

WINE-MAKING (continued)

quality, such an exchange lasting for 3 to 7 years may be beneficial, while for white wines one or two years at most are all that are needed.

At the end of the ageing period, determined by the type of wine and by the characteristics of the vintage or the year of its production, the wine maker filters the wine by whatever process he may have decided upon, bottles it, and sells it for the future enjoyment of those whose privilege it is to comment and criticize. Whatever their reaction, you may rest assured that year after year he will tend his vines and produce his wines. You may have decided against them, but that will not discourage him, because he drank his wines before you did and found them satisfying.

Chacun à son goût.

PUBLICATIONS

- W. H. Avery and G. L. Dugger, "Hypersonic Airbreathing Propulsion," *Aeronautics and Astronautics*, **2**, June 1964, 42-47.
- R. H. Cantrell, R. W. Hart, and F. T. McClure, "Linear Acoustic Gains and Losses in Solid Propellant Rocket Motors," *A.I.A.A. J.*, **2**, June 1964, 1100-1105.
- S. N. Foner, R. L. Hudson, and B. H. Nall, "Admittance Measurements of Solid Propellants by an Acoustic Oscillator Technique," *A.I.A.A. J.*, **2**, June 1964, 1123-1129.
- J. F. Bird, "Massive Condensations in Interstellar Matter and Stellar Associations," *Rev. Mod. Phys.*, **36**, July 1964, 717-747.
- R. W. Hart, R. H. Cantrell, J. F. Bird, and F. T. McClure, "Non-linear Effects in Instability of Solid Propellant Rocket Motors," *A.I.A.A. J.*, **2**, July 1964, 1270-1273.
- R. R. Newton, "Orbital Elements from Doppler Tracking of Three Satellites," *J. Spacecraft and Rockets*, **1**, July-Aug. 1964, 441-444.
- R. E. Walker and M. Shandor, "Influence of Injectant Properties for Fluid-Injection Thrust Vector Control," *J. Spacecraft and Rockets*, **1**, July-Aug. 1964, 409-413.

HONORS AND APPOINTMENTS

R. E. Gibson, Director of the Applied Physics Laboratory, has accepted appointment as a member of the Technical Committee on Space and Atmospheric Physics of the American Institute of Aeronautics and Astronautics.

R. A. Dickmann, supervisor of Personnel Research and Analysis, the Personnel and Education Group, has been appointed chairman of the Computer Personnel Research Group, a national organization concerned with selection, training, and appraisal of computer personnel.

D. W. Fox, supervisor of the Aeroelasticity and Vibration Analysis Project, is one of three recipients of a joint grant awarded by the Scientific Council of NATO in support of "Research and Collaboration in the Estimation of Spectra Operators."

D. E. Rutz, a member of the staff

of the APL Security Office, has been elected chairman of the Baltimore Chapter, American Society for Industrial Security.

A. G. Schulz, a supervisor of the Excitations Mechanisms Group in the Research Center, has been appointed a member of the National Academy of Sciences—National Research Council Committee on Basic Research Advisory to the U. S. Army Research Office (Durham) for a period of three years, with concentration in the field of optics and related research. Retiring from this committee are S. N. Foner, supervisor of the Electronic Physics Group and chairman of the Editorial Board of the *Digest*, representing the sub-field of atomic and molecular physics, and C. K. Jen, supervisor of the Microwave Physics Group, representing the sub-field of microwaves.

ADDRESSES

- F. J. Adrian, "Comment on the Valence-Bond Theory of β Atom Hyperfine Splitting," *American Physical Society*, Washington, D. C., April 27-30, 1964.
- R. M. Hanes, "A Story of a Book," *33rd Inter-Society Color Council*, Symposium on Color Education, New York, May 4-5, 1964.
- J. F. Bird, "Theory of Massive Gravitational Condensations," *Harvard University Observatory*, Colloquium, May 29, 1964.
- R. P. Sues and L. B. Weckesser, "Radome Thermal Design for a Mach 4 Missile," *Ohio State University*, Electromagnetic Window Symposium, June 2, 1964.
- A. A. Westenberg, "Application of Quantitative ESR to Gas Phase Chemical Kinetics," *University of Minnesota*, Department of Mechanical Engineering Colloquium, June 2, 1964.
- J. T. Massey, "Lasers—Their Operation and Application," *Research Analysis Corporation*, McLean, Va., June 10, 1964.
- D. W. Fox, "Lower Bounds to Eigenvalues," *Conference on "Funktionalanalytische Methoden in der Numerischen Mathematik*,

Mathematisches Forschungsinstitut, Oberwolfach-Walke, Schwarzwald, Germany, June 16, 1964.

I. B. Irving and W. J. Billerbeck, "Thermal Problems Involved in Space Simulation," *First International Congress on Vacuum Techniques in Space Research*, Paris, France, June 29, 1964.

D. W. Fox, "Lower Bounds for Eigenvalues of Sums of Resolvable Operators," *l'Institut des Mathématiques Appliquées, l'Ecole Polytechnique de l'Université de Lausanne*, Switzerland, July 6, 1964.

C. K. Jen, Invited Lecture Series on Microwave Spectroscopy, *Academia Sinica*, Taiwan (Formosa), Science Symposium, July-Aug. 1964 (8 weeks).

The papers listed below were presented at the *Tenth Symposium (International) on Combustion*, University of Cambridge, Cambridge, England, Aug. 16-21, 1964:

W. G. Berl, P. Breisacher, D. Dembrow, F. Falk, J. T. O'Donovan, J. L. Rice, and V. Sigillito, "Combustion Characteristics of Monopropylpentaborane Flames";

ADDRESSES

(continued)

- W. E. Wilson, Jr., "Structure, Kinetics and Mechanisms of a Methane-Oxygen Flame Inhibited with Methyl Bromide";
- R. W. Hart and F. T. McClure, "Theory of Acoustic Instability in Solid Propellant Rocket Combustion";
- A. A. Westenberg and R. M. Fristrom, "H and O Atom Profiles Measured by ESR in C₂ - Hydrocarbon - O₂ Flames";
- F. S. Billig, "Supersonic Combustion of Storable Liquid Fuels in Mach 3.0 to 5.0 Air Streams."

WITH THE AUTHORS

A. W. Nagy, co-author of "Zero Field Maser," is a native of New York City. He received his E.E. degree in electrical communications from Polytechnic Institute of Brooklyn, and, in 1932, his M.A. degree in physics from Columbia University. Mr. Nagy was employed as a



research associate and instructor until 1943, when he became a member of the scientific staff of the Office of Scientific Research and Development. After war-time service in the Coast Guard, during which he was closely associated with the MK 57 gun director program, he came to APL in 1946 as a specialist in antennas, microwave circuits, and physical electronics. He is a member

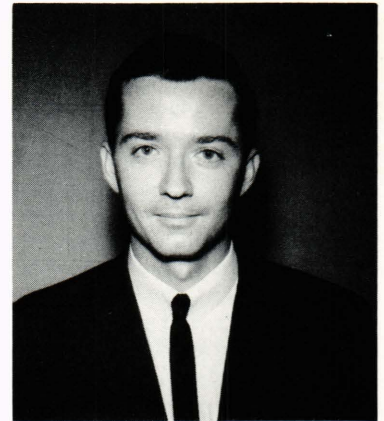
of the staff of the Maser Project of the Homing Guidance Group, in which research and development in the field of solid-state paramagnetic masers is being conducted. Mr. Nagy is a senior member of the Institute of Electrical and Electronic Engineers.

G. E. Friedman, co-author of "Zero Field Maser," was born in Washington, D. C. He received his M.S. degree in electrical engineering in 1961 from the University of Maryland, and is currently completing his work for a Ph.D. degree at the University of Maryland. A spe-



cialist in circuitry, Mr. Friedman came to APL in 1956 as an associate engineer in the Transistor Group. He has been responsible for development of an operational amplifier, a closed-loop frequency-locked tracking filter, and a subcarrier oscillator for missile telemetry. He is a member of the staff of the Maser Project in the Homing Guidance Group, and is concurrently an instructor in the Electrical Engineering Department of the University of Maryland. Mr. Friedman is a member of the Institute of Electrical and Electronic Engineers.

R. P. Suess, co-author of "Radome Thermal Design for a Mach 4 Missile," was born in Pittsburgh, Pennsylvania. He received his B.S. degree from the University of Pittsburgh in 1960, and is currently completing requirements at the University of Maryland for his M.S. degree in aeronautical engineering. He came to APL in 1960 as a specialist in heat transfer



and aerodynamics. Mr. Suess is on the staff of the Thermal Analysis Project of the Bumblebee Engineering Group. He is a member of the American Institute of Aeronautics and Astronautics.



L. B. Weckesser, co-author of "Radome Thermal Design for a Mach 4 Missile," was born in Baltimore, Maryland. He received his B.S. degree in mechanical engineering in 1952 and his M.S. degree in mechanical engineering in 1956, from the University of Maryland. He joined the APL professional staff in 1952 and was assigned to the investigation of problems associated with the several APL missile programs. Among these were mechanical properties of aluminum at elevated temperatures, high-frequency fatigue testing, separation release mechanisms, and thermal analysis and testing. Mr. Weckesser is supervisor of the Thermal Analysis Project of the Bumblebee Engineering Group. He is a member of the American Institute of Aeronautics and Astronautics.

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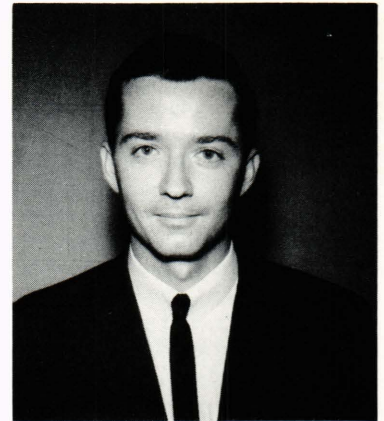
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