
ADDRESSES

Principal recent addresses
made by APL staff members
to groups and organizations
outside the Laboratory.

- G. H. Mowbray, "Visual Temporal Resolution," *Psychobiology Seminar*, Florida State University, Apr. 5, 1962.
- G. L. Dugger, "Hypersonic Ramjets and Supersonic Burning," *Bristol Siddeley Engines, Ltd.*, Bristol, England, Apr. 9; and *Hq. ONERA*, Chalais Meudon, Paris, Apr. 10, 1962.
- D. D. Zimmerman, "A Career in Physics," *Career Day*, Howard County (Md.) High School, Apr. 12, 1962.
- R. E. Gibson, "Managing Research and Development," *Conference for Federal Science Executives*. The Brookings Institution, Williamsburg, Va., Apr. 13, 1962.
- T. Wyatt, "The Transit Satellite Program," *The School of Engineering*, The Johns Hopkins University, Baltimore, Apr. 13, 1962.
- C. O. Bostrom, D. J. Williams, and G. F. Pieper, "Charged-Particle Detection Experiments in the TRAAC Satellite," *American Geophysical Union*, Washington, D. C., Apr. 25-26, 1962.
- R. R. Newton, "Non-Zonal Harmonics Deduced from the Motion of Transit 4A," *American Geophysical Union*, Washington, D. C., Apr. 25-26, 1962.
- G. F. Pieper, A. J. Zmuda, C. O. Bostrom, and B. J. O'Brien (State University of Iowa), "Solar Protons and Magnetic Storms in July 1961," *American Geophysical Union*, Washington, D. C., Apr. 25-26, 1962.
- D. J. Williams, C. O. Bostrom, and G. F. Pieper, "Neutron-Detection Experiment in the TRAAC Satellite," *American Geophysical Union*, Washington, D. C., Apr. 25-26, 1962.
- W. H. Guier and G. C. Weiffenbach, "Navigation Using Artificial Satellites—The Transit System," *Third International Space Science Symposium*, (Sym-

posium of the Use of Artificial Satellites for Geodesy) Washington, D. C., Apr. 26-28, 1962.

- E. L. Cochran, "Electron Spin Resonance Studies of Reactive Free Radicals," *Department of Chemistry*, Carnegie Institute of Technology, Pittsburgh, Apr. 30, 1962.
- A. J. Zmuda, G. F. Pieper, C. O. Bostrom, and B. J. O'Brien (State University of Iowa), "Solar Protons and Magnetic Storms in July 1961," *Third International Space Science Symposium* (COSPAR Meeting), Washington, D. C., Apr. 30-May 9, 1962.
- E. P. Gray, "RF Enhancement of Single Particle Confinement in Cusped Geometries," *AEC Sherwood Theoretical Meeting*, New York University, Apr. 30-May 1, 1962.
- S. H. Gordon, "Microelectronic Techniques," *The Weizmann Institute of Science*, Rehovoth, Israel, May 2, 1962.
- R. E. Walker, "Secondary Gas Injection Studies at APL," *Atlantic Research Corp.*, Alexandria, Va., May 3, 1962.
- R. E. Gibson, "Space, Time and Gravitation," *Virginia Alumni Assn. of The Johns Hopkins University*, Richmond, Va. May 4, 1962.
- R. E. Gibson, "The Prospects for Very Big Systems Research," *Operations Research Society of America*, Washington, D. C., May 11, 1962.

R. B. Kershner, "Project Transit Development," *IRE, Buena Ventura Sub-Section*, Pt. Mugu, Calif., May 11, 1962.

F. L. Kennedy, "Document Retrieval Experiment Using an IBM 1401 Computer," *Special Libraries Association*, Washington, D. C., May 27-June 1, 1962.

APL COLLOQUIA

Apr. 20—"Artificial Reverberation, Pseudostereophony, and the Digital Simulation of Concert Hall Acoustics," by Dr. M. R. Schroeder, Bell Telephone Laboratories.

Apr. 27—"Present Problems of Muon Physics," by Dr. V. L. Telegdi, University of Chicago.

May 4—"Crystal Symmetry and Physical Properties," by Dr. S. Bhagavantam, Indian Institute of Science.

May 11—"Studies on the Population Balance Between Moose and Wolves on Isle Royale," by Prof. D. L. Allen, Purdue University.

May 18—"The Structure and Spectra of Negative Atomic Ions," by Dr. L. M. Branscomb, National Bureau of Standards.

May 25—"Research Results from the Injun and TRAAC Satellites," by Dr. G. F. Pieper, Applied Physics Laboratory, The Johns Hopkins University.

JOURNAL PUBLICATIONS

The following list is a compilation of recently published books and technical articles written by APL staff members.

- F. J. Adrian, "Analysis of the ESR Spectrum of NO₂ in Solid Argon," *J. Chem. Phys.*, **36**, 6, Mar. 15, 1962, 1692-1693.
- F. J. Adrian, E. L. Cochran, and V. A. Bowers, "ESR Spectrum and Structure of the Formyl Radical," *J. Chem. Phys.* **36**, 6, Mar. 15, 1962, 1661-1672.
- L. Monchick, "Heat Conductivity of Polyatomic and Polar Gases," *J. Chem. Phys.*, **36**, 6, Mar. 15, 1962, 1622-1639.
- E. L. Cochran, F. J. Adrian, and V. A. Bowers, "ESR Detection of the Cyanogen and Methylene Imino Free Radicals," *J. Chem. Phys.*, **36**, 7, Apr. 1, 1962, 1938-1942.
- R. B. Kershner, "The Transit System," *J. Inst. Navigation*, The Royal Geographical Society, **15**, 2, Apr. 1962, 129-141.
- G. H. Mowbray, "Some Remarks Concerning Brebner and Gordon's Paper 'Ensemble Size and Selective Response Times with a Constant Signal Rate,'" *Quart. J. Exp. Psych.*, **14**, 2, May 1962, 117-118.

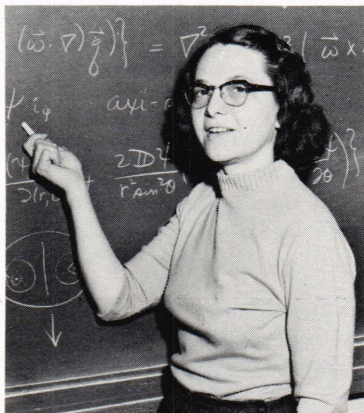
PATENTS

U. S. Government patents recently issued to Laboratory staff members for inventions produced in support of APL objectives.

- R. L. Konigsberg—*Electrical Bridge*, Patent No. 3,034,044.
- H. B. Riblet—*Broad Band Spherical Antenna*, Patent No. 3,034,121.
- R. O. Robinson, Jr.—*System for Obtaining Miss Distance*, Patent No. 3,029,426.

WITH THE AUTHORS

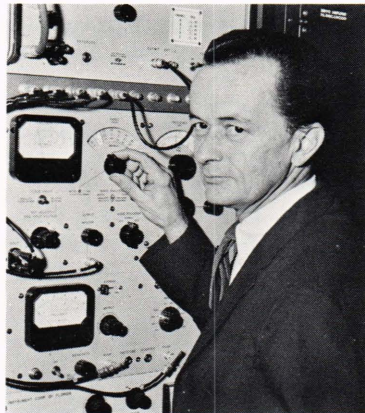
V. O'Brien, author of "Moving Bubbles, Drops, and Other Fluid Blobs," is a physicist at APL, having joined the staff in 1955. She is a native of Baltimore, Md., and received an A.B. degree in mathematics from Goucher College, an M.A. degree in mathematics and an M.S. degree in aeronautics from The Johns Hopkins University, and, in 1960, a Ph.D. degree in fluid mechanics from The Johns Hopkins University. Dr. O'Brien was formerly employed as an aerodynamicist at The Martin Company, Baltimore, and as a research staff assistant at The Johns Hopkins University. At APL she has



been a member of the Research Center, working on problems of solar and atmospheric disturbances, turbulent diffusion, visual perception of contours, viscous vortex flows, turbulence transition, and magneto-

hydrodynamics. Dr. O'Brien is a member of the Institute of Aeronautical Sciences and the American Physical Society.

Co-author of "Frequency Monitoring of VLF Transmissions," B. W. Shaw was born in Narragansett Pier, R. I. He received his B.S. degree in electrical engineering from the University of Maryland in 1940, then became associated with the Potomac Electric Power Co., Washington, D. C., and later with the U. S. Engineering Dept. in Port-of-Spain, Trinidad, B.W.I. As a specialist in electronics, Mr. Shaw began his APL career in 1946 in the field of beam-



rider receiver development. He has also, for several years, been concerned with weapon simulator design and with the functional design of time and frequency comparison systems and the analysis of time and frequency comparison data.

C. R. Haave, co-author of "Frequency Monitoring of VLF Transmissions," attended St. Mary's College in Winona, Minnesota, his native city. Further studies in electrical engineering were undertaken at the University of Minnesota, with graduate work in physics at the Catholic University of America. He was first employed by Northwest Airlines, Inc., in airline communications. After extended military service, he was appointed a graduate assistant at the Catholic University of America. Mr. Haave was later with the Vitro Corp. as a physicist in underwater ordnance systems, and with Tufts



College as a Research Associate Professor of Physics. Coming to APL in 1954, he has most recently been engaged in studies of refraction correction, VLF radio propagation, and with the analysis of various aspects of Transit ground-station operation.

T. C. Cheston, author of "Criteria for Conically-Scanned Tracking Antennas," was born in Vienna, Austria, and received his B.Sc. degree in electrical engineering from the University of Edinburgh in 1947. From 1947-56, Mr. Cheston was employed as an engineer at Marconi's Wireless Telegraph Co., Ltd., England, by the Canadian Westinghouse Co., and by the Royal Canadian Air Force. He came to APL in 1956 as a specialist in microwave antennas in the Terrier Division Radome Project. He is now



Supervisor of the Antenna Development Project, Typhon Weapon Control Division. Mr. Cheston is a member of the Institute of Electrical Engineers and of the Institute of Radio Engineers.

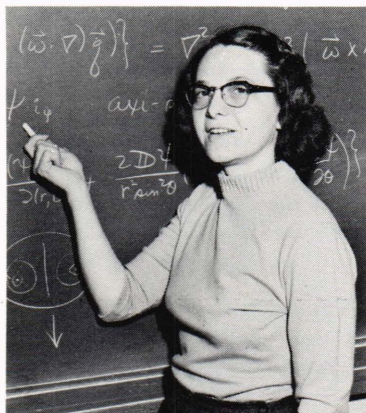
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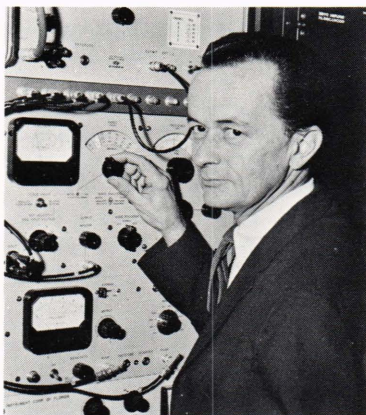
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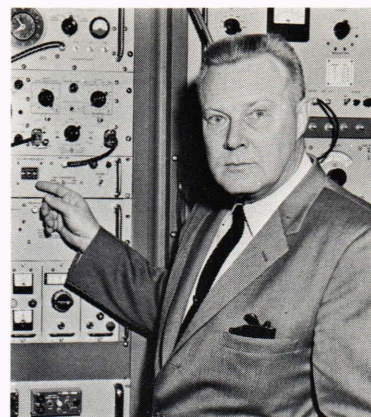
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