

PUBLICATIONS AND REPORTS

MEETING PAPERS PRESENTED

International Symposium on High-Temperature Technology (sponsored by Stanford Research Institute), Monterey, California

September 8-11, 1963

W. B. Nottingham, Emitter Materials for High-Temperature Energy Conversion

International Scientific Radio Union General Assembly, Tokyo, Japan

September 9-20, 1963

A. G. Bose, A Two-State Modulation System

J. M. Wozencraft and R. S. Kennedy, Coding and Communication

American Chemical Society Fall Meeting, New York

September 11, 1963

G. G. Hammes, Relaxation Spectra of Enzymatic Reactions

Fifth International Congress of Slavists, Sofia, Bulgaria

September 17-24, 1963

M. Halle, On Cyclically Ordered Rules in the Russian Conjugation Systems of Slavic Languages (in Russian)

Physics Seminar, University of New Hampshire, Durham, New Hampshire

October 3, 1963

S. C. Brown, Infrared Studies of High-Density Plasmas (invited)

American Electroencephalographic Society Meeting, San Francisco, California

October 7-9, 1963

J. S. Barlow, Some Preliminary Observations on Evoked Responses and Perception of Visual Stimuli in Man (invited)

Thermionic Converter Specialist Conference (sponsored by IEEE), Gatlinberg, Tennessee

October 7-9, 1963

W. B. Nottingham, Voltage-Current Data Interpreted in Relation to the Theory of the Isothermal Cesium Diode

H. L. Witting and E. P. Gyftopoulos, Volume Ionization Processes in Cesium Converters

Institute of Electrical and Electronic Engineers, Boston Section Meeting, Boston, Massachusetts

October 8, 1963

W. A. Rosenblith, Engineering and the Sciences of Life and Man (invited)

MEETING PAPERS PRESENTED (continued)

Fifth IBM Medical Symposium, Endicott, New York

October 11, 1963

W. A. Rosenblith, The Use of Computational Techniques in the Study of Brain Function (invited)

Sixteenth Annual Gaseous Electronics Conference, Mellon Institute, Pittsburgh, Pennsylvania

October 16-18, 1963

K. U. Ingard, G. Bekefi, and K. W. Gentle, Effect of Gas Flow on Electrical Properties of a Positive Column

IEEE Joint Meeting, Professional Groups on Nuclear Science, Microwave Theory and Techniques, and Electron Devices, Boston, Massachusetts

October 23, 1963

A. Bers, Electron Beam-Plasma Interaction for Fusion (invited)

National Electronics Conference, Chicago, Illinois

October 28-30, 1963

R. P. Rafuse, Recent Developments in Parametric Multipliers

NEREM Conference, Boston, Massachusetts

November 4-6, 1963

H. H. Woodson, Magnetohydrodynamic Power Generation

Associated Mid-West Universities, Argonne National Laboratory Conference on Direct Conversion, Lemont, Illinois

November 5, 1963

W. D. Jackson, Review of MHD Power Generation (invited)

Acoustical Society of America Meeting, University of Michigan, Ann Arbor, Michigan

November 6-9, 1963

J. L. Hall II, Binaural Interaction in the Accessory Superior Olivary Nucleus of the Cat

T. F. Weiss, Response of a Model of the Peripheral Auditory System to Sinusoidal Stimuli

American Physical Society, Division of Plasma Physics Fifth Annual Meeting, San Diego, California

November 6-9, 1963

A. Bers and R. J. Briggs, Criteria for Determining Absolute Instabilities and Distinguishing between Amplifying and Evanescent Waves

R. J. Briggs and A. Bers, Electron-Beam Interactions with Ions in a Hot Plasma

T. H. Dupree, Theory of Radiation Emission and Absorption in Plasma

W. D. Getty, High-Perveance Electron Beam-Plasma Interaction

MEETING PAPERS PRESENTED (continued)

L. M. Lidsky, Orbit Stability in the Corkscrew

D. L. Morse, Low-Frequency Instabilities of a Partially Ionized Plasma in a Magnetic Field

D. L. Morse, Plasma Rotation in a Hollow-Cathode Discharge

D. J. Rose, L. M. Lidsky, and E. Thompson, Radiation Enhancement in an Optical Thomson Scattering Experiment

L. D. Smullin, The Beam Plasma Discharge (invited)

Physics Colloquium, Dartmouth College, Hanover, New Hampshire

November 14, 1963

S. C. Brown, Far Infrared Studies of Gas Discharge Plasmas (invited)

16th Annual Conference on Engineering in Medicine and Biology, Baltimore, Maryland

November 18-20, 1963

M. Eden and P. Mermelstein, Mathematical Models for the Dynamics of Handwriting Generation

W. H. Levison, G. O. Barnett, and W. D. Jackson, Nonlinear Analysis of the Pressoreceptor Reflex System

Sechenov Centennial Celebration, Academy of Sciences, Moscow, U. S. S. R.

November 24-30, 1963

W. A. Rosenblith, D. A. Fessard, J. Massion, and R. D. Hall, Cortical and Thalamic Responses to Somatic Stimulation in Awake and Asleep Cats (invited)

American Physical Society, Division of Plasma Physics Meeting, Cambridge, Massachusetts

November 26, 1963

N. Gothard, W. D. Jackson, and J. F. Carson, Preliminary Experiments with a Liquid-Metal MHD Waveguide

W. D. Jackson and M. H. Reid, Experimental Study of Induction-Coupled Liquid-Metal MHD Channel Flow

JOURNAL ARTICLES ACCEPTED FOR PUBLICATION

(Reprints, if available, may be obtained from the Document Room, 26-327, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge 39, Massachusetts.)

F. T. Barath, A. H. Barrett, J. Copeland, D. E. Jones, and A. E. Lilley, The Mariner II Microwave Radiometer Experiment and Results (Astron. J.)

A. Bers, Electron Beam-Plasma Interaction for Fusion (The Reflector)

M. Clarke, Jr. and P. Milner, Dependence of Timbre upon Tonal Loudness Produced by Musical Instruments (J. Audio Eng. Soc.)

T. H. Dupree, Kinetic Theory of Plasma and the Electromagnetic Field (Phys. Fluids)

JOURNAL ARTICLES ACCEPTED FOR PUBLICATION (continued)

- M. Eden, Human Information Processing (IEEE Trans. PGIT)
- J. A. Fodor, Review of "Questions of Meaning" by L. Antal (Language)
- W. D. Getty and L. D. Smullin, The Beam-Plasma Discharge: Build-up of Oscillations (J. Appl. Phys.)
- W. J. C. Grant and M. W. P. Strandberg, Derivation of Spin Hamiltonians by Tensor Decomposition (J. Phys. Chem. Solids)
- G. G. Hammes and M. L. Morrell, A Study of Ni(II) and Co(II) Phosphate Complexes (J. Am. Chem. Soc.)
- H. A. Haus, Review of "Topics in the Theory of Random Noise" by R. L. Stratonovick (Gordon and Breach Science Publishers, New York, 1963) (Proc. IEEE)
- J. J. Katz and J. A. Fodor, A Reply to Dixon's "A Trend in Semantics" (Linguistics)
- C. L. Liu, The Memory Orders of States of an Automaton (J. Franklin Inst.)
- A. P. Paul, A. S. House, and K. N. Stevens, Automatic Reduction of Vowel Spectra: An Analysis-by-Synthesis Method and Its Evaluation (J. Acoust. Soc. Am.)
- L. Stark, M. Okajima, G. Whipple, and S. Yasui, Computer Pattern Recognition Techniques: Some Results with Real Electrocardiographic Data (IEEE Trans. Biomedical Electronics)
- L. Stark and L. R. Young, Variable Feedback Experiments Supporting a Discrete Model for Eye-Tracking Movements (IEEE Trans. (PGHFE) Special Manual Control Issue)
- S. Weinreb, A. H. Barrett, M. L. Meeks, and J. C. Henry, Radio Observations of OH in the Interstellar Medium (Nature)
- D. R. Whitehouse and H. B. Wollman, Plasma Diffusion in a Magnetic Field (Phys. Fluids)

LETTERS TO THE EDITOR ACCEPTED FOR PUBLICATION

- J. A. Bellisio, C. Freed, and H. A. Haus, Noise Measurements on Gaseous Optical Maser Oscillators (J. Appl. Phys.)
- W. H. Heiser, Magneto-hydrodynamic Shock Waves and Magnetically Driven Shock Tubes (Phys. Fluids)
- S. G. Kukolich, Ammonia Maser with Separated Oscillating Fields (Proc. IEEE)
- O. Redi and H. H. Stroke, Spins and Nuclear Moments of Hg^{203} (Phys. Letters (Amsterdam))
- W. F. Schreiber, The Effect of Scanning Speed on the Signal/Noise Ratio of Camera Tubes (Proc. IEEE)

TECHNICAL REPORTS PUBLISHED

(These and previously published technical reports, if available, may be obtained from the Document Room, 26-327, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge 39, Massachusetts.)

- 414 Laszlo Tisza and P. M. Quay, The Statistical Thermodynamics of Equilibrium
- 416 Joseph L. Hall II, Binaural Interaction in the Accessory Superior Olivary Nucleus of the Cat – An Electrophysiological Study of Single Neurons
- 417 William D. Rummier, Optimum Noise Performance of Multiterminal Amplifiers
- 418 Thomas F. Weiss, A Model for Firing Patterns of Auditory Nerve Fibers
- 419 Michael A. Arbib, Hitting and Martingale Characterizations of One-Dimensional Diffusions

SPECIAL PUBLICATIONS

- W. P. Allis and J. L. Delcroix, Notions générales sur la théorie macroscopique des ondes dans les Plasmas (Seminar, University of Paris, September 1962)
- A. G. Bose, A Two-State Modulation System (Proc. 1963 Western Electronic Show and Convention, Los Angeles, California, August 20-23, 1963)
- J. B. Dennis, Distributed Solution of Network Programming Problems (Proc. Allerton Conference on Circuits and Systems, University of Illinois, Urbana, Illinois, November 15-17, 1963)
- H. A. Haus and J. A. Mullen, Noise in Optical Maser Amplifiers (Proc. Symposium on Optical Masers, Polytechnic Institute of Brooklyn, New York, April 16-18, 1963)
- W. S. McCulloch, Studies in Carbohydrate Metabolism and Its Regulation in Health and Disease of the Central Nervous System (Ann. New York Acad. Sci.)
- D. R. Whitehouse, Diagnostics and Communications (Proc. Third Annual Symposium on the Engineering Aspects of Magnetohydrodynamics, Gordon and Breach, Science Publishers, Ltd., New York)

Proceedings of the VIth International Conference on Ionization Phenomena in Gases, Orsay (S-et-O), France, September 1, 1963. The following papers are included:

- H. Fields and G. Bekefi, Relaxation Rate of Electrons to Equilibrium
- J. C. Ingraham and S. C. Brown, Electron Energy Decay in the Helium Afterglow
- P. W. Jameson and D. R. Whitehouse, Electron Energy Streaming in a Collisionless Plasma
- D. T. Llewellyn-Jones, S. C. Brown, and G. Bekefi, Far Infrared Electron Density Measurements
- J. F. Waymouth, Perturbation of a Plasma by a Probe