "Evaluation of the use of the "Elektroson" device for post-operative analgesia." [Abstr. in: Neuroelectric News 4(4):7-8 (Nov. '74)].

4424. PRUCHA, R.V. (1976), J. of Microwave Power 11(2):160 only, "Human thermal loading by exposure to emissions from a microwave oven (Symposium summary)", [Previously listed as citation #4053 (Session 4A) this Biblio.]

4425. RABICHEV, L.Y., VASILIEV, V.F., PUTILIN, A.S., ILINA, T.G., RAKU, P. V., & KERNITSKY, L.P. (1973), U.S. Patent No. 3,773,049, (Nov. 20), "Apparatus for the treatment of neuropsychic and somatic diseases with heat, light, sound and VHF electromagnetic radiation", [simultaneously applied to the patient's CNS at a predetermined repetition rate].

4426. RABINOWITZ, J. (1973), IEEE Trans. on Microwave Theory and Techn. , MTT-21(12):850-851, "Possible mechanisms for the biomolecular absorption of microwave radiation with functional implications".

4427. RABINOWITZ, J.R., & OLCERST, R.B. (1975), Radiation Research, 62( ): 594-, "The effect of microwaves on transport of ascorbic acid in the rabbit lens." [abstract]

4428. RAI, P.S., BALL, H.J., NELSON, S.O., & STETSON, L.E. (1971), Annals of the Entomological Society of America, 64(5):1116-1121 (Sept.), "Morphological changes in adult Tenebrio molitor (Coleoptera:Tenebrionidae) resulting from radiofrequency or heat treatment of larvae or pupae", [at 39 MHz].

4429. RAI,P.S., BALL, H.J., NELSON, S.O., & STETSON, L.E. (1974), Annals of the Entomological Society of America, 67(4):687-690, (July), "Cytopathological effects of radiofrequency electric fields on reproductive tissue of adult Tenebrio molitor (Coleoptera:Tenebrionidae)", [at 39 MHz].

4430. RAI, P.S., BALL, H.J., NELSON, S.O., & STETSON, L.E. (1975), Annals of the Entomological Society of America, 68(3):542-544 (May), "Effects of radiofrequency electrical treatment on fecundity of Tenebrio molitor L. (Coleoptera:Tenebrionidae), " [at 39 MHz].

4431. RAI, P.S., BALL, H.J., NELSON, S.O., & STETSON, L.E. (1977), Annals of the Entomological Society of America, 70(2):282-284 (March), "Spermatozoan

activity and insemination in Tenebrio molitor following radiofrequency electrical treatment (Coleoptera:Tenebrionidae)."

4432. RAJEWSKY, B. (Ed.) (1938), Ergebnisse der Biophysikalischen Forschung in Einzeldarstellungen. Volume 1: Ultrakurzwellen, Georg Thieme, Leipzig (in Ger.), [Results of Biophysical Research in Separate Presentations. Volume 1: Ultrashort waves.].

4433. RANADE, S.S., AVADHANI, N.G., & REGE, D.V. (1974), Photochem. Photobiol., 19(2):103-108, "Effects of non-ionizing radiations in the transforming ability of E. coli DNA".

4434. RATNER, S.C., & JENNINGS, J.W. (1968), J. of Comparative Physiol. & Psychol., 65(2):365-368, "Magnetic fields and orienting movements in mollusks."

4435. RAUE, H. (1963), Klinische Monatsblaetter Augenheilkunde, 142( ):563-567, (In Ger. w/Engl. summary), "The use of microwaves in opthalmology", [reviews use of microwaves in treatment of retinal edema, uveitis, keratitis and neuritis].

4436. REGESTEIN, Q.R., MURAWSKI, B.J., & ENGLE, R.P. (1975), J. Nerv. Ment. Dis., 161(3):200-203, "A case of prolonged, reversible dementia associated with abuse of electroconvulsive therapy."

4437. REIGEL, D.H., LARSON, S.J., & SANCES, A., JR. (1969), Gastroenterology, 56( ):1192, "Effect of limbic system stimulation and electroanesthesia upon gastric secretion."

4438. REPACHOLI, M.H., & STUCHLY, M.A. (1977), Presented at IEEE Meeting, Toronto, (Sept.), [Proposed Canadian] "Emission and exposure standards for microwave radiation."

4439. REPPERT, B. (1976), The Washington Post [newspaper], p. A5 only (Nov. 22), "Soviet microwave work cited." [by a Defense Intelligence Agency (DIA) report which says "extensive Soviet research into microwaves might lead to methods for causing disoriented human behavior, nerve disorders or even heart attacks."]

4440. REVZIN, A., & NEUMANN, E. (1974), Biophys. Chem., 2(2):144-150, "Conformation changes in rRNA induced by electric impulses."

4441. REXFORD-WELCH, S.C. & LINDSAY, I.R. (1976), J. of Microwave Power 11(2):160-162, "The practice of microwave radiation safety (Symposium summary)", [Previously listed as citation #4053 (Session 4A). this Biblio.].

4442. RHEA, J., (1977), Microwave Systems News 7(2):23 only, In the 'Washington Window:News & Comment from the Capitol' Section (Mar. 1977), "(Microwave) Diathermy radiation standards snagged."

4443. RISSMANN, W.J., & CAIN, C.A. (1975), Natl. Electron. Conf. Proc., 30( ): 239-244, (in Engl.), "Microwave hearing in mammals."

4444. ROBINSON, N., NIEVEL, J.G., & ANDERSON, J. (1975), Biochem. Soc. Trans.,

2(6):1359-1360, "Histochemical and ultrastructural analysis of the effect of electromagnetic radiation on rat liver and brain."

4445. ROBINSON, J.E., McCULLOCH, D., & EDELSACK, E.A. (1976), J. of Microwave Power, 11(2):87-98 (June), "Microwave heating of malignant mouse tumors and tissue equivalent phantom systems."

4446. ROMANOV, I.V., ULYANOV, M.Iu., & SMIRNOV, Iu.V. (1974), Med. Parazitol. (Mosk.), 43(1):108-109 (in Russ.), "The effect of UHF electromagnetic fields on the viability of plerocercoids of Diphyllobothrium latum."

4447. ROSENFELD, S.S. (1977), The Washington (DC) Post (newspaper), Friday, Jan. 7, page ? only, "[Non-ionizing] Radiation sickness: medical and political."

4448. ROSENTHAL, G.H. Jr. (1975), Final Rept. Illinois Inst. of Technology Research Inst. (Chicago, ILL), [AD# A023092] (May), "Germination and early growth of sunflowers in weak ELF electromagnetic fields."

4449. ROTKOVSKA, D., & VACEK, A. (1976), J. of Microwave Power, 11(2):141-143, "Modification of the repair of radiation damage of haematopoiesis in mice by microwaves (Symposium summary)", [Previously listed as citation #4053 (Session 2A) this Biblio.]

4450. RUDGE, A.W. (1970), J. of Microwave Power, 5(3):155-174, "An electromagnetic radiation probe for near-field measurements at microwave frequencies."

4451. RUGH, R., & McMANAWAY, M. (1976), The Journal of Experimental Zoology, 197(3):363-367 (Sept.), "Anesthesia as an effective agent against the production of congential anomalies in mouse fetuses exposed to electromagnetic radiation [2450 MHz]."

4452. RUGH, R. (1972), Presented at 7th Mid-Year Topical Symposium, Health Physics Society (San Juan, Puerto Rico), (13 Dec), "The most dramatic and radiosensitive period in life - from conception to birth."

4453. RUGH, R., HO, H., & McMANAWAY, M. (1976), J. of Microwave Power, 11(3): 279-281, "The relation of dose rate of microwave radiation to the time of death and total absorbed dose in the mouse."

4454. RUGH, R. (1976), J. of Microwave Power, 11(2):127-132 (June), "The relation of sex, age, and weight of mice to microwave radiation sensitivity." [2450 MHz]

4455. RUGH, R. (1976), Health Phys., 31(1):33-39, "Are mouse fetuses which survive microwave radiation permanently affected thereby?"

4456. RYZHOV, A.I., & GARGANEYEV, G.P. (1965), Materials of the Scientific Conf., Tomsk Univ., pp. 349-352 (in Russ.), (Reviewed in: Foreign Science Bull., 5(2):p ? (1969)), "Pathomorphological changes in the gastrointestinal tract under the action of a constant magnetic field."

4457. RZEPECKA, M.A., & METHERALL, P.A. (1975), J. of Microwave Power, 10(2): 191-198, "A waveguide applicator for irradiation of samples at controlled temperature."

4458. SANCHEZ, S.A. (1973), QST Magazine, __( ):58- (Mar.), "Danger: When you transmit [RF radiation] you can turn off a pacemaker."

4459. SAUL, R. (1958), Polarad Electronics Corp., NY, "Notes on microwave measurement."

4460. SAVARA, B.S., et al.(1973), Rept. of Univ. of Oregon (Portland), July, 30 pps. [AD #768-221], "Electrical enhancement of healing in combat injuries to hard and soft tissues."

4461. SCHERESCHEWSKY, J.W. (1928), Publ. Health Rep., 43( ):940-, "Action of currents of very high frequency upon tissue cells. B. Upon a transplantable fowl sarcoma."

4462. SCHERESCHEWSKY, J.W. (1933), Radiology, 20( ):246- , "Biological effects of very high frequency electromagnetic radiation."

4463. SCHIFFMANN, R.F. (1975), Food Eng., 47(11):72-76, "Microwaves challenge today's heat processing", [of food].

4464. SCHMIDT, D.E. (1976), Neuropharmacology, 15(2):77-84, "Regional levels of choline and acetylcholine in rat-brain following head focussed microwave sacrifice: Effect of (E)-Amphetamine and (EOR)-Parachloroamphetamine."

4465. SCHWAN, H.P. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 88-97, "Some tissue determinants of interactions with E-fields."

4466. SEAMAN, R.L. (1977), In: Brain Interactions with Weak Electric and Magnetic Fields [citation #4062, this Biblio.], pp. 45-48, "Effects of microwave radiation on Aplysian ganglion cells."

4467. SEBESTIK, V., & PETZ, R. (1976), Physiol. Bohemoslov., 25(3):241-244, (in Engl.), "Thermostability of the erythrocytes of mice exposed to the action of a magnetic field."

4468. SELLS, S.B. DUKE, M.J., & FINDIKYAN, N. (1966), Stress Reviews Radiation, Contract Nonr 3436(00), (Aug.), pp. 15-33, "Microwave radiation."

4469. SERDYUK, A.M., & YERSHOVA, L.K. (1972), Fiziologichnyy zhurnal AN UkrSSR, 18(6):802-807 (Nov./Dec.), (in Ukrainian), "Effect of low-intensity ultrahigh-frequency electromagnetic field on bioelectric activity of rabbit brain." [Abstr. in: Neuroelectric News, 3(3):8 only (Apr. 1973)].

4470. SERDYUK, A.M. (1969_, Vrach. Delo, 11( ):108-111 (in Russ.), [Transl. in: Nuclear Sci. Abst., 24:4555, #46660 (1970)], "Biological effect of low-intensity UHF electromagnetic fields."

4471. SERVANTIE, B., GILLARD, J., SERVANTIE, A.M., OBRENOVITCH, J., BERTHARION, G., PERRIN, J.C., & CRETON, B. (1976), J. of Microwave Power, 11(2):145-146, "Comparative study of the action of three types of microwave fields upon the behavior of the white rat." (Sympcsium summary). (Also listed in citation #4053 (Session 3-A) this Biblio.)

4472. SEVAST'YANOV, V.V. (1973), Voyenno-meditsinskiy zhurnal, __(5):56-58 (in Russ.), "Regarding the influence of metallic implants on the intensity of SHF irradiation." [local diffraction effects], [Cited in: Neuroelectric News, 4(2):13 only, (Mar. 1974)].

4473. SHEALY, C.N. (1975), J. of Neurosurgery, 43(4):448-451, "Percutaneous radiofrequency denervation of spinal facets."

4474. SHEPPARD, A.R., & EISENBUD, M. (1977), New York Univ. Press, NY, N.Y., 271 pps., Biological Effects of Electric and Magnetic Fields of Extremely Low Frequency.

4475. SHEVTSOV, V.V., TUROVA, N.F., MISHCHENKO, B.P., & POGODAEV, K.I. (1972), __(3):298-302 (in Russ.), "Electrophoretic study of soluble proteins of rat brain in norm and during electroconvulsions."

4476. SHINN, D.H. (1976), Marconi Review, 39( ):61-80 (June, 2nd quarter), "Avoidance of radiation hazards from microwave antennas."

4477. SHLIAFER, T.P., & IAKOVLEVA, M.I. (1970), Fiziol. Zh. SSSR, 56( ): 1689-1693 (in Russ. with Engl. summary), "Single unit activity in the somatosensory cortex of rats subjected to the influence of static electric fields."

4478. SHLYAFER, T.R., & YAKOVLEVA, M.I. (1969), Fiziologicheskiy Zhurnal SSSR imeni Sechenova, 60(1):16-21 (in Russ.), "Investigations realted to the activity of neurons in an electromagnetic field." [Abstr. in: Neuroelectric News 1(1):9 only (Oct. 1970)].

4479. SIEKIERZYNSKI, M. CZARNECKI, C., DZIUK, E., JEDRZEJCZAK, W.W. & SZADY, J. (1976), J. of Microwave Power 11(2):144-145, "Microwave radiation and other harmful factors of the working environment in radio-location: Method of determination of microwave effects (Symposium summary)", [Previously listed as citation #4053 (Session 2A) this Biblio.].

4480. SILVERMAN, C. (1974), Health Physics, 26( ):596-597, "International Symposium on the Biological Effects and Health Hazards of Microwave Radiation: A report on the Symposium", [held in Poland].

4481. SLINEY, D.H., & CONOVER, D.L. (1975), In: Industrial Environmental Health: The Worker and the Community (CRALLEY, L.V., & ATKAINS, P.R., ed.). Academic Press, NY, pp. 157-177, "Nonionizing radiation."

4482. SLINEY, D.H. (1972), In: Industrial Environmental Health: The Worker and the Community, Academic Press, Inc., N.Y., pp. 172-239, "Nonionizing Radiation", [contains a section entitled, "Microwave Radiation Hazards," pp. 218-223].

4483. SMITH, G.S. (1975), IEEE Trans. on Biomedical Engineering, BME-22(6):477-483 (Nov.), "A comparison of electrically short bare and insulated probes for measuring the local radio frequency electric field in biological systems."

4484. SMITH, S., & BROWN, D. (1971), Rept., Div. of Electronic Products, Bureau of Radiological Health Rept. No. BRH/DEP 72-5, USDHEW Pub. No. (FDA) 72-8015, 56 pps. (Nov.) "Radiofrequency and microwave radiation levels resulting from man-made sources in the Washington, D.C. area."

4485. SOLOV'YEVA, G.R. (1974), Meditsinskaya tekhnika, __(3):41-46 (in Russ.), "Equipment and application of low-frequency magnetotherapy."

4486. SOROKA, A.B. (1971), Meditsinskaya tekhnika, __(4):19-23 (July-Aug.), (in Russ.), "Continuous registration of arterial blood flow by a non-invasive method using miniature electromagnetic sensors."

4487. SOUTHERN, W.E. (1975), Science, 189( ):143-145 (11 July), "Orientation of gull chicks exposed to project SANGUINE's electromagnetic field."

4488. SPIEGEL, R.J. (1976), IEEE Trans. on Biomed. Engr., BME-23(5):387-390 (Sept.), "ELF coupling to spherical models of man and animals."

4489. SPRIEGEL, R.J. (1975), IIT Research Institute Technical Memorandum #3, (Mar.), "ELF coupling to biospheres."

4490. STAVINOHA, W.B. (1975), Final Rept. under AF contract F41609-75-C-0018 (Apr.), "Research and reports on biological effects of Air Force [RF] transmitter near fields."

4491. STEFANOV, B., & SOLAKOVA, S. (1975), Gig. Sanit., __(8):70-72 (in Russ.), "Experimental study of some problems relating to the biological effect of water exposed to a uniform magnetic field."

4492. STENZLER, M. (19??), Electronic Engineering Times,, ?(?):p ?, "Russian scientists tour U.S. laboratories, cooperative (microwave) radiation studies anticipated."

4493. STEVENS, A., & PELUSO, F. (1976), J. of Microwave Power 11(2):170-171, "Temperature changes generated by microwave therapy in the thighs of human subjects (Symposium summary)", [Previously listed as citation #4053 (Session 5A) this Biblio.].

4494. STONE, R.B., CHRISTIANSEN, M.N., NELSON, S.O., WEBB, J.C., GOODENOUGH, J.L., & STETSON, L.E. (1973), Crop Science, 13( ):159-161 (Mar.-Apr.), "Induction of germination of impermeable cottonseed by electrical treatment."

4495. STYKAN, O.A. (1967) Voenno-Med. Zh. (Moscow) 7(36-38):4 pp. (July), [Engl. transl. available from NTIS (N76-25763), dated 1975, by Oak Ridge Nat. Lab. (ORNL-TR-4053), "Radiation genetic effects of electron vacuum tubes of a radar station", [health physics, chromosomes, mutations, radiation dosage, safety factors].

4496. SUBRAHMANIAN, G., GANGADHARAN, P., MURTHY, M.S.S., & GUPTA, J.P. (1973), Def. Sci. J. (India), 23:129-136, (July), [A74-22625] "Microwave radiation hazards" [Including biological].

4497. SUSSKIND, C. (1975), J. of Microwave Power, 10(4):357, "Correspondence on D.R. JUSTESEN'S 'Prescriptive grammar for the radiobiology of non-ionizing radiation'."

4498. SZADY, J., SIEKIERZYNSKI, M., DZIUK, E., JEDRZEJCZAK, W.W., & CZARNECKI, C. (1976), J. of Microwave Power, 11(2):139-140, "Effects of microwaves on the 24 hour rhythm and 24 hour urinary excretion of 17-hydroxycorticoids and 17-ketosteroids." (Symposium summary), [Also listed in citation #4053 (Session 2A) this Biblio.].

4499. SZELENYI, Z., ZEISBERGER, E., & BRUECK, K. (1976), Pfluegers Archiv., 364(2):123-127, "Effects of electrical stimulation in the lower brainstem on temperature regulation in the unanesthetized guinea pig."

4500. SZMIGIELSKI, S., LUCZAK. M., BIELEC, M., JANIAK, M., KOBUS, M., STEWART, W.E., & deCLERQ, E. (1976), J. of Microwave Power 11(2):174-175, "Effect of microwaves combined with interferon and/or interferon inducers (poly 1-poly c) on development of sarcoma-180 in mice (Symposium summary)", [Previously listed as #4053 (Session 6A) this Biblio.].

4501. TAYLOR, E.M., & ASHLEMAN, B.T. (1975), Rept. Washington Univ. (Seattle), (AD #A018-931), 11 pp., "Some effects of electromagnetic radiation on the brain and spinal cords of cats", [Also in Annals of the N.Y. Academy of Sciences, 247( ):63-73 (28 Feb. 1975]; [Abstr. in: Neuroelectric News 6(3):38 only (Mar. 1977].

4502. TAYLOR, J.R. (1972), Proc. of the Microwave Power Symposium, May, p. 31-32, "Microwave radiation hazards control program in the U.S. Army".

4503. TELL, R.A. (1975), Environmental Protection Agency Technical Note, ORP/EAD 75-1 (Aug.), "An analysis of broadcast radiation levels in Hawaii."

4504. TELL, R.A., & O'BRIEN, P.J. (in press), Environmental Protection Agency, Washington, D.C., "An investigation of broadcast radiation intensities at Mt. Wilson, California."

4505. TEOTIA, J.S., & MILLER, B.F. (1975), Poult. Sci., 54(5):1388-1394 (in Engl.), "Destruction of Salmonellae in poultry meat with lysozyme, EDTA, X-ray, microwave, and chlorine."

4506. THACKRAY, R.I., BAILEY, J.P., & TOUCHSTONE, R.M. (1975) Civil Aeromedical Institute, Okla. City, Okla. [Aug.), (AD# A025-426/8], "Physiological, subjective and performance correlates of reported boredom and monotony while performing a simulated radar control task."

4507. TIURI, M., & LIIMATANEN, P. (1975), J. of Microwave Power, 10(2):141-146, "Microwave method for measurement of fiber orientation in paper."

4508. TKACHENKO, Ye.I. (1973), Fiziologicheskiy zhurnal im. Sechenova, __ (10):1457-1462 (in Russ.), "Influence of Direct Current on the bioelectric activity of the dog brain." [Abstr. in: Neuroelectric News, 4(2):1 only (1974)].

4509. TORNUYEV, Yu.V. (1972), Fiziologicheskiy zhurnal SSSR in. I.M. Sechenova, 58(9):1385-1389 (in Russ.), "On the origin of the external electric field of an excited isolated nerve in air."

4510. TOROPTSEV, I.V., & GARGANEYEV, G.P. (1965), Materials of the Scientific Conf., Tomsk Univ., pp. 345-348 (in Russ.), (Reviewed in Foreign Science Bull., 5(2):p ? (1969)), "Morphological changes developing in experimental animals under continuous prolonged action of a constant magnetic field."

4511. TRAVKIN, M.P. (1969), Rept. [NLL-RTS-5237; N70-10895], 16 pp., "Life in a magnetic field."

4512. UDINTSEV, N.A., & MOROZ, V.V. (1974), Byulleten' eksperimental'noy biologii i meditsiny, __(6):51-53 (in Russ.), "Reaction of the hypophyseo-adrenal system to the action of an alternating magnetic field."

4513. UNGIADZE, A.A. (1970), Fiziologicheskiy zhurnal imeni I.M. Sechenova, 56(11):1531-1538 (in Russ.), "Behavioral and EEG effects of the electrical stimulation of the hippocampus." (200 Hz), [Abstr. in: Neuroelectric News, 1(4):8 only (1971)].

4514. VALENTINUZZI, M. (1965), Bull. Math Biophys., 27(Suppl.):203-214, "Notes on magnetic actions upon the nervous system."

4515. VanDYKE, J.H., & HALPERN, M.H. (1966), Abstr. in: Anat. Rec., 154(2):436, "Biological manifestations in mice associated with absence of magnetic field."

4516. VAN KOUGHNETT, A.L., KASHYAP, S.C., & DUNN, J.G. (1975), J. of Microwave , Power, 10(4):451-458, "Parallel plate microwave applicator."

4517. VAN KOUGHNETT, A.L. (1973), IMPI Trans., 1( ):17-39, "Fundamentals of microwave heating."

4518. VAN KOUGHNETT, A.L., & WYSLOUZIL, W. (1972), J. of Microwave Power 7(4):381-383, "A waveguide TEM mode exposure chamber [for the study of biological effects of microwaves]".

4519. VARGA, A. (1975), Presented at 3rd International Colloquium of the International Section of ISSA for the Prevention of Occupational Risks Due to Electricity, held at Marbella, Spain, 27-29 Oct., "The Influence of electrical and electromagnetic fields on human organism."

4520. VARMA, M.M. & TRABOULAY, E.A. (1975), Mutation Research, 31(5):334-, "Thermal profiles of native and microwave-irradiated DNA."

4521. VAWTER, S.M. (1974), J. American Medical Association, 228(9):1170 only, "Radiation hazards from therapeutic microwave diathermy".

4522. VELA, G.R., WU, J.F., & SMITH, D. (1976), Soil Science, 121(1):44-51, "Effect of 2450 MHz microwave radiation on some soil microorganisms in situ."

4523. VETTER, R.J., ZIEMER, P.L., & CONNOVER, D.L. (1975), Indiana Academy of Science, 83( ):393-396, "Anechoic chamber design for microwave research."

4524. VETTER, R.J. (1975), Natl. Electron. Cong. Proc., 30( ):237-238, (in Engl.), "Neuroendocrine response to microwave irradiation."

4525. VIALOV, A.M., & SHPIL'BERG, P.I. (1969), Gig. sanit., 34(4):30-35 (In Russ. with summary), "Effect of magnetic fields in industry on the central nervous system." [EEG data].

4526. VILENCHIK, M.M. (1967), Uspekhi sovremennoy biologii, 63(1):54-72 (in Russ.), [Reviewed in: Foreign Science Bull., 5(2):p ? (1969)], "Magnetic effects in biology."

4527. VILLFORTH, J. (1972), FDA Consumer (Sept), DHEW Pub. No. (FDA) 73-8013, "Radiation [including non-ionizing] and health".

4528. VLADIMIRSKII, B.M., et al. (19??),pp. 224-233 (in Russ.), "Experimental study of the effect of extremely low frequency electromagnetic fields on warm-blooded animals and microorganisms."

4529. VOIGHT, K. KENDEL, K., & BUDINGEN, H.J. (1975), Ultrasonics International pp. 172-175, "Direct visualization of brain tumours with the [ultrasonic] electronic sector scan."

4530. VOSS, W.A.G. (1973), IMPI Trans., 1( ):86-102, "Microwave safety."

4531. VOSS, W.A.G. (ed.) (1974), Proc. of the IEEE, 62( ):1- (Jan.), "Special issue on industrial, scientific, and medical applications of microwaves."

4532. WAGENEDER, F.M., IWANOVSKY, A., & DODGE, C.H. (1969), Foreign Sci. Bull., 5(4):1-104, "Electrosleep (cerebral electrotherapy) and electroanesthesia: The international effort in evaluation."

4533. WALLEN, C.A., & MICHAELSON, S.M. (1976), J. of Microwave Power 11(2): 175-176, "Microwave-induced hyperthermia as an adjuvant to cancer therapy (Symposium summary)", [Previously listed as citation #4053 (Session 6A) this Biblio.].

4534. WANG, J.C. (1975), Federal Communications Commission Technical Memorandum, Serial No. 1 (Sept. 19), "Power density in near field of small linear antennas."

4535. WANG, Y.C., & HOPPER, S. (1976), Final Technical Rept., [RADC-TR-76-10], General Microwave Corp. (Farmingdale, NY), (May 1971-Mar. 1974), AD #A021-453, 44pp., "Experimental models of RF radiation hazards meter for measuring

microwave emission."

4536. WANIBUCHI, Y., IJIMA, H., SANO, F., NAKANISHI, M., NISHIMURA, A., & OKINO, S. (1974), Kokyu To Junkan, 22(7-8):605-610, (in Jap.), "Clinical application of the EM method to measure human blood flow in the central and peripheral arteries."

4537. WARNKE, U., & PAUL, R. (1975), Umsch. Wiss. Tech., 75(13):415-416, (In Ger.) "Bees exposed to high voltages."

4538. WEBB, M.D., GUY, A.W., & McDOUGALL, J.A. (1976), J. of Microwave Power 11(2):162-164, "Assessment of the EM field coupling of 915 MHz oven leakage to human subjects by thermographic studies on phantom models (Symposium Summary)." (Previously listed as citation #4053 (Session 5A) this Biblio.].

4539. WEBB, S.J. (1976), J. of Microwave Power 11(2):138 only, "Effects of microwaves on normal and tumor cells as seen by laser-Raman spectroscopy (Symposium summary)", [Previously listed as citation #4053 (Session 1A) this Biblio.].

4540. WEIL, C.M. (1975), Presented at Annual Meeting of the N.C. Section of IEEE, Winston-Salem, N.C. (Nov.), "Applications of microwaves in medicine."

4541. WELLSAND, J.A. (1975), Final Rept. (& Ph.D. Thesis), Army Material Command (Texarkana, TX), (USAMC-ITC-02-08-76-410), (AD #A020-681), (N76-32840), 69 pp. (Nov.), "Proposed revisions to ANSI Standard C95.1 for exposure to radio frequency and microwave radiations."

4542. WEST, B.L., & REGELSON, W. (1976), J. of Microwave Power 11(2):176-177, "Pulsed radiowave (27.12 MHz) effects on *in vivo* and *in vitro* tumor growth (Symposium summary)", [Previously listed as citation #4053 (Session 6A) this Biblio.].

4543. WESTON, M. (1976), Ebony (magazine), __( ):54-61 (July), "Electro-medicine: New aid to mend bones."

4544. WEVER, R. (1977), In: *Brain Interactions with Weak Electric and Magnetic Fields* [citation #4062, this Biblio.], pp. 39-44, "Effects of low-level, low-frequency fields on human circadian rhythms."

4545. WEVER, R. (1969), Rept. (BMWF-FB-W-69-31; N70-16360), (Sept.), 212 pp. (in Ger.), "Investigations of the circadian periodicity in men, with particular consideration of the influence of weak alternating electric fields."

4546. WEVER, R. (1968), Naturwissenschaften, 55(1):29-32 (in Ger.), (N69-38585), "Influence of weak electromagnetic fields on circadian rhythms in man."

4547. WHATTON, C.P. (1975), Microwave J., 18(11):39-42, "Industrial and scientific [including biomedical] applications of doppler radar."

4548. WHITE, J.R. (1973), IMPI Trans., 1( ):40-63, "Why materials heat."

4549. WIKTOR-JEDRZEJCZAK, W., AHMED, A., SELL, K.W., CZERSKI, P., & LEACH, W.M. (1977), J. of Immunology, 118(4):1499-1502, (Apr.), "Microwaves induce an increase in the frequency of complement receptor-bearing lymphoid spleen cells in mice." [see also citation #4055, this Biblio.]

4550. WILKENING, G.M. (1973), In: The Industrial Environment - It's Evaluation and Control, National Institute for Occupational Safety & Health, U.S. Dept. of Health, Education, and Welfare; Chapt. 28, Non-Ionizing Radiation, p. 357-376 [see esp. p.371-376], "Biological effects of microwave radiation."

4551. WILLIAMS, W.J., & PIONTEK, G.E. (1972), Rept., Bioelectrical Sciences Lab., Univ. of Michigan, 119 pps., "Microwave Effects on Living Systems", [Prepared for General Motors in connection with the use of proposed vehicular radar units].

4552. WINCOTT, P.A. (1974), IMPI Trans., 2( ):76-91, "Applications at 2450 MHz."

4553. YAMANE, A., KOBAYASHI, T., MAMIYA, O., TAMIYA, H., SASAKI, K., & YOSHIDA, S. (1975), Proceedings of the 86th Annual Meeting of the Japanese Densorological Society, pp. 317-318 (in Jap.), "The effects of microwave irradiation on insects, nematodes, fungi, and bacteria in withered pine trees."

4554. YASNOGORODSKIY, V.G. (1973), Sovetskaya meditsina, __(3):91-94 (in Russ.), "Treatment of pathologies of the peripheral nervous system by pulse currents." (freq.=100-200 Hz), [Abstr. in: Neuroelectric News, 4(2):8 only (1974)].

4555. YERSHOVA, L.K., & DUMANSKIY, YU.D. (1969), Fiziologichnyy Zhurnal, AN Ukr SSR, 15(6):777-780 (in Ukrainian), "Biopotentials of rabbit cerebral cortex subjected to a low-intensity RF field." [Abstr. in: Neuroelectric News, 1(1): 9 only (Oct. 1970)].

4556. ZARET, M.M., SNYDER, W.Z., & BIRENBAUM, L. (1976), Brit. J. of Ophthalmology, 60( ):632-637, "Cataract after exposure to non-ionizing radiant energy (medical diathermy and an electric oven)"

4557. ZHARDETSKIY, O. (1973), Uspekhi sovremennoy biologii, 75(1):159-(in Russ.), "NMR in biological studies." [Abstr. in: Neuroelectric News, 4(1):13 only (1973)].

4558. "Military specification: Radiation limits, microwave and x-radiation generated by ground electronic equipment (as related to personnel safety)", (This amendment forms a part of military specification MIL-R-9673B (USAF) dated Apr. 4 1960) MIL-R-9673B (USAF), Amendment 2, 4 pps., 15 Sept. 1961.

4559. "Cytogenetics, chemical dosimetry section, and animal care section", [Describes microwave radiation experiment], Annual Report of Eastern Environmental Radiat. Lab., (Montgomery, ALA), (Jan.-Dec.), pp.26-37, 1970.

4560. "Polaroid microwave leakage measurement, hazard evaluation of marine radar on pleasure craft, fluorescent light bulbs as microwave oven interlocks, product testing", Annual Report of the Eastern Environmental Radiation Laboratory, Montgomery, Alabama, pp. 49-52, Jan.-Dec. 1970.

4561. "Biological effects of electromagnetic fields (below visible frequencies) especially in the central nervous system (1964-1970)", Brain Research Institute & Biomedical Library, Univ. of California, Los Angeles, Bibliographic Rept. No. 44, 10 pp., 1971(?).

4562. "Biological effects of electromagnetic fields (Sept. 1970 - Aug. 1971)", Brain Research Institute & Biomedical Library, Univ. of California, Los Angeles, Bibliographic Rept. No. 44a, 3 pp., 1971(?).

4563. "Electronic Acupuncture?" In: Neuroelectric News (News Note), 2(1): 19-20 [Brief description of a German electrotherapeutic method where acupuncture points are subjected to weak AC currents in the 7-9 KHz range.], (1971).

4564. "Healing fractures electrically", Medical World News, pp. 20-21 (24 Aug. '73) [bone growth stimulated by microamp current], (Cited in Neuroelectric News, News, 4(2):17 only (Mar. 1974)).

4565. "Radio waves: No genetic mutations", Science News, ___ ( ):p. ? only (29 June 1974?).

4566. "An evaluation of electroanesthesia [electronarcosis] and electrosleep",Rept. of the ad hoc Committee on Electric Stimulation of the Brain, Division of Medical Sciences, National Research Council, [Rept. available from NTIS as #PB-241-305], (Dec. 14, 1974).

4567. "We want you to know about microwave oven radiation", [including consideration of "safety" to humans], DHEW Publication No. (FDA) 74-8049 (1974).

4568. "Clinical applications of electric current remain largely unexplored", J. of the Amer. Med. Assoc., 227(2):129-130 (14 Jan. 1974).

4569. "High voltage power line controversy", The News Journal (Wilmington, Del.), Nov. 27, 1975.

4570. "Magnetic fields and humans", Popular Science, 207(4):22 (1975).

4571. "Microwave thermography for cancer and stroke detection", Chemical and Engineering News, 53(46):31 (1975).

4572. "Further research on determining the influence of embryonic exposure to

exposure to microwaves on post-natal behavior and growth rate", Rept., Office of Naval Research (Arlington, VA)/Institute for Behavioral Research, Inc. (Silver Spring, MD), (Nov. 20, 1975).

4573. "Biological effects of microwaves probed by Office of Telecommunications Policy (OTP)", Microwaves,__( ):24 only, (June 1975).

4574. International Microwave Power Institute (IMPI) Short Course and Workshop on "Biomedical Safety aspects of microwave radiation, and application of microwaves to biomedical systems and to industry", Spring 1975.

4575. "Effects of non-ionizing electromagnetic radiation", A collection of translations of Soviet and East European articles on the bio-effects of non-ionizing EMR. [previously attributed (in error) to VLADIMIRSKIY, in citation No. 3665, this Biblio.], 38 pp., JPRS #63992, 30 Jan. 1975.

4576. "Administration of the Radiation Control for Health and Safety Act of 1968, 1974 annual report", U.S. Dept. of Health, Education, and Welfare, Food & Drug Admin., 93 pp., April 1, 1975.

4577. "Safety from microwave hazards in using power equipment", International Microwave Power Institute (IMPI) Policy Statement, J. of Microwave Power, 10(4):333-341, (1975).

4578. "New types of microwave diathermy applicators evaluated", In: BRH (Bureau of Radiological Health) Bulletin 11(3):2-3, U.S. Dept. of HEW, PHS, FDA, Feb. 7, 1975.

4579. "RF/Microwave [Radiation]" In: Progress in Radiation Protection, 1975, p.7-8, Bureau of Radiological Health, FDA, DHEW Pub. No. (FDA) 77-8015, 1976.

4580. "Communist studies test microwaves as weapons", Navy Times, 26th year, no. 9, p. 24 only (13 Dec 1976).

4581. "[Electronic cardiac] Pacemaker wearers, Researchers watch microwaves", Occupational Health & Safety, 45(5):10 only (Sept/Oct 1976).

4582. "Occupational safety standards, electromagnetic fields of radiofrequency, general safety requirements, GOST 12.1.006-76," Government standard of the USSR, State committee on standards of the council of ministers of the USSR, Moscow, (in Russ.), 1976.

4583. "Stronger measures needed to insure that medical diathermy devices are safe and effective". General Accounting Office Rept. HRD-76-153, Report to the Senate committee on government operations by the Comptroller General of the United States, (Sept. 2, 1976).

4584. "Biological effects of nonionizing electromagnetic radiation: A digest of current literature", BENER Digest 1(1), A Quarterly publication produced for the Office of Telecommunications Policy and United States Navy by The Franklin Institute Research Laboratories, Science Information Services, Phila., PA (1976).

4585. Course entitled "Ultrasound, laser, ultraviolet and microwave radiation: Biophysical basis, hazards and applications in medicine and industry." Held at Massachusetts Institute of Technology, Cambridge, Mass., 12-16 July 1976; [as noted in Photochemistry & Photobiology, 23(5):379 only (May 1976)].

4586. "Letter revealed: (President) Ford urged Soviets on (microwave) radiation curb (at U.S. Embassy in Moscow)", The Washington (DC) Post (newspaper), p A.6 only, Monday, July 26, 1976.

4587. "Moscow Embassy case: (microwave) radiation tests (for possible human genetic alerations) kept secret, doctor says", The Washington (DC) Star (newspaper), p. A-3 only, Monday, July 26, 1976.

4588. "Is microwave leakage hazardous?", Consumer Reports, __(?):319-321 (June 1976).

4589. "Regulations for the administration and enforcement of the Radiation Control for Health and Safety Act of 1968", HEW Publication (FDA) 76-8035 (Supersedes DHEW Publication (FDA) 75-8003), Jan. 1976.

4590. "Consumer Reports on microwave ovens: A review", (comments on an article in Consumer Reports (June '76) regarding safety of microwave ovens), IMPI (International Microwave Power Institute) Newsletter, 9(4):3 only (July-Aug, 1976).

4591. "Comments--The Tronado microwave machine: A further report", The Medical J. of Australia, 2(5):156-157 (July 31, 1976). [Comments on the Western Australian Cancer Council/National Health and Medical Research Council study of case reports to determine whether the Tronado (radio frequency generator) machine plus radiotherapy (as used by Dr. J.A.G. Holt) was superior to that of orthodox radiotherapy alone. The "committee agreed that conclusive assessment was impossible within the context of a retrospective study such as that which has been undertaken....There is a strong need for an experimental study on the effects of very high frequency radiation using the Tronado machine in solid malignant tumours."]

4592. "Fourth report on 'Program for control of electromagnetic pollution of the environment: The assessment of biological hazards of nonionizing electromagnetic radiation'", Office of Telecommunications Policy, Executive Office of the President, (June 1976).

4593. "Investigation of the effect of RF radiation on primate lymphocyte division response". Dept. of HEW, NIOSH Technical Information Rept. Series (In Press, 1976).

4594. "Scarsdale Scientist hits probe", (Some comments on the "U.S. Embassy in Moscow microwave incident", "Operation PANDORA", and some research performed in past years by Dr. Milton Zaret.), The Reporter Dispatch (newspaper), White Plains, NY, Mon., May 3, 1976.

4595. "Project SEAFARER, the Navy's proposed grid antenna system for sending extremely low frequency (ELF) signals to submerged ballistic missile submarines, has passed a major hurdle but still has a long, long way to go. The National Research Council, an arm of the National Academy of

Sciences, reported this month that the electric and magnetic fields to be generated by SEAFARER's massive underground network of electrically energized cables probably will have no ill effect on health and environment. The report is a preliminary one, however. The NRC will issue its final report next spring. The preliminary document said in part"...The evidence evaluated so far indicates that at SEAFARER frequencies such weak-field effects should not be cause for concern". Ocean Science News 18(52):2-3, (1976).

4596. "Threshold Limit Values (TLV's) for Chemical Substances and Physical Agents in the Workroom Environment, with Intended Changes for 1976", see esp. p. 81 and pp. 89-90 for microwave exposure limits, Amer. Conf. of Governmental Industrial Hygienists (ACGIH), 1976.

4597. Sections on "RF-Microwave Radiation" from Quadrennial Report the the Division of Biological Effects (Bureau of Radiological Health, Food and Drug Administration) for the period 1971-1974, HEW Publication #(FDA) 76-8058, pp. 46-78, July 1976.

4598. "Pacemaker interference [from non-ionizing electromagnetic radiation]: A low risk", Med. World News, 17(17):40 (1976).

4599. "Nonionizing Radiation Course #583", [including microwave, laser, and optical radiational given by the Div. of Training, National Institute for Occupational Safety & Health (NIOSH), Apr. 4-8, 1977.

4600. "Suit on Radiation (TACAN repairmen)", The Washington Post (newspaper) p. A4 only, (Sat., March 19, 1977).

4601. "Microwave studies demonstrate behavioral changes", BRH (Bureau of Radiological Health) Bulletin, 11(5):2-3 (March 7, 1977).

4602. "Direct-contact diathermy probes found safer [to patient and operator]," Microwaves, 16(5):12 only (May, 1977).

4603. "Navy makes first test of Poseidon ELF radio" (SEAFARER Program), Navy Times, 26(17):28 only (Feb. 7, 1977).

4604. "Hardship Post. The State Department has declared Moscow an 'unhealthful post', and U.S. employees who are stationed there receive 20% more in salary as hardship allowance...based upon the State Department's evaluation of reported environmental conditions regarding sanitation and disease, medical and hospital facilities and climate. According to U.S. Embassy officials, one factor in determining Moscow as 'unhealthful' is the prevalence of giardiasis, a rare intestinal disorder that is believed to be spread in drinking water. Nothing has been said of the persistent microwave radiation of the Embassy by the KBG (the Soviet security and espionage apparatus)". Parade Magazine, The Washington (DC) Post (newspaper), p. 23 only, Jan. 9, 1977.

4605. "Nonionizing radiation hazards market", Rept. by Andy Hish Assoc., (9710 Cozycroft Avenue, Chatsworth, CA), (with sections on "Federal R&D programs on biomedical research, and microwave effects on humans"), 197?.

SUPPLEMENT NUMBER 9: TECHNICAL MEETING SECTION

4606. The 4th Annual Health Physics Society Midyear Topical Symposium "Electronic product radiation and the health physicist,", Louisville, KY, January 28-30, 1970.

I. New Scope for Health Physics
   A. Energy Pollution of the Environment--MORGAN, K.Z. (Health Physics Div., Oak Ridge National Laboratories)
   B. The Impact of Public Law 90-602--ELDER, R.L. (Bureau of Radiological Health, Environmental Control Administration)
   C. Educational Needs to Implement New Responsibilities in Radiation Safety--STANNARD, J.C. (U. of Rochester Medical Center)

II. Microwave and RF Radiation
   A. Microwave Systems--
   B. Instrumentation and Dosimetry--PALMISANO, W.A. (U.S. Army Environmental Hygiene Agency)
   C. Biological Effects--SHER, L.D. (U. of Pennsylvania)
   D. Microwave Safety and Standards--THOMPSON, R.L. (Environmental Health, Cape Kennedy)

III. Laser Radiation

4607. Conference on Engineering in Medicine and Biology, sponsored by Alliance for Engineering in Medicine and Biology, held in New Orleans, LA, 20-24 Sept. 1975

PEDERSON, P.C. (Univ. of Utah, Salt Lake City), Johnson, C.C., DURNEY, D.H., & BRAGG, D.G., "Diagnostic application of microwave radiation."

4608. Nineteenth Navy Occupational Health Workshop, sponsored by Navy Environmental Health Center, held at Mills Hyatt House, Charleston, SC, 27 Sept. - 01 Oct. 1976 (relevant presentations).

General Session--Radiation

TYLER, P.E. (Navy Med. Res. & Dev. Command, Bethesda, MD), "Bio-effects of RF/microwaves."

KNIGHT, M.G. (Navy Environmental Health Ctr., Cincinnati, Ohio, "RF/microwave hazard analysis."

DEVINE, R.T. (Bureau of Med. & Surgery, Navy, Washington, DC), "Microwave ovens (hazard from)."

4609. "The Bicentennial Symposium," 1976 International Microwave Symposium/ Exhibition, Cherry Hill, NJ, June 14-16. (Relevant Session); (An expansion of citation no. 4050, this Biblio.)

Session 23: Review and State-of-the-Art, "Biological Effects and Hazards of Microwave Radiation" (ROSENTHAL, S.W., chmn.):

GUY, A.W., (Univ. of Washington, Seattle), "Biological Effects and Experimental Techniques," (invited)

JUSTESEN, D.R. (V.A. Hospital, Kansas City, MO), "Behavioral and CNS Effects," (invited)

BAIRD, R. (Nat. Bureau of Standards, Boulder, CO), "Measurements and Dosimetry," (invited)

TYLER, P.E. (Naval Med. Res. & Dev. Command, Bethesda, MD), "Medical Surveillance," (invited)

THIEL, J. (Texas Dept. of Health Resources, Austin), "Effects Other Than Biological," (invited)

Panel Discussion

4610. 1976 International IEEE/AP-S Symposium and Internat. Union of Radio Science (USNC/URSI) Meeting, held at University of Massachusetts, Amherst, Oct. 11-15. (Relevant Presentations)

Session AB-1A: Auditory and Other Sensory Effects (HUNT, E., CHMN.)

ADRIAN, J.J. (Megatek Corp., San Diego, CA), "Low frequency hearing and seeing."

CHOU, C-K, GUY, A.W. (Univ. of Washington School of Medicine, Seattle), & GALAMBOS, R. (Univ. of California, San Diego), "Characteristics of microwave-induced cochlear microphonics."

FREY, A.H., & COREN, E. (Randomline, Inc., Huntingdon Valley, PA), "Holographic evaluation of hypothesized RF hearing mechanisms."

JOHNSON, R.B., LOVELY, R.H., BUY, A.W. (Univ. of Washington School of Medicine, Seattle), & GALAMBOS, R. (Univ. of California, San Diego), "Microwave control of behavior: An auditory phenomenon."

LEBOVITZ, R.M., & SEAMAN, R.L. (Univ. of Texas Health Science Center at Dallas), "Microwave hearing: The response of single auditory neurons in the cat to pulsed microwave radiation."

LIN, J.C. (Wayne State Univ., Detroit, MI), "Predicted frequency and threshold of microwave-induced auditory sensation."

Session AB-1B: Prompt Behavioral Effects (D'ANDREA, J.A., chmn.)

BERMANT, R.I. (Univ. of Kansas), & JUSTESEN, D.R. (Kansas Univ. School of Medicine & Kansas City Veterans Administration Hospital), "Pavlovian conditioning of microwave-induced hyperthermia."

HJERESEN, D.L., PHILLIPS, R.D. (Battelle-Northwest, Richland, WA), & LOVELY, R.H. (Univ. of Washington, Seattle), "Perception and response to pulsed microwave radiation by rats."

MONOHAN, J.C. & HO, H.S. (Bureau of Radiological Health, FDA, USPHS, HEW, Rockville, MD), "Temperature dependence of microwave avoidance."

Session AB-2A: CNS Effects (LARSEN, J.E., chmn.)

ALBERT, E.N., GRAU, L., & KERNS, J. (George Washington Univ. Medical Center. Wash. DC), "Microwave effects on the blood-brain barrier of hamsters." (withdrawn)

CATRAVAS, G.N., TAKENAGA, J., KATZ, J.B., & ABBOTT, J.R. (Armed Forces Radiobiology Institute, Bethesda, MD), "Effects of low power density microwaves on macromolecular constituents of the brain of rats."

FREY, A.H., & GENDELMAN, S. (Randomline, Inc., Huntingdon Valley, PA), "Electromagnetic energy exposure effects on motor coordination or balance."

PHILLIPS, R.D., HJERESEN, D.L., & SHELDON, R.L. (Battelle-Northwest, Richland, WA), "Audiogenic seizure sensitivity of mice after repeated exposures to 2.88 GHz pulsed microwaves."

SWITZER, W.G. (Trinity Univ., San Antonia, TX), & MITCHELL, D.S. (Southwest Research Institute, San Antonio, TX), "An electron microscopic and hematologic investigation of rats chronically exposed to low-intensity 2.45 GHz microwave radiation."

Session AB-2B: Immunologic and Hematopoietic Effects (ROMERO-SIERRA, C., and HAZZARD, D., co-chmn.)

HUANG, A.T., ENGLE, M.E., & ELDER, J.A. (Duke Univ. Medical Center & EPA), "Lymphocyte transformation induced by microwave radiation."

RAGAN, H.A., & PHILLIPS, R.D. (Battelle, Pacific Northwest Laboratories, Richland, WA), "Effects of pulsed microwaves on the hematopoietic system of mice."

WIKTOR-JEDRZEJCZAK, W., AHMED, A., CZERSKI, P., LEACH, W.M., & SELL, K.W. (Naval Medical Research Institute, Bethesda, MD & Bureau of Radiological Health, FDA, Rockville, MD), "Microwaves (2450 MHz) stimulate maturation of B lymphoid cells in spleens of exposed mice."

WIKTOR-JEDRZEJCZAK , W., AHMED, A., CZERSKI, P., LEACH, W.M.,

& SELL, K.W. (Naval Medical Research Institute, Bethesda, MD & Bureau of Radiological Health, FDA, Rockville, MD), "The effect of microwaves (2450 MHz) on the response of mice to T lymphoid cell dependent and T lymphoid cell independent antigens: Preliminary results."

Joint AP-S/URSI Session, Invited Papers: (FANTE, R.L., chmn.) (relevant papers)

VOSS, W.A.G. (Canada), Replaced by JUSTESEN, D.R. (Kansas City V.A. Hospital), "Biolcgical effects of electromagnetic waves--A review of current research."

Session AB-3A: Dosimetry (HO, H.S., chmn.)

GANDHI, O.P. & SEDIGH, K. (Univ. of Utah, Salt Lake City) "Biological phantom materials for simulating man at different frequencies."

GURU, B.S., & CHEN, K.M. (Michigan State Univ., East Lansing), "Internal EM field and absorbed power density in human torsos induced by 1 to 500 MHz EM waves."

HERCHENROEDER, P., CHEUNG, A.Y. (Univ. of Maryland, College Park), SWICORD, M., & BASSEN, H. (Bureau of Radiological Health, FDA, Rockville, MD), "Microwave dosimetry via electric field mapping within full-size and scaled phantom models."

MASSOUDI, H., DURNEY, C.H., & JOHNSON, C.C. (Univ. of Utah, Salt Lake City), "Comparison of the average specific absorbed power in the ellipsoidal conductor and dielectric models of humans and monkeys at radio frequencies."

WALLACE, J.E., & GUY A.W. (Univ. of Washington School of Medicine, Seattle), "Experimental heating patterns in bi-layered biological tissue using circular aperture sources." (withdrawn)

Session AB-3B: Dosimetry (MITCHELL, J.C., chmn.)

ALLIS, J.W., BLACKMAN, C.F., FROMME, M.L., & BENANE, S.G. (U.S. Environmental Protection Agency, Research Triangle Park, NC), "Use of heating and cooling curves to measure microwave energy absorption in biological samples."

GANDHI, O.P., HUNT, E.L., & D'ANDREA, J. (Univ. of Utah, Salt Lake City & Walter Reed Army Institute of Research, DC), "Electromagnetic power deposition in man and animals with and without ground and reflector effects."

KINN, J.B. (U.S. Environmental Protection Agency, Research Triangle Park, NC), "Whole body dosimetry of small

animals: The effect of weight and exposure geometry."

PUTTHOFF, D.L., JUSTESEN, D.R., LEVINSON, D.M., WARD, L.B., & BLACK, J.A. (Univ. of Kansas School of Medicine & Kansas City Veterans Administration Hospital, Kansas City, MO), "Drug-induced ectothermia in small mammals: The quest for a biological dosimeter."

Session A-2: Dielectric Measurements (BIRNBAUM, G., chmn)

CARVER, K.R. (New Mexico State Univ., Las Cruces), "Dielectric sheet power spectral response and swept-frequency measurement applications."

JACOBI, J.H., & LARSEN, L.E. (Walter Reed Army Inst. of Research, Wash. DC), "Microwave interrogation of dielectric targets (II) by time delay spectrum."

LARSEN, L.E., & JACOBI, J.H. (Walter Reed Army Institute of Research, Wash. DC), "Microwave interrogation of dielectric targets (I) by scattering parameters."

MA, C.H., & DEATON, D. (Univ. of Mississippi), "Measurement of the dielectric constant and conductivity of biological materials by microwave cavity perturbation method."

ULABY, F.T., & ATTEMA, E.P.W. (Univ. of Kansas Center for Research, Inc., Lawrence, KS), "L-band measurements of the dielectric properties of saline soil using a power transfer technique."

Session AB-4A: Microwave Measurements and Exposure Systems (LIN, J.C., chmn)

CONOVER, D.L. (Nat. Inst. for Occupat. Safety & Health, Cincinnati, OH), "Industrial RF (6-40.68 MHz) personnel exposure problems--Initial observations."

HAGMANN, M.J., & GANDHI, O.P. (Univ. of Utah, Salt Lake City), "Radiators for microwave biological effects research--Waveguide slot array with constant radiation intensity."

HEYNICK, L.N., POLSON, P., & KARP, A. (Stanford Research Institute, Menlo Park, CA), "A microwave exposure system for primates."

JANES, D.E., TELL, R.A., ATHEY, T.W., & HANKIN, N.N. (U.S. Environmental Protection Agency, Silver Spring, MD), "Radiofrequency radiation levels in urban areas."

OLIVA, S.A., & CATRAVAS, G.N. (Armed Forces Radiobiology Research Institute, Bethesda, MD), "A multiple-animal

array for equal power density microwave irradiation."

Session AB-4B: Instrumentation--Probes (BOWMAN, R.R., chmn)

BABIJ, T.M., & TRZASKA, H. (Technical Univ. of Warsaw, Poland), "Omnidirectional Power density probes." (withdrawn)

BASSEN, H., HERCHENROEDER, P., CHEUNG, A., & NEUDER, S. (Bureau of Radiological Health, FDA & Univ. of Maryland), "Evaluation of an implantable electric field probe within finite, simulated tissues."

CETAS, T.C., HEFNER, D. (Univ. of Arizona College of Medicine, Tucson), SNEDAKER, C., & SWINDELL, W. (Univ. of Arizona, Tucson), "Further developments of the birefringent crystal optical thermometer."

LARSEN, L.E., MOORE, R.A., JACOBI, J.H., & HALGAS, F. (Walter Reed Army Institute of Research & Westinghouse Electric Corporation), "A microwave compatable temperature electrode."

TYAZHELOV, V.V., TIGRANIAN, R.E., & KHIZHNIAK, E.P. (Institute of Biological Physics, Acad. of Sci. USSR, Pushchino), "A new type of artifact-free electrodes for observing biopotentials in strong electromagnetic fields."

Session AB-5A: Physiological and Behavioral Effects (PHILLIPS, R., chmn)

GAGE, M.I. (U.S. Environmental Protection Agency, Research Triangle Park, NC), "Effects of single exposures to 2450 MHz microwave irradiation on rat behavior."

LU, S-T., LEBDA, N., MICHAELSON, S.M., PETTIT, S., & RIVERA, D., (School of Med. & Dent., Univ. of Rochester, NY), "Thermal and neuroendocrine effects of long term, low level microwave (2450 MHz, CW) irradiation."

MITCHELL, D.S., SWITZER, W.G., & BRONAUGH, E.L. (Southwest Research Institute, San Antonio, TX), "Effects of chronic athermal microwave radiation on innate and learned behaviors in rats."

MYERS, D.E., LOVELY, R.H., & GUY, A.W. (Univ. of Washington, Seattle), "Irradiation of rats by low level 918 MHz microwaves: Delineating the dose-response relationship."

TRAVERS, W.D., & VETTER, R.J. (Purdue Univ., West Lafayette, IN), "Low intensity microwave effects on the synthesis of thyroid hormones and serum proteins."

Session AB-5B: Behavioral Effects (LOVELY, R.H., chmn)

D'ANDREA, J.A., GANDHI, O.P., & LORDS, J.L. (Univ. of Utah, Salt Lake City), "Behavioral effects of resonant electromagnetic energy absorption in rats."

FREY, A.H., & SPECTOR, J. (Randomline Inc., Huntingdon Valley, PA), "Irritability and aggression in mammals as affected by exposure to electromagnetic energy."

SANZA, J.N., & deLORGE, J. (Naval Aerospace Medical Research Laboratory), "Fixed interval behavior in rats exposed to low power densities of microwaves."

Session AB-6A: Selected Topics (ROSENTHAL, S.W., chmn)

HAMRICK, P.E., McREE, D.I., THAXTON, P., & PARKHURST, C.R. (National Institute of Environmental Health Sciences, and North Carolina State Univ.), "Humoral immunity of Japanese quail subjected to microwave radiation during embryogeny."

JOHNSON, C.C., DURNEY, C.H., BARBER P.W. (Univ. of Utah), MASSOUDI H., & ALLEN, S.J. (USAF School of Aerospace Medicine, Brooks AFB, TX), "Radiofrequency radiation dosimetry handbook."

LIBURDY, R.P. (USAF School of Aerospace Medicine, Brooks AFB, TX), "Effects of radiofrequency radiation on peripheral vascular permeability."

McARTHUR, G.R., LORDS, J.L., & DURNEY, C.H. (Univ. of Utah, Salt Lake City), "Effects of 960 MHz microwave on isolated gut segments." (Not given)

SCHWAN, H.R., & FOSTER, K.R. (Univ. of Pennsylvania, Philadelphia), "Free water and the microwave conductivity of tissue."

SEVASTYANOVA, L.A., & POTAPOV, S.L. (Oncological Scientific Center, Moscow, USSR), "Resonance effect in biological action of microwave radiation." (not presented)

SZMIGIELSKI, S., JANIAK, M., & KOBUS, M. (Center for Radiobiology and Radioprotection, & Univ. Medical School, Warsaw, Poland), "Enhancing cytotoxic effect of 3 GHz microwaves for cells treated with membrane-injuring substances."

Session AB-6B: Selected Topics (KRITIKOS, H., chmn)

FERRI, E.S. (FDA, Bureau of Radiological Health, Winchester, MA) "Ascorbic acid levels in rabbit eyes after single and repeated exposure to microwave radiation."

GUY, A.W. (Univ. of Washington, School of Medicine, Seattle), "A method for exposing cell cultures to EM fields under

conditions of controlled temperature and field strength."

HO, H.S., & EDWARDS, W.P. (Bureau of Radiological Health, FDA, USPHS, HEW, Rockville, MD), "Dose rate related effects on the oxygen consumption of mice during and after microwave irradiation."

REED, & OLSON, (Univ. of Utah), "Further characterization of bradycardia observed at 960 MHz."

SZUL, R., & SZUL, M. (Technical Univ. of Warsaw, Poland), "Observations concerning biological active, natural electromagnetic radiation of extremely low intensity." (not given)

Session AB-7A: Hyperthermia (McREE, D.I., chmn)

CHEN, K-M, & GURU, B.S. (Michigan State Univ., East Lansing), "Hyperthermia by local EM heating."

CHEUNG, A.Y., DAO, T., & ROBINSON, J.E. (Univ. of Maryland, Baltimore), "Dual beam TEM applicator for direct contact heating of dielectrically encapsulated malignant mouse tumor."

KANTOR, G., & CETAS, T.C. (Bureau of Radiological Health, FDA & Univ. of Arizona College of Medicine), "A comparative heating pattern study of direct contact applicators in microwave diathermy."

VETTER, R.J., STOETZEL, G.A. (Purdue Univ., West Lafayette, IN), & SHUPE, R. (Indiana Univ. School of Medicine, IN), "Microwave hyperthermia and Co-60 radiation treatment of hamster melanoma."

Session AB-7B: Therapeutic and Diagnostic Applications (CLEARY, S.F., chmn)

BARRETT, A.H., MYERS, P.C., & SADOWSKY, N.L. (M.I.T. Dept. of Physics, Research Laboratory of Electronics, & Faulkner Hosp., Dept. of Radiology), "Application of microwave radiometers to diagnostic medicine."

CONNOR, W.G., ROTH, H.B., McKELVIE, D.H., WILSON, S.E., & CETAS, T.C. (Univ. of Arizona College of Medicine, Tucson), "The use of spontaneously occurring animal tumors for preclinical testing of hyperthermia treatments."

LAI, P-K., CAIN, C.A., & DUCOFF, H.S. (Univ. of Illinois, Urbana), "Suppression by hyperthermia, or by 2450 MHz microwaves, of repair of damage produced by ionizing radiation."

SZMIGIELSKI, S., BIELEC, M., & JANIAK, M. (Center for Radiobiology and Radioprotection, Warsaw, Poland), "Combined effect of microwave hyperthermia and purified bacterial toxins on development of Arcona-180 and Guerin tumors."

Session AB-8A: Developmental and Mutagenic Effects (PICKARD, W.F., chmn)

CHERNOVETZ, M.E. (Tulsa Univ.), OKE, A.F., & JUSTESEN, D.R. (Univ. of Kansas School of Medicine and Kansas City Veterans Administration Hospital), "Microwave-induced teratology in the rat."

GUILLET, R., & MICHAELSON, S. (univ. of Rochester, NY), "The effect of repeated microwave exposure in neonatal rats."

OLSEN, R.G. (Naval Aerospace Medical Research Laboratory, Pensacola, FLA), "Insect pupae teratogenesis in a standing wave irradiation system."

RUGH, R., & McMANAWAY, M. (Bureau of Radiological Health, Rockville, MD), "Can electromagnetic waves cause congenital anomalies?"

Session AB-8B: ELF Effects (POSTOW, E., chmn)

GILLIS, M.F., BEAMER, J.L., RICHARDSON, R.L, ALLEN, C.H., & KAUNE, W.T. (Battelle-Northwest, Richland, WA), "60-Hz electric field exposure system for a minature swine colony."

GRISSETT, J.D. (Naval Aerospace Medical Research Laboratory, Pensacola, Fla.), "Chronic exposure of primates to electric and magnetic fields associated with ELF communications systems."

KAUNE, W.T., HJERESEN, D.L., BEAMER, J.L., RICHARDSON, R.L., & PHILLIPS, R.D. (Battelle-Northwest, Richland, WA), "Interaction and response of swine to 60 Hz electric fields."

SMITH, R.F. (Univ. of Kansas School of Medicine), & JUSTESEN, D.R. (Kansas City Veterans Administration Hospital), "Effects of a 60-Hz electromagnetic field on locomotive and aggressive behaviors of mice."

Note: Speaker underlined

4611. "International Symposium on Biological Effects of Electromagnetic Waves," sponsored by the International Union of Radio Science (URSI), Commissions A and B, to be held in Airlie, Va. (USA), 30 Oct-4 Nov, 1977 (GUY, A.W., Chmn).

4612. Bureau of Radiological Health "Symposium on Biological Effects and Measurement of RF/Microwaves "(HAZZARD, D.G., chmn.), held in Rockville, Md., Feb. 16-18, 1977.

Session I: Behavioral Effects (SHORE, M.L., chmn.)

FREY, A.H. (Randomline, Inc., Huntingdon Valley, PA), "Behavioral effects of EM energy."

GALLOWAY, W.D. (BRH), "Interactions between micorwaves and neuroactive compounds."

HENTON, W.W. (BRH), "Microwave absorption and taste aversion as a function of 915 MHz radiation."

JUSTESEN, D.R. (VA Hospital, Kansas City, KS), "Microwave hyperthermia and the visually evoked response to the guinea pig."

MEDICI, R.G. (UCLA, Los Angeles, CA), "Behavioral protocols and preliminary observation of chicks exposed to weak amplitude modulated 450 MHz electric field."

MONAHAN, J.C. (BRH), "free-operant avoidance and escape from microwave radiation."

Session II: Physical Measurements (SCHNEIDER, R., chmn.)

BASSEN, H.I. (BRH), "Internal and external dosimetry using BRH miniature probes."

CETAS, T. (U. of Arizona), "Infrared emittance of electromagentic phantom material and infrared transmittance of polyethene." [presented by G. Kantor, BRH]

CHEUNG, A.Y. (U. of Maryland, College Park), "Implantation electric field measurement within biological tissues."

GUY, A.W. (U. of Washington, Seattle), "Quantitation of biological effects."

HO, H.S. (BRH), "Change in average absorbed dose rate of a group of mice under repeated exposure to 915 MHz micorwave radiation."

HO, H.S. (BRH), "Comparison of calculated absorbed dose rate distribution in phantom heads exposed to 2450 MHz and 915 MHz plane wave and slot sources."

KANTOR, G. (BRH), "New types of diathermy applicators - Comparison of performance with conventional types."

NEUDER, S.M. (BRH), "A finite element technique for calculating induced internal field in lossy dielectric media exposed to plane wave electromagnetic radiation."

RABINOWITZ, J.R. (New York U. Medical Ctr.), "Description of a system to irradiate cultured cells with microwaves."

RUGGERA, P.S. (BRH), "Near field measurements of RF fields."

SWICORD, M.L. (BRH), "Broadband measurements of dielectric properties."

Session III: Growth and Development (LEACH, W.M., chmn.)

MICHAELSON, S.M. (U. of Rochester, NY), "Endocrine perturbations in the rat and dog exposed to 2450 MHz CW/Microwaves."

ROSENBAUM, F.J. (Washington U., St. Louis, Mo.), "Biological effects of low level microwave radiation on Tenebrio molitor."

SHORE, M.L. (BRH), "Investigation of repetitive microwave exposure during prenatal development." [in species?]

Session IV: Nervous System Effects (WAXLER, M., chmn.)

ALBERT, E.N. (George Washington U., DC), "Light and electron microscopic observations on the blood.brain barrier after microwave irradiation."

BAWIN, S.M. (UCLA, Los Angeles, CA), "Effects of weak oscillating electric fields on ionic binding in cerebral tissue."

LEBOVITZ, R.M. (U. of Texas Southwestern Medical School), "Vestibulocochlear single unit response to microwave radiation."

Session V: Occupational and Ocular Effects (SILVERMAN, C., chmn.)

CARPENTER, R. (BRH), "Histopathological changes in the rabbit lens during development of microwave cataracts."

CARPENTER, R. (BRH), "Are microwave cataracts thermally caused?"

FERRI, E.S. (BRH), "Changes in ascorbic acid levels invoked in the rabbit eye."

HIRSCH, S.E. (Walter Reed Army Institute of Research), "Effects of repeated microwave irradiations to the albino rabbit eye."

ROBINETTE, C.D. (National Research Council, National Academy of Sciences), "Causes of death following occupational exposure to microwave radiation (radar) 1950-1974)."

Panel Discussion: "Applicability of reported results for the assessment of potential health hazards of RF/microwave emitting electronic products."

4613. Annual Meeting of the Air Pollution Control Association, Toronto, Canada, June 20-24, 1977.

ALBRECHT, R.M., and LANDAU, E. (Div. of Biological Effects BRH, FDA), "Microwave radiation: An epidemiologic assessment."

4614. IEEE (MTT-S) International Microwave Symposium, San Diego, CA, June 21-23, 1977.

KANTOR, G., WITTERS, D.M. (Div. of Electronic Products, BRH, FDA) & GREISER, J.W. (Transco Products, Inc., Venice, CA), "The design and performance of a circularly polarized direct contact applicator for microwave diathermy."

4615. URSI Meeting on Electromagnetic Theory, San Francisco, CA, June 24, 1977.

NEUDER, S.M. (Div. of Electronic Products, BRH, FDA), & MEIJER, P.H.E. (Catholic Univ. of America), "Induced internal fields in irregular shaped lossy dielectric media exposed to plane wave electromagnetic radiation."

4616. Workshop on the Physical Basis of Electromagnetic Interactions with Biological Systems, Univ. of Maryland, College Park, June 15-17, 1977.

GANDHI, O.P., & HAGMANN, M.J. (Univ. of Utah, Salt Lake City), "Some recent results on deposition of electromagnetic energy in animals and models of man."

4617. Electromagnetic Radiation Management Advisory Council (ERMAC), 34th Meeting, Meeting, Office of Telecommunications Policy (OTP), Washington, D.C., April 5-6, 1977.

Agency Program Reviews (and speakers):

Bureau of Radiological Health (BRH) - VILLFORTH, J., NEILL, R., SHORE, M., CARPENTER, R., HO, H., MONAHAN, J., LEACH, W., SILVERMAN, C., SCHNEIDER, R., BASSEN, H., SWICORD, M., NEUDER, S. (BRH), GUY, A. (U. of Washington), & ROBINETTE, D. (National Research Council, NAS).

National Institute for Occupational Safety and Health (NIOSH) - HARRIS, E., & CONOVER, D.

National Institute of Environmental Health Sciences (NIEHS) - McREE, D., & GUY, A. (U. of Washington).

Veterans Administration (VA) - SMITH, J., JUSTENSEN, D. (VA, Kansas City), McAFEE, R. (VA, New Orleans).

Federal Aviation Administration (FAA) - RICHARDSON, E. & RIES, F.

National Bureau of Standards (NBS)--MILLER, C. & RIES, F.

Federal Communications Commission (FCC) - WANG, J.

National Science Foundation (NSF) - CAPLAN, N., & BARBER, P. (U. of Utah).

4618. 1977 International IEEE/AP-S Symposium, USNC/URSI Meeting, URSI International Electromagnetic Symposium, June 20-24, held at Stanford Univ. Campus, CA. Containing a session on "Biological effects for applications of microwaves".

4619. International Microwave Power Institute (IMPI) Microwave Power Symposium held in Minneapolis, MN, on May 26-28, 1977. (Including a Session on medical and biological applications).

4620. Conference on Electrical Properties of Biological Polymers, Water, and Membranes [with a session on "Dielectric Behavior of Biopolymers in Strong [Electric Fields'], (TAKASHIMA, S. & FISHMAN, H.M., organizers], Jan. 26-28, 1977, sponsored by the New York Academy of Sciences, NY, NY.

4621. 13th Annual Microwave Power Symposium of The International MMicrowave Power Institute (IMPI), to be held in Ontario, Canada, on June 27-30, 1978.

4622. 1978 IEEE AP-S/URSI (Commission A), International Symposium, to be held in Washington, DC, May 15-19 (Bio-effects section?).

4623. Conference on Electrical Properties of Biological Polymers, Water and Membranes [with a session on "Dielectric Behavior of Biopolymers in Strong [Electric Fields"], (TAKASHIMA, S. & FISHMAN, H.M., organizers), Jan. 26-28, 1977, sponsored by the New York Academy of Sciences, NY, NY.

Appendix 1. CHRONOLOGY OF THE BIBLIOGRAPHY AND SUPPLEMENTS

Report/Supplement	Report Issued by*	Date Released	Contains Citation Numbers	Number of Citations	NTIS* Order No.
Original Bibliography	NMRI	Oct. 4, 1971	1-1966	1966	734-391
Revised Bibliography	NMRI	Apr. 20, 1972	1-1966	[1966]	750-271
Alphabetical Addenda	[Part of	Oct. 4, 1971	1967-2054	[87]	
Supplement No. 1	the	Oct. 5, 1971	2055-2072	[17]	
Supplement No. 2	Revised	Nov. 21, 1971	2073-2101	[28]	
Supplement No. 3	Biblio.]	Apr. 17, 1972	2102-2311	209	
Supplement No. 4	BUMED	June 1, 1973	2312-2638	326	770-621
Supplement No. 5	NMRDC	July 25, 1974	2639-3124	486	784-007
Alphabetical Addenda (to Supplement #5)			3125-3136	11	
Supplement No. 6	NMRDC	June 27, 1975	3137-3378	241	A015-622
Supplement No. 7	NMRI Detach.	May 12, 1976	3379-3723	344	A025-354
Supplement No. 8	NMRI Detach.	Aug. 13, 1976	3724-4055	331	A029-430
Compilation & Integration of Revised Biblio. + 7 Suppls. + Addenda (to #5)	NMRI Detach.	Sept 27, 1976	1-3723	3723	?
Supplement No. 9	NIOSH	Nov. 8, 1977	4056-4623	567	?

*Key:
- NMRI — Naval Medical Research Institute, Bethesda, MD 20014.
- NMRI Detach. — Naval Medical Research Institute Detachment, Naval Surface Weapons Center, Dahlgren, VA 22448.
- BUMED — Research Division, Bureau of Medicine & Surgery, Dept. of the Navy, Washington, D.C. 20372.
- NMRDC — Electromagnetic Radiation Project Office, Naval Medical Research & Development Command, Bethesda, MD 20014.
- NIOSH — National Institute for Occupational Safety and Health, Rockville, MD 20857.
- NTIS — National Technical Information Service, Springfield, VA 22151.

* U.S. GOVERNMENT PRINTING OFFICE: 1978— 757-141/6777

BIBLIOGRAPHIC DATA SHEET	1. Report No. 78-126	2.	3. Recipient's Accession No.
4. Title and Subtitle BIBLIOGRAPHY OF REPORTED BIOLOGICAL PHENOMENA ('EFFECTS') AND CLINICAL MANIFESTATIONS ATTRIBUTED TO MICROWAVE AND RADIO-FREQUENCY RADIATION. SUBTITLE- NINTH SUPPLEMENT TO BIBLIOGRAPHY OF MICROWAVE AND RF BIOLOGIC EFFECTS			5. Report Date November 1977 6.
7. Author(s) Zorach R. Glaser, Patricia F. Brown, Judith M. Allamong, and Robert C. Newton			8. Performing Organization Rept. No.
9. Performing Organization Name and Address National Institute for Occupational Safety and Health Division of Criteria Documentation and Standards Development Priorities and Research Analysis Branch Rockville, Maryland 20857			10. Project/Task/Work Unit No. VII-D12-093 11. Contract/Grant No. NA
12. Sponsoring Organization Name and Address National Institute for Occupational Safety and Health 4676 Columbia Parkway Cincinnati, Ohio 45226			13. Type of Report & Period Covered Med. Res. Interim rept. (Biographic current to Oct 77) 14.

15. Supplementary Notes - Continuation of Bibliography initiated under Navy sponsorship. This report contains an appendix which lists all previous supplements and addenda, and the AD number by which they may be obtained.

16. Abstracts Approximately 575 additional references on the biological responses to radio-frequency(RF) and microwave radiation, published up to September 1977, are included in this continuing bibliography of the world literature. This Supplement brings to more than 4600 the number of listed references. Particular attention has been paid to the effects on humans of non-ionizing radiation at RF and microwave frequencies. The citations are arranged alphabetically by author(where possible), and contain as much information as possible so as to assure effective retrieval of the original documents. Soviet and East European literature is included in detail.

This report is the ninth supplementary "up-dated" bibliographic listing to Naval Medical Research Institute (NMRI, Bethesda, Maryland, 20014) Research Rept. No. 2, completed under Research Work Unit MF12.524.-15-0004B, October 1971, by the senior author and available from the National Technical Information Service (NTIS, Springfield, Virginia, 22151).

17. Key Words and Document Analysis. 17a. Descriptors

Biological Effects
Bibliography
Electromagnetic Radiation Bio-Effects
Radio Frequency (RF) Radiation
Radiation Effects
Thermogenesis
Health Effects
Radiobiology (Non-Ionizing)
Non-Ionizing Radiation
Microwave Radiation
Electric-Field Bio-Effects
Magnetic Bio-Effects
Human Factors
Pulsed Electromagnetic Radiation
Stress Physiology
Radar Safety

17b. Identifiers/Open-Ended Terms

Radio Frequency and Microwave Radiation Bio-Effects Bibliography.

17c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report)	21. No. of Pages
"RELEASE UNLIMITED"	UNCLASSIFIED	60
	20. Security Class (This Page) UNCLASSIFIED	22. Price

FORM NTIS-35 (REV. 10-73) ENDORSED BY ANSI AND UNESCO. THIS FORM MAY BE REPRODUCED USCOMM-DC 8265-P74

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DHEW (NIOSH) Publication No. 78-126