

PGMTT National Symposium

HOTEL DEL CORONADO, SAN DIEGO, CALIF., MAY 9-11, 1960

Welcome and Opening Remarks Monday Morning, May 9

D. Proctor, Chairman of the 1960 PGMTT National Symposium.

A. A. Oliner, National Chairman of the PGMTT.

Session 1—Microwave Components and Systems

Chairman: *T. N. Anderson, FXR Inc., Long Island City, N.J.*

"New Developments in Microwave Communications Systems," *C. C. Cutler, Bell Telephone Labs., Holmdel, N. J.*

"Mode Conversion in Helix Waveguide," *H. G. Unger, Bell Telephone Labs., Holmdel, N. J.*

"Some Properties of Dielectric Loaded Slow Wave Structures," *G. B. Walker and C. G. Engelfield, Univ. of British Columbia, Vancouver, B. C., Canada.*

"UHF Strip Transmission Line Hybrid Junction," *I. Tatsuguchi, Bell Telephone Labs., Whippany, N. J.*

"A Variable Slope, Non-Dispersive Microwave Phase Shifter," *G. D. Carey and R. E. Hovda, Autonetics, Div. of North American Aviation, Downey, Calif.*

"A Wide-Band Turnstile Junction and Direction Finding Antenna," *R. C. Honey and J. K. Shimizu, Stanford Res. Inst., Menlo Park, Calif.*

"Microwave Phase Analyser," *K. D. Claborn and R. E. Jones, Bendix Radio, Div. of Bendix Aviation Corp., Baltimore, Md.*

Monday Afternoon

Session 2—Parametric Amplifiers

Chairman: *A. Berk, Research Labs., Hughes Aircraft Co., Culver City, Calif.*

"Gallium Arsenic Point Contact Diodes," *W. M. Sharpless, Bell Telephone Labs., Holmdel, N. J.*

"Characterization of Microwave Variable Capacitance Diodes," *S. T. Eng., Development Lab., Hughes Semiconductor Div., Newport Beach, Calif.*

"A Perturbation Theory for Parametric Amplifiers," *R. H. Kingston and A. L. McWhorter, Lincoln Lab., M.I.T., Lexington, Mass.*

"A Study of the Optimum Design of Wideband Parametric Amplifiers and Up-Converters," *G. L. Matthaei, Stanford Res. Inst., Menlo Park, Calif.*

"A Low-Noise X-Band Parametric Amplifier," *R. D. Weglein, Research Labs., Hughes Aircraft Co., Culver City, Calif., and F. Keywell, Semiconductor Div., Hughes Products, Costa Mesa, Calif.*

"A Four Terminal Low Noise Parametric Microwave Amplifier," *W. Eckhardt and F. Sterzer, RCA, Princeton, N. J.*

"Design and Operation of Four-Frequency Parametric Up-Converters," *J. A. Luksch, E. W. Matthews and G. A. VerWys, RCA, Moorestown, N. J.*

"A Study of the Iterated Traveling-Wave Parametric Amplifier," *C. V. Bell, Walla Walla College, College, Park, Wash.*

Monday Evening

Session 2A—Parametric Amplifiers

Panel Discussion: *A. Berk, Research Labs., Hughes Aircraft Co., Culver City, Calif.; C. J. Carter, Space Technology Labs., Los Angeles, Calif.; J. C. Green, Airborne Instruments Lab., Melville, L.I., N. Y.; E. M. T. Jones, Stanford Res. Inst., Menlo Park, Calif.; N. Uenohara, Bell Telephone Labs., Murray Hill, N. J., G. Wade, Stanford Univ., Stanford, Calif.*

Tuesday Morning, May 10

Session 3—Ferrites

Chairman: *N. Sakiotis, Motorola, Inc., Scottsdale, Ariz.*

"Non-Linear Effects in Ferrites," *M. Weiss, Research Labs., Hughes Aircraft Co., Culver City, Calif.*

"Ferroxplane Type Materials at Microwave Frequencies," *I. Bady, U. S. Army Signal Res. and Dev. Lab., Fort Monmouth, N. J.*

"Antiferromagnetic Materials for Millimeter and Sub-millimeter Devices," *G. S. Heller and J. J. Stickler, Lincoln Lab., M.I.T., Lexington, Mass.*

"Design Problems Associated with Rectangular Waveguide Reciprocal Phase-shifters," *A. Clavin, RANTEC Corp., Calabasas, Calif.*

"Magnetostatic Modes and Ferrites with Conventional Waveguide Geometries," *G. P. Rodrigue, Sperry Microwave Electronics Co., Clearwater, Fla.*

"Wide Band Resonance Isolator," *W. W. Anderson and M. E. Hines, Bell Telephone Labs., Murray Hill, N. J.*

"An Electrically-Variable, Reciprocal Ferrite Phase Shifter," *R. W. Kordos and V. J. McHenry, Research Labs. Div., Bendix Aviation Corp., Detroit, Mich.*

Tuesday Afternoon

Session 4—Millimeter Waves and Diode Applications

Chairman: *P. Vartanian, Melabs, Palo Alto, Calif.*

"Millimeter Wave Generation," *B. Epstein, Microwave Res. Inst., Brooklyn, N. Y. (on leave from Compagnie General TSF, France)*

"Millimeter Wave Generation by Parametric Methods," *G. H. Heilmeier, RCA Labs., David Sarnoff Res. Center, Princeton, N. J.*

"A Pulsed Ferrimagnetic Microwave Generator," *B. J. Elliott, T. Schaug-Petersen and H. J. Shaw, Stanford Univ., Stanford, Calif.*

"Maser Operation at Signal Frequencies Higher Than the Pump Frequency," *F. R. Ames, Airborne Instruments Lab., Melville, L. I., N. Y.*

"Generation of Microwaves by Means of Esaki Diodes," *R. F. Rutz, Research Labs., IBM, Poughkeepsie, N. Y.*

"The Large Signal Behavior of a Cavity Type Parametric Amplifier," *F. A. Olson and G. Wade, Stanford Univ., Stanford, Calif.*

"A Solid State Microwave Source from Reactance Diode Harmonic Generators," *T. M. Hylltin and K. L. Kotzebue, Texas Instruments, Dallas, Tex.*

Wednesday Morning, May 11

Session 5—Microwave Propagation in Plasmas and Solids

Chairman: *L. Goldstein, Univ. of Illinois, Urbana.*

"Propagation of Waves in a Plasma in a Magnetic Field," *W. Allis, Research Lab. of Electronics, M.I.T., Cambridge, Mass.*

"Plasma-Electromagnetic Interaction," *N. Marcuvitz, Microwave Res. Inst., Polytechnic Institute of Brooklyn, Brooklyn, N. Y.*

"Magnetoplasma Effects in Semiconductors," *B. Lax, Lincoln Labs., M.I.T., Lexington, Mass.*

"Coherent Excitation of Plasma Oscillations in Solids," *D. Pines, Univ. of Illinois, Urbana (work done at General Dynamics Corp., San Diego, Calif.)*

Panel Discussion: *O. T. Fundingsland, Raytheon Mfg. Co., Waltham, Mass.; R. Gould, California Institute of Technology, Pasadena; H. Margenau, Yale Univ., New Haven, Conn.; R. P. Whitmer, Sylvania Electronic System, Mountain View, Calif.*

Wednesday Afternoon

Session 6—Filters and Measurements

Chairman: *K. Tomiyasu, General Electric Microwave Lab., Palo Alto, Calif.*

"Lossy Waveguide Resonators," *H. Riblet, Microwave Development Labs., Inc., Wellesley, Mass.*

"Peak Internal Fields in Direct Coupled Cavity Filters," *L. Young, Westinghouse Electric Corp., Baltimore, Md.*

"Strip Transmission Line Directional Filter," *R. L. Steven and P. E. Dorato, Airborne Instruments Lab., L. I., N. Y.*

"Application of the Smith Chart to Problems of Propagation in a Magneto-Ionic Medium," *G. A. Deschamps and W. L. Weeks, Univ. of Illinois, Urbana.*

"Microwave Measurements of Electron Attachment Rates," *V. A. J. van Lint and E. G. Wilkner, General Atomic, Div. of General Dynamics Corp., San Diego, Calif.*

"Fractional Millimicrosecond Electrical Stroboscope," *W. M. Goodall and A. F. Dietrich, Bell Telephone Labs., Holmdel, N. J.*

The banquet speaker at the PGMTT National Symposium will be W. E. Edson of the General Electric Co., Palo Alto, Calif., who will speak on "Microwave Power Sources of the Future."