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- ZIMMERMAN, D. D.—*Evolution of Microelectronic Packaging*, **7**, 2, November–December 1967, pp. 10–14
- ZMUDA, A. J.—*Solar-Terrestrial Disturbances and*

*Solar Protons in July 1961*, **1**, 3, January–February 1962, pp. 16–20

——— *The Auroral Oval*, **6**, 2, November–December 1966, pp. 2–8.

——— See HAAVE, C. R.

## PUBLICATIONS

Compilation of principal recently published books and technical articles written by APL staff members.

- L. M. Spetner, "Natural Selection versus Gene Uniqueness," *Nature* **226**, No. 5249, June 6, 1970, 948–949.
- W. J. Wright, "The Engineer as an Individual," *EDN* **15**, No. 14, July 15, 1970, 71–76.
- T. O. Poehler and J. R. Apel, "Far Infrared Cyclotron Resonance in  $Hg_{1-x}Cd_xTe$ ," *Phys. Letters* **32A**, No. 4, July 27, 1970, 268–269.
- A. Brandt and L. L. Perini, "Particle Injection into a Uniform Flow," *J. Spacecraft and Rockets* **7**, No. 7, July 1970, 880–881.
- W. M. Waters, "Adaptive Radar Beacon Forming," *IEEE Trans. Aerospace and Electronic Systems* **AES-6**, No. 4, July 1970, 503–513.
- S. M. Krimigis, P. Verzariu (APL), J. A. Van Allen (Univ. of Iowa), T. P. Armstrong (Univ. of Kansas), T. A. Fritz (Goddard Space Flight Center), and B. A. Randall (Univ. of Iowa), "Trapped Energetic Nuclei  $Z \geq 3$  in the Earth's Outer Radiation Zone," *J. Geophys. Res., Space Phys.* **75**, No. 22, Aug. 1, 1970, 4210–4215.
- C. S. Leffel, Jr., "Analysis of Ions Extracted from a Plasma Puff in Magnetic Guide Fields," *J. Appl. Phys.* **41**, No. 9, Aug. 1970, 3759–3767.
- A. G. Schulz and F. D. Rollo (JHU Medical Institutions), "A Method for Measuring Radioiodine Uptake which Corrects for Thyroid Depth," *J. Nuclear Med.* **11**, No. 8, Aug. 1970, 508–513.
- W. C. Caywood, G. Dailey, "Dynamic Response Characteristics of the Urban Gravity-Vacuum Transit System," *J. Eng. for Industry*, Aug. 1970, 524–530.
- T. A. Potemra, A. J. Zmuda, B. W. Shaw, and C. R. Haave, "VLF Phase Disturbances, HF Absorption, and Solar Protons in the PCA Events of 1967," *Radio Sci.* **5**, Nos. 8, 9, Aug.–Sept. 1970, 1137–1145.

## ADDRESSES

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

The following four presentations of "Computer Animation" were made in Washington, D.C. by S. E. Anderson:

*National Bureau of Standards, ACM Technical Standards*, June 25, 1970;

*Office of Civil Defense*, August 10, 1970;

*Naval Research Laboratory*, August 19, 1970;

*National Security Agency*, August 27, 1970.

The following two lectures were presented at the *SIAM National Meeting*, Denver, Colorado, July 1, 1970: D. W. Fox and V. G. Sigillito, "Lower Bounds for the Radial Lithium Atom's Lowest Eigenvalue";

L. W. Ehrlich and J. R. Kuttler, "The Method of Special Choice Applied to a Matrix."

The following three papers were presented at the *Society of Nuclear Medicine*, Washington, D.C., July 10–12, 1970:

L. G. Knowles, E. F. Hart, and A. G. Schulz, "Effect of Line Spacing and Time Smoothing on Lesion Detectability in Scanning";

L. C. Kohlenstein and A. G. Schulz, "Observer Performance Criteria for Evaluating Radionuclide Imaging Systems";

F. D. Rollo (Upstate Medical Center, Syracuse, N.Y.) and A. G. Schulz, "A Quantitative Evalua-

tion of Pulse Height Selection in Scanning Systems."

R. K. Frazer, "Thermal Stress Limitations of Alumina and Pyroceram 9609 A-Sandwich Radomes," *Georgia Institute of Technology, 10th Electromagnetic Window Symposium*, Atlanta, July 29–31, 1970.

The following two papers were presented at the *AIAA Guidance, Control, and Flight Mechanics Conference*, Santa Barbara, California, August 17–20, 1970:

C. E. Williams, B. E. Tossman, and N. K. Brown, "Interactive Hybrid Computer Simulation of Magnetically Damped Spacecraft";

B. E. Tossman, "Variable Parameter Nutation Damper for SAS-A."