

1973 IEEE-G-MTT
INTERNATIONAL MICROWAVE SYMPOSIUM
University of Colorado, Boulder, Colorado

INTRODUCTORY SESSION
0830-0900 Monday, 4 June 1973
Chemistry 140

Welcoming Remarks

David F. Wait, Chairman, Symposium Steering Committee
1973 IEEE-G-MTT International Microwave Symposium

Keynote Address

John B. Horton, President
G-MTT Administrative Committee

TECHNICAL SESSIONS

TECHNICAL PROGRAM

Monday Morning, 4 June 1973

I - MILLIMETER AND SUBMILLIMETER WAVELENGTH
TECHNIQUES

0910-1200 East Ballroom, UMC

Chairman, P.P. Toullos
I.I.T. Research Institute
Chicago, IL

II - COMPUTER-AIDED MICROWAVE PRACTICES

0910-1200 West Ballroom, UMC

Chairman, H.E. Stinehelfer
Microwave Associates, Inc.
Burlington, MA

	Title	Page
I-1 0910	MILLIMETER-WAVE INTEGRATED CIRCUITS (Invited) M.V. Schneider, Bell Telephone Labs., Holmdel, NJ	16
I-2 0940	CIRCULAR TE ₀₁ MODE FILTERS FOR A GUIDED MILLIMETER-WAVE TRANSMISSION K. Hashimoto, S. Shimada and M. Koyama, Yokosuka Electrical Communication Laboratory, Kanagawa, Japan	19
I-3 1000	MODAL AND COUPLING CHARACTERISTICS OF INHOMOGENEOUS DIELECTRIC SLAB WAVE- GUIDES E.F. Kuester, D.C. Chang and S.W. Maley, University of Colorado, Boulder, CO	22

(1020 Coffee Break)

I-4 1040	RADIATION LOSSES IN CURVED DIELECTRIC IMAGE WAVEGUIDES OF RECTANGULAR CROSS SECTION R.M. Knox and P.P. Toullos, I.I.T. Research Institute, Chicago, IL J.Q. Howell, NASA-Langley Research Center, Hampton, VA	25
I-5 1100	SEMICONDUCTOR DIELECTRIC WAVEGUIDES FOR MILLIMETER WAVE FUNCTIONAL CIRCUITS H. Jacobs and M.M. Chrepta, U.S. Army Electronics Command, Fort Monmouth, NJ	28
I-6 1120	THE TUNGSTEN-P TYPE SILICON POINT CONTACT DIODE A.J. Kerecman, U.S. Army Electronics Command, Fort Monmouth, NJ	30
I-7 1140	REFLECTION BEAM ISOLATOR FOR SUBMILLI- METER WAVELENGTHS M. Kanda, National Bureau of Standards, Boulder, CO; W.G. May, University of Colorado, Boulder, CO	35

1200 LUNCH

	Title	Page
II-1 0910	A MICROWAVE NETWORK OPTIMIZATION PROGRAM J.W. Bandler and J.R. Popovic, McMaster University, Hamilton, Canada; V.K. Jha and C.M. Kudsia, RCA Ltd., S. Anne-de-Bellevue, Quebec, Canada	38
II-2 0930	MICROWAVE CIRCUIT ANALYSIS BY SPARSE MATRIX TECHNIQUES F. Bonfatti, V.A. Monaco and P. Tiberio, Universita Degli Studi Di Bologna, Bologna, Italy	41
II-3 0950	NEW ALGORITHMS FOR NETWORK OPTIMIZATION C. Charalambous and J.W. Bandler McMaster University, Hamilton, Ontario Canada	44

(1010 Coffee Break)

II-4 1040	NUMERICAL TECHNIQUES FOR TRAPATT CIRCUIT ANALYSIS AND DESIGN R.D. Regier, Watkins-Johnson Co., Scotts Valley, CA; K.L. Kotzebue, University of California, Santa Barbara, CA	47
II-5 1100	COMPUTER SIMULATION AND OPTIMIZATION OF A PLANAR PHASED ARRAY OF CIRCULAR WAVE- GUIDE ELEMENTS J.E. Dudgeon and E.J. Finnell, III, University of Alabama, University, AL	50
II-6 1120	COMPUTER-AIDED DESIGN OF A WAVEGUIDE MULTIPLEXER A.E. Atia, COMSAT Labs., Clarksburg, MD	53
II-7 1140	ACCELERATION OF CONVERGENCE OF THE FINITE-ELEMENT METHOD E. Della Torre and W. Kinsner McMaster University, Hamilton, Ontario Canada	56

1200 LUNCH

TECHNICAL PROGRAM
Monday Afternoon, 4 June 1973

III - MILLIMETER WAVELENGTH COMPONENTS 1400-1700 East Ballroom, UMC			IV - PASSIVE SOLID STATE DEVICES 1400-1700 West Ballroom, UMC		
Chairman, H. Jacobs Army Electronics Command Fort Monmouth, NJ			Chairman, A. Clavin Hughes Aircraft Co. Canoga Park, CA		
Title	Page		Title	Page	
III-1 POWER AMPLIFICATION AT 55-65 GHz WITH 1400 18 GHz GAIN-BANDWIDTH PRODUCT J.E. Raue, TRW Systems Group, Redondo Beach, CA	60		IV-1 OCTAVE COVERAGE LUMPED-ELEMENT 1400 CIRCULATOR DEVELOPMENT J. Wolczok and I. Rubinstein, AIL-Division of Cutler-Hammer, Melville, NY	84	
III-2 A DISTRIBUTED PIN DIODE PHASER FOR 1420 MILLIMETER WAVELENGTHS B.J. Levin and G.G. Weidner, RCA Corporation, Camden, NJ	63		IV-2 ON STRIPLINE FOUR-PORT CIRCULATORS 1415 W.H. Ku and Y.S. Wu, Cornell University, Ithaca, NY	86	
III-3 LOW CONVERSION LOSS MILLIMETER WAVE 1440 MIXERS L.E. Dickens, Westinghouse Defense & Electronic Systems Center, Baltimore, MD	66		IV-3 HIGH POWER S-BAND JUNCTION CIRCULATOR 1430 R.A. Stern, U.S. Army Electronics Command, Fort Monmouth, NJ	89	
(1500 Coffee Break)			IV-4 1445 PAPER WITHDRAWN		
III-4 SOLID STATE DEVICES AT 50 GHz 1520 M. Akaike, N.Kanmuri and H.Kato, Yokosuka Electrical Communication Lab., Tokyo, Japan and T.Miyakawa, N.Tokoyo, H. Yatsuka and H. Hayashi, Fujitsu Labs. Ltd., Kawasaki, Japan	69		IV-5 WIDEBAND OPERATION OF MICROSTRIP 1500 CIRCULATORS Y.S. Wu and F.J. Rosenbaum, Washington University, St. Louis, MO	92	
III-5 20°K-COOLED PARAMETRIC AMPLIFIER FOR 1540 46 GHz WITH LESS THAN 60°K NOISE TEMPERATURE J. Edrich, University of Denver, Denver, CO	72		IV-6 REVIEW OF FERRITE PHASE SHIFTER TECH- 1530 NOLOGY (Invited) L.R. Whicker, Naval Research Laboratory, Washington, DC	95	
III-6 A NONDEGENERATE MILLIMETER WAVE PARA- 1600 METRIC AMPLIFIER WITH A SOLID-STATE PUMP SOURCE J. Whelehan, E. Kraemer, H. Paczkowski, F. Bourne, J. Taub, E.J. Wendt and A. Larsen, AIL-Cutler-Hammer, Deer Park, Long Island, NY	75		IV-7 A LOW COST LITHIUM FERRITE PHASE SHIFTER 1600 D.A. Charlton, Hughes Aircraft Company, Fullerton, CA	98	
III-7 LOW NOISE, 94 GHz PARAMETRIC AMPLIFIER 1620 DEVELOPMENT H.C. Okean, J.R. Asmus and L.J. Steffek, LNR Communications, Inc., Farmingdale, NY	78		IV-8 THE TWIN-FERRITE-TOROID CIRCULAR WAVEGUIDE 1615 PHASER F.J. Bernues and D.M. Bolle, Brown Univer- sity, Providence, RI	101	
III-8 LOW LOSS, 3MM JUNCTION CIRCULATOR 1640 H.C. Okean and L.J. Steffek, LNR Communications, Inc., Farmingdale, NY	80		IV-9 ULTRA BROADBAND PHASE SHIFTERS 1630 G.D. Lynes, Martin Marietta Corp., Denver, CO	104	
			IV-10 DRIVERLESS PHASE SHIFTERS 1645 R.W. Burns, R.L. Holden and R. Tang, Hughes Aircraft Co., Fullerton, CA	107	

TECHNICAL PROGRAM
Monday Evening, 4 June 1973

PANEL - MILLIMETER WAVE INTEGRATED CIRCUIT TECHNIQUES
2000 - 2200 East Ballroom, UMC

Organizer and Moderator: H. Sobol, RCA Laboratories
Princeton, NJ

M. Cohn
Westinghouse Electric Corp.
Baltimore, MD

H. Jacobs
U.S. Army Electronics
Command (ECOM)
Fort Monmouth, NJ

T.H. Oxley
General Electric Co., Ltd.
Middlesex, England

C.P. Wen
RCA Laboratories
Princeton, NJ

P. Toullos
IIT Research Institute
Chicago, IL

M.V. Schneider
Bell Telephone Labs.
Holmdel, NJ

PANEL - NONLINEARITIES IN MICROWAVE DEVICES AND SYSTEMS
2000 - 2200 West Ballroom, UMC pp. 111-114

Organizer and Moderator: G.L. Heiter
Bell Telephone Labs.
North Andover, MA

RELATIONSHIPS BETWEEN NONLINEARITY MEASUREMENTS AND
PERFORMANCE IN CATV SYSTEMS
K. Simmons, Jerrold Electronic Corp., Horsham, PA

TWO-TONE NONLINEARITY TESTING: THE INTERCEPT POINT, P₁
F. Fulton, Avantek, Santa Clara, CA

THREE-TONE NONLINEARITY TESTING: THE INTERMODULATION
COEFFICIENT, M

R.C. Heidt, Bell Telephone Labs., North Andover, MA

NOISE LOADING OF FM SYSTEMS: THE NOISE-POWER-RATIO, NPR,
AND CUSTOMER REQUIREMENTS
J.C. Gillespie, Farinon Electric, San Carlos, CA

TECHNICAL PROGRAM
Tuesday Morning, 5 June 1973

V - MICROWAVE DELAY LINES AND ACOUSTIC DEVICES			VI - MICROWAVE MEASUREMENTS			VII-ACTIVE SOLID STATE DEVICES(A)		
0900-1130 East Ballroom, UMC			0900-1210 West Ballroom, UMC			0900-1200 Forum Room, UMC		
Chairman, N. Lipetz U.S. Army Electronic Tech. and Devices Lab. Fort Monmouth, NJ			Chairman, S.F. Adam Hewlett-Packard Company Palo Alto, CA			Chairman, G.I. Haddad University of Michigan Ann Arbor, MI		
Title	Page		Title	Page		Title	Page	
V-1 0900 SYSTEMS APPLICATIONS OF ACOUSTIC SURFACE WAVES (Invited) T.W. Bristol, Hughes Aircraft, Fullerton, CA	116		VI-1 0900 A NEW METHOD FOR MEASURING DIELECTRIC PROPERTIES OF MATERIAL MEDIA USING A MICROSTRIP CAVITY T. Itoh and R. Mittra, University of Illinois, Urbana, IL	138		VII-1 0900 A PUSH-PULL IMPATT DIODE AMPLIFIER W.C. Tsai and C.W. Lee, Raytheon Co., Waltham, MA	160	
V-2 0925 A SYNTHESIS PROCEDURE FOR UNAPODIZED NONDISPERSIVE SURFACE WAVE FILTERS W.R. Smith, Hughes Aircraft Co., Fullerton, CA	117		VI-2 METROLOGICAL APPLICATIONS OF A PROPERTY OF STATIONARITY IN RECTANGULAR CAVITIES CONTAINING A DIELECTRIC SLAB C. Eugène, University of Louvain at Louvain-la-Neuve, Belgium	140		VII-2 0920 A HIGH-POWER, C-BAND MULTIPLE IMPATT DIODE AMPLIFIER R.E. Lee, D. Parker and U. Gysel, Stanford Research Institute, Menlo Park, CA	163	
V-3 0940 THE MICROWAVE REALIZATION OF A SIMPLE SURFACE WAVE FILTER FUNCTION R.D. Weglein and E.D. Wolf, Hughes Research Labs., Malibu, CA	120		VI-3 MEASUREMENT OF TRANSMISSION CAVITY QUALITY FACTORS F.M. Palka, Sperry Electronic Tube Div., Gainesville, FL J.R. Ashley, University of Colorado, Colorado Springs, CO	143		VII-3 0940 CHARACTERISTICS OF IMPATT DIODE REFLECTION AMPLIFIERS R.W. Laton, Massachusetts Institute of Technology, Lexington, MA and G.I. Haddad, University of Michigan, Ann Arbor, MI	166	
V-4 0955 LARGE PULSE COMPRESSION RATIO OBTAINED WITH NON-LINEAR INTERACTION OF BULK ACOUSTIC WAVES IN LiNbO ₃ J.M. White, D.K. Winslow and H.J. Shaw, Stanford University, Stanford, CA	123					VII-4 1000 A KU-BAND IMPATT AMPLIFIER WITH IMPROVED INTER-MODULATION PRODUCTS H. Komizo, Y. Daido, H. Ashida, Y. Ito and M. Honma, Fujitsu Labs Ltd., Kawasaki, Japan	169	
(1010 Coffee Break)			(1000 Coffee Break)			(1020 Coffee Break)		
V-5 1030 DEVELOPMENT OF AN L-BAND PULSE COMPRESSOR USING SURFACE WAVES D.T. Bell, Jr. and D.W. Mellon, Texas Instruments, Dallas, TX	126		VI-4 1030 A NEW COMPUTER-CONTROLLED KLINGER CAVITY MODE CONVERSION TEST SET B.S. Seip and L.W. Hinderks, Bell Telephone Labs., Murray Hill, NJ	146		VII-5 1040 IMPEDANCE CHARACTERISTICS OF TRAPATT OSCILLATOR CIRCUITS J.D. Welch, Massachusetts Institute of Technology, Lexington, MA; P.T. Greiling, University of California, Los Angeles, CA	172	
V-6 1045 DEVICE PERFORMANCE USING MAGNETIC WAVES AT X BAND W.L. Bongianini, North American Rockwell Corp., Anaheim, CA	129		VI-5 1050 A REFERENCE NOISE STANDARD FOR MILLIMETER WAVES W.C. Daywitt, National Bureau of Standards, Boulder, CO	149		VII-6 1100 F-BAND TRAPATT DIODE FUNDAMENTAL MODE AMPLIFIER CIRCUITS V.A. Mikenas, RCA, Moorestown, NJ	175	
V-7 1100 CONTROL OF SURFACE ACOUSTIC WAVES WITH DISTRIBUTED VARACTORS G. Chao, Naval Research Laboratory, Washington, DC	132		VI-6 1110 A HIGH PRECISION SWEPT RF REFLECTOMETER SYSTEM IN COAXIAL LINE P. Lacy and W. Oldfield, Wiltron Co., Palo Alto, CA	151		VII-7 1120 THE DESIGN OF LUMPED-ELEMENT TRAPATT CIRCUITS K.L. Kotzebue, University of California, Santa Barbara, CA; R.D. Regier, Watkins-Johnson Co., Scotts Valley, CA	178	
V-8 1115 ELECTRONICALLY CONTROLLABLE TIME DELAY J. Burnsweig, W.T. Gosser and S.H. Arneson, Hughes Aircraft Co., Culver City, CA	134		VI-7 1130 SWEPT LONG LINE DETECTOR NETWORK ANALYZER R. Garver and F. Weinert, Weinschel Engineering, Gaithersburg, MD	152		VII-8 1140 TRANSMISSION CAVITY AND INJECTION STABILIZATION OF AN X-BAND TRANSFERRED ELECTRON OSCILLATOR J.R. Ashley, University of Colorado, Colorado Springs, CO; F.M. Palka, Sperry Electronic Tube Div., Gainesville, FL	81	
			VI-8 1150 LARGE-SIGNAL S-PARAMETER CHARACTERIZATION OF UHF POWER TRANSISTORS R.J. Chaffin and W.H. Leighton, Sandia Labs, Albuquerque, NM	155				

1130 LUNCH

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TECHNICAL PROGRAM
Tuesday Afternoon, 5 June 1973

VIII-CIVIL MICROWAVE SYSTEMS			IX-MICROWAVE FILTERS AND RELATED COMPONENTS			PANEL - MICROWAVE NOISE MEASUREMENTS AND SYSTEM EFFECTS		
1340-1650 East Ballroom, UMC			1350-1650 West Ballroom, UMC			1400-1630 Forum Room, UMC		
Chairman, G.E. Schafer U.S. Army Electronics Proving Ground Ft. Huachuca, AZ			Chairman, S.B. Cohn S.B. Cohn Associates Encino, CA			Organizer and Moderator, P.A. Goud University of Alberta Edmonton, Alberta, Canada		
Title	Page		Title	Page		Panel		
VIII-1 THE ENVIRONMENTAL IMPACT OF MICROWAVE SYSTEMS IN THE 70's D.M. Jansky, Office of Telecommunications Policy, Washington, DC	184	1340	IX-1 TEMPERATURE STABLE MICROWAVE DIELECTRIC RESONATORS UTILIZING FERROELECTRICS J.K. Plourde, Bell Telephone Labs., Allentown, PA	202	1350	AN OVERVIEW OF THE ROLE OF MICROWAVE NOISE IN SYSTEMS p.226 S. Okwit, LNR Communications Inc., Farmingdale, NY		
VIII-2 SOLAR POWER STATION (Invited) P. Glaser, Arthur D. Little, Inc., Cambridge, MA	186	1400	IX-2 IMPROVED HAIRPIN-LINE FILTERS U.H. Gysel, Stanford Research Institute, Menlo Park, CA	205	1410	MEASUREMENT OF NOISE PERFORMANCE FACTORS p.226 M.G. Arthur, National Bureau of Standards, Boulder, CO		
VIII-3 ADAPTING MICROWAVE TECHNIQUES TO HELP SOLVE FUTURE ENERGY PROBLEMS W.C. Brown, Raytheon Co., Waltham, MA	189	1430	IX-3 THE WAVEGUIDE SANDWICH HARMONIC REJECTION FILTER J.D. Rhodes, University of Leeds, England	208	1430			
VIII-4 COMPARISON OF MICROWAVE, MILLIMETER WAVE AND OPTICAL TECHNIQUES FOR COMMUNICATIONS F. Arams, LNR Communications, Inc., Farmingdale, NY	192	1450	IX-4 NON-MINIMUM PHASE, OPTIMUM AMPLITUDE, BANDPASS WAVEGUIDE FILTERS A.E. Atia and A.E. Williams, COMSAT Labs, Clarksburg, MD	210	1450			
(1510 Coffee Break)			(1510 Coffee Break)			(1500-1530 Coffee Break)		
VIII-5 MILLIMETER WAVE SPACE COMMUNICATIONS WITH THE ATS-F SATELLITE L.J. Ippolito, Goddard Space Flight Center, Greenbelt, MD	193	1530	IX-5 A LOW-LOSS, WIDEBAND TRANSMITTER MULTIPLEXER J.I. Smith and R.E. Fisher, Bell Telephone Labs., Whippany, NJ	213	1530	PSEUDO-RANDOM NOISE LOADING FOR SYSTEM EVALUATION p.227 R.B. Swerdlow, BTL, No. Andover, MA		
VIII-6 THREE-AXIS ATTITUDE SENSING ON ATS-F/G SPACECRAFT A. Kampinsky, Goddard Space Flight Center, Greenbelt, MD	195	1550	IX-6 FREQUENCY MULTIPLEXING WITH ACTIVE NETWORKS N.M. Swamy and V.P. Kodali, Tata Institute of Fundamental Research, Bombay, India	215	1550	NOISE COMPARISONS IN LOW AND MEDIUM POWER DEVICES p.227 J.R. Ashley, University of Colorado, Colorado Springs, CO		
VIII-7 2.6 GHz SATELLITE TV BROADCAST RECEIVER J.A. Hall, R.D. Pering and D.J. Mellor, Hewlett-Packard, Palo Alto, CA	196	1610	IX-7 BASIC CONSIDERATIONS ON TEMPERATURE HYBRID POWER DIVIDERS N. Nagai, Cornell University, Ithaca, NY; A. Matsumoto, Kitami Institute of Technology, Kitami, Hokkaido, Japan	218	1610	LOW NOISE RECEIVERS AND THEIR CALIBRATION p.228 C.T. Stelzried, Jet Propulsion Lab., Pasadena, CA		
VIII-8 AVALANCHE DIODE SOURCE WITH INTEGRATED AFC CIRCUIT AND FREQUENCY CONVERTER FOR DIGITAL COMMUNICATION SYSTEMS S.F. Paik, R.E. Blight, C.J.R. Pallemmaerts, W.W. Rollins and G.G. Russo, Raytheon Co., Lexington, MA	198	1630	IX-8 NEW NON-UNIFORM WAVEGUIDE TAPER DESIGN YIELDING LOW VSWR AND HIGH REJECTION H.J. Gould, A.E. Smoll and C.C. Han, Philco-Ford Corp., Palo Alto, CA	221	1630			

TUESDAY EVENING SOCIAL PROGRAM

CASH BAR SOCIAL HOUR, 1800-1900, TUESDAY, 5 June, HARVEST HOUSE MOTOR HOTEL
SYMPOSIUM BANQUET, 1900 TUESDAY, 5 June, HARVEST HOUSE MOTOR HOTEL
Speaker: Ray Stanish, Topic: EINSTEIN, RELATIVITY, AND ALL THAT JAZZ
Master of Ceremonies: D.F. Wait, National Bureau of Standards

TECHNICAL PROGRAM
Wednesday Morning, 6 June 1973

X - ACTIVE SOLID STATE DEVICES(B)			XI-MICROWAVE TECHNIQUES IN BIOLOGICAL RESEARCH			XII-WAVEGUIDE ANALYTICAL TECHNIQUES		
0900-1205 East Ballroom, UMC			0915-1215 West Ballroom, UMC			0915-1205 Forum Room, UMC		
Chairman, H.W. Cooper Westinghouse Electric Corp. Baltimore, MD			Chairman, H.M. Altschuler National Bureau of Standards Boulder, CO			Chairman, N.H. Nahman National Bureau of Standards Boulder, CO		
Title	Page		Title	Page		Title	Page	
X-1 0900 PERFORMANCE AND LIMITATIONS OF FET's AS MICROWAVE POWER AMPLIFIERS (Invited)	230		XI-1 0915 GEOELECTRIC DISCONTINUITY DETECTOR	254		XII-1 0915 MINIMUM PHASE BEHAVIOR OF RANDOM MEDIA	272	
L. Napoli and R. DeBrecht, RCA Labs., Princeton, NJ			H. Trzaska, Technical Univ. of Wroclaw, Wroclaw, Poland			H.E. Rowe, Bell Telephone Labs., Holmdel, NJ		
X-2 0925 TWO DIMENSIONAL DISTRIBUTED THEORY FOR A MICROWAVE SCHOTTKY BARRIER FIELD EFFECT TRANSISTOR	233		XI-2 0935 ENVIRONMENTALLY CONTROLLED WAVEGUIDE IRRADIATION FACILITY	255		XII-2 0935 COMPARISON BETWEEN RECTANGULAR AND ANNULAR WAVEGUIDE MODAL ANALYSES FOR WAVEGUIDE BENDS	275	
G.D. Alley, Bell Telephone Labs., North Andover, MA			H.S. Ho, E.I. Ginns and C.L. Christman, Bureau of Radiological Health, Rockville, MD			E. Bahar and G. Govindarajan, Univ. of Nebraska, Lincoln, NB		
H.E. Talley and G.L. Wright, Univ. of Kansas, Lawrence, KS			XI-3 0955 POWER DEPOSITION IN A SPHERICAL MODEL OF MAN EXPOSED TO 1-20 MHz EM FIELDS	257		XII-3 1005 FURTHER EXTENSION OF THE MODIFIED RESIDUE CALCULUS TECHNIQUE	278	
X-3 0945 A 4 GHz HIGH POWER TRANSISTOR-DESIGN AND RELIABILITY	236		J.C. Lin, C.C. Johnson and A.W. Guy, University of Washington, Seattle, WA			J.P. Montgomery and D.C. Chang, University of Colorado, Boulder, CO		
P. Wang, J. Chen, P. Froess and S. Kakihana, Hewlett-Packard, Palo Alto, CA			XI-4 1015 APPLICATION OF NONTHERMAL EFFECTS IN HIGH DIELECTRIC MATERIALS TO MICROWAVE DOSIMETRY	260		XII-4 1025 MUTUAL COUPLING BETWEEN PARALLEL PLATE WAVEGUIDES	281	
X-4 1005 POWER TRANSISTOR AMPLIFIER DESIGN USING LARGE-SIGNAL S-PARAMETERS	239		R.J. Vetter, D.R. Elle, P.L. Ziemer, D.J. Fehring, Purdue Univ., Lafayette, IN			L. Shafai, Y.S. El-Moazzen, University of Manitoba, Winnipeg, Canada		
J.G. Webb and R.J. Chaffin, Sandia Laboratories, Albuquerque, NM								
(1025 Coffee Break)			(1035 Coffee Break)			(1045 Coffee Break)		
X-5 1045 SIMPLE LSA CIRCUITS	242		XI-5 1105 AN RF DECOUPLED ELECTRODE FOR MEASUREMENT OF BRAIN TEMPERATURE DURING MICROWAVE EXPOSURE	262		XII-5 1105 A COUPLED INTEGRAL EQUATION SOLUTION FOR MICROSTRIP TRANSMISSION LINES	284	
J.M. Rodgers, Royal Radar Establishment, Malvern, England			L.E. Larsen, Walter Reed Army Institute of Research, Washington, DC; R.A. Moore and J. Acevedo, Westinghouse Defense and Electronic Systems Center, Baltimore, MD			C.E. Smith, University of Mississippi, University, MS		
X-6 1105 A 0.75-6 GHz VARACTOR UP-CONVERTER BROADBAND AT ALL THREE PORTS	244		XI-6 1130 THEORETICAL AND EXPERIMENTAL STUDIES OF MICROWAVE INDUCED CATARACTS IN RABBITS	265		XII-6 1125 A NUMERICAL METHOD FOR THE SOLUTION OF THE JUNCTION OF CYLINDRICAL WAVEGUIDES	287	
R.L. Sicotte, COMSAT Labs., Clarksburg, MD			P. Kramar, A.F. Emery, A.W. Guy and J.C. Lin, University of Washington, Seattle, WA			H. Oraizi and J. Perini, Syracuse University, Syracuse, NY		
X-7 1125 FREQUENCY MODULATION OF CAVITY STABILIZED SOLID STATE DIODE OSCILLATORS	247		XI-7 1155 BIRD FEATHERS AS DIELECTRIC RECEPTORS OF RF FIELDS	268		XII-7 1145 ANALYSIS OF PROBE FED CAVITIES OF ARBITRARY SHAPE	290	
W.R. Day, Litton Indus., San Carlos, CA			J. Bigu del Blanco and C. Romero-Sierra, Queen's University, Kingston, Ontario, Canada; J.A. Tanner, National Research Council of Canada, Ottawa, Canada			N. Wang and G.A. Thiele, Ohio State University, Columbus, OH		
X-8 1145 GaAs "TRAVELLING-WAVE" TRANSISTOR	250							
R.H. Dean, R.E. DeBrecht, A.B. Dreeben, J.J. Hughes, R.J. Matarese, L.S. Napoli, RCA Labs., Princeton, NJ								

1205 LUNCH

1215 LUNCH

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TECHNICAL PROGRAM
Wednesday Afternoon, 6 June 1973

XIII-INTEGRATED OPTICS			XIV-MIC SYSTEMS COMPONENTS			XV-BIOLOGICAL EFFECTS OF MICRO- WAVE RADIATION		
1400-1700 East Ballroom, UMC			1400-1620 West Ballroom, UMC			1400-1630 Forum Room, UMC		
Chairman, P.D. Coleman University of Illinois Urbana, IL			Chairman, W.H. From Raytheon Co. Bedford, MA			Chairman, W.A. Mills Environmental Protection Agency Rockville, MD		
Title	Page		Title	Page		Title	Page	
XIII-1 OPTICAL GUIDED WAVE THEORY 1400 AND TECHNIQUES (Invited) H. Kogelnik, Bell Telephone Lab., Holmdel, NJ	294		XIV-1 A COMPACT S-BAND DIODE 1400 PHASE SHIFTER R.W. Burns and R.L. Holden, Hughes Aircraft Co., Fullerton, CA	298		XV-1 POSSIBLE MECHANISMS FOR THE 1400 BIOMOLECULAR ABSORPTION OF MICROWAVE RADIATION WITH FUNCTIONAL IMPLICATIONS J.R. Rabinowitz, New York University Medical Center, New York, NY	314	
XIII-2 PROGRESS OF INTEGRATED 1420 OPTICS IN ENGLAND (Invited) J. Midwinter, Post Office Research Station, Suffolk, England			XIV-2 A NEW MIC DOUBLE BALANCED 1420 MIXER WITH RF AND IF BAND OVERLAP R.H. Pflieger, AIL-Division of Cutler-Hammer, Melville, NY	301		XV-2 MICROWAVE EFFECTS ON CENTRAL 1420 NERVOUS SYSTEM ATTRIBUTED TO THERMAL FACTORS E.M. Taylor, A.W. Guy, B. Ashleman and J.C. Lin, University of Washington, Seattle, WA	316	
XIII-3 INTEGRATED OPTICAL DEVICES 1440 AT IBM (Invited) E. Lean, International Business Machines, York- town Heights, NY	294		XIV-3 BROADBAND INTEGRATED UP AND 1440 DOWN CONVERTERS D.W. Maki, J.E. Degenford and M. Cohn, Westinghouse Electric Corp., Baltimore, MD	304		XV-3 EFFECT OF 2450 MHZ MICROWAVE 1440 FIELDS ON PERIPHERAL NERVES C.K. Chou and A.W. Guy, University of Washington, Seattle, WA	318	
(1500-1520 Coffee Break)			(1500 Coffee Break)			(1500 Coffee Break)		
XIII-4 REVIEW OF FIBER OPTICS 1530 (Invited) R.A. Andrews, Naval Research Labs., Washington, DC	294		XIV-4 A HYBRID INTEGRATED L-BAND 1520 ALC AMPLIFIER W. Kruppa and R.F. Lee, Bell Telephone Labs., Reading, PA	306		XV-4 MICROWAVE INTERACTION WITH 1530 THE AUDITORY SYSTEMS OF HUMANS AND CATS A.W. Guy, E.M. Taylor, B. Ashleman and J.C. Lin, University of Washington, Seattle, WA	321	
XIII-5 INTEGRATED OPTICS FOR 1550 MICRON WAVELENGTHS (Invited) D.B. Anderson, North Amer- ican Rockwell, Anaheim, CA	294		XIV-5 A MIC PHASED LOCKED LOOP 1540 AVALANCHE OSCILLATOR IN X BAND J.A. Salmon, Thomson-CSF, Malakoff, France	308		XV-5 THE EFFECT OF CHRONIC, LOW- 1550 LEVEL MICROWAVE RADIATION ON THE TESTICLES OF MICE S.J. Haidt, Bureau of Radiological Health, Rock- ville, MD; A.H. McTigue, Yale Univ., New Haven, CT	324	
XIII-6 PERIODIC STRUCTURES AND THEIR 1610 APPLICATION IN INTEGRATED OPTICS (Invited) W.S.C. Chang, Washington University, St. Louis, MO	294		XIV-6 COPLANAR BALUN CIRCUITS 1600 FOR GaAs FET HIGH POWER PUSH-PULL AMPLIFIERS R.E. DeBrecht, RCA Labs., Princeton, NJ	309		XV-6 MICROWAVE IRRADIATION SAC- 1610 RIFICE: APPLICATION IN NEUROCHEMICAL RESEARCH D.E. Schmidt, M.J. Schmidt, G.A. Robison and L.K. Wilson, Vanderbilt University, Nashville, TN	326	
XIII-7 MATERIALS STUDY FOR MILLI- 1630 METER SUBCARRIER OPTICAL MODULATORS A.E. Popa, Hughes Research Labs., Malibu, CA	295							

TECHNICAL PROGRAM
Wednesday Evening, 6 June 1973

<u>WORKSHOP</u> - BIOLOGICAL EFFECTS OF MICROWAVE RADIATION		2000-2200 East Ballroom, UMC	pp.329-338
Organizer, A.W. Guy University of Washington Seattle, WA		Moderator, S.W. Rosenthal Polytechnic Institute of Brooklyn Farmingdale, Long Island, NY	
W-1	COMPARATIVE ASPECTS OF RADIO FREQUENCY AND MICROWAVE BIOMEDICAL RESEARCH S.M. Michaelson, University of Rochester, Rochester, NY; H.P. Schwan, Univ. of Pennsylvania, Philadelphia, PA		
W-2	FURTHER EXPERIMENTS SEEKING EVIDENCE OF NONTHERMAL BIOLOGICAL EFFECTS OF MICROWAVE RADIATION 2030 L.M. Liu, G.W. Skewes and F.J. Rosenbaum, Washington University, St. Louis, MO; G.A. Lindauer, Emerson Electric Co., St. Louis, MO		
W-3	BRADYCARDIA IN ISOLATED HEARTS INDUCED BY MICROWAVE IRRADIATION 2040 J.L. Lords, C.H. Durney, A. Borg and C. Tinney, University of Utah, Salt Lake City, UT		
W-4	CONTINUOUS EXPOSURE OF CHICKS TO ELECTROMAGNETIC FIELDS 2050 A.J. Giarola and W.F. Krueger, Texas A&M University, College Station, TX		
2100	Discussion		

NOTES

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