

ducted in September 1978.<sup>7</sup> A variety of surface truth measurements was made during this exercise to evaluate the data from all SEASAT instruments. Surface ships, buoys, aircraft underflights, and one GEOS-3 pass were used. An example of the waveheight data is given in Fig. 7. A comparison of the on-board altimeter measurement with that of a somewhat more sophisticated ground processing algorithm (Fedor's) is also shown. The points asterisked were taken from a contour chart derived from surface measurements by the Navy's

Fleet Numeric Weather Center for 1200Z on September 16, 1978, the date of the pass. Correlation of satellite data with surface measurements made at slightly different times and locations can result in occasional discrepancies because of the changing nature of the ocean processes. Nevertheless, 68% of all waveheight comparisons (of which this figure is a small sample) differed by less than 0.5 m from the surface truth value for waveheights up to 4 m (the highest observed during GOASEX). This corresponds to the accuracy requirement allotted to the instrument alone. The single GEOS-3 data point provided further corroboration of the accuracy of the altimeter waveheight measurement.

<sup>7</sup>SEASAT Gulf of Alaska Workshop Report (Draft), Jet Propulsion Laboratory Document 622-101 (1979).

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## APL COLLOQUIA

October 1977-December 1978

- Oct. 7—"Disordered Magnetism," by K. Moorjani, APL.
- Oct. 14—"Semiconductor Electrodes in the Electrochemical Conversion of Solar Energy," by H. Gerischer, Fritz-Haber Inst.
- Oct. 21—"Fluctuations of the Earth's Climate," by H. E. Landsberg, Univ. of Maryland.
- Oct. 28—"Hunting for Neutrinos Deep Under the Ocean," by M. M. Shapiro, Naval Research Laboratory.
- Nov. 4—"Amorphous Semiconductors," by D. Adler, Massachusetts Inst. of Technology.
- Nov. 11—"Sugar, Culture, and Power—An Anthropological View," by S. M. Minz, The Johns Hopkins Univ.
- Nov. 18—"The Role of Inexhaustible Energy Resources in Solving the Energy Crisis," by B. Miller, U.S. Department of Energy.
- Dec. 2—"Projecting Future Defense Capabilities," by N. R. Augustine, Martin Marietta Aerospace.
- Dec. 9—"The State of Academic Science," by B. R. Smith, Columbia University, and J. J. Karlesky, Franklin and Marshall College.
- Dec. 16—"Basic Left-Right Symmetry in Nature: Its Implication for Atomic Parity and Electron-Positron Colliding Experiments," by J. C. Pati, Univ. of Maryland.
- Jan. 6—"Has the Sun a Companion Star?" by E. R. Harrison, Univ. of Massachusetts.
- Jan. 27—"Ultrahigh Power Microwave Pulses from Intense Relativistic Electron Beams," by V. L. Granatstein, Naval Research Laboratory.
- Feb. 3—"A New Encryption Method," by R. L. Rivest, Massachusetts Inst. of Technology.
- Feb. 10—"Optimal Energy Paths," by W. M. Brown, Hudson Inst.
- Feb. 17—"The Crime of Claudius Ptolemy," by R. R. Newton, APL.
- Feb. 24—"Earthquake Prediction," by R. M. Hamilton, U.S. Geological Survey.
- Mar. 3—"The Search for Extraterrestrial Intelligence," by B. M. Zuckerman, Univ. of Maryland.
- Mar. 10—"Converting Scientific Fact into Legal Evidence," by V. Brannigan, Univ. of Maryland.
- Mar. 17—"Electromagnetic Radiation: Its Impact on Biology and on Technical Operations," by S. Koslov, APL.
- Mar. 24—"Relationships between R&D and Productivity/Economic Growth," by J. W. Kendrick, George Washington Univ.
- Mar. 31—"Some Paradoxes of Confirmation in Science," by P. Achinstein, The Johns Hopkins Univ.
- Apr. 7—"Gamma Ray Lines in Astrophysics," by R. Ramaty, NASA/Goddard Space Flight Center.
- Apr. 14—"The Impossibility of Group Decisions," by C. R. Johnson, Univ. of Maryland.
- Apr. 21—"A Set of Questions on U.S. Military R&D: For What and How Much?" by F. A. Long, Cornell Univ.
- Apr. 28—"The Control of the Ingestion of Calories in Feeding Behavior," by P. R. McHugh, The Johns Hopkins Univ.
- May 5—"Capturing the Sun's Heat for Future Use," by W. R. Powell, APL.
- May 12—"The Financial Realities of an Adequate Energy Supply," by J. Winger, Chase Manhattan Bank.
- May 19—"The Role of a Museum



## APL COLLOQUIA (continued)

- in a Developing Country," by L. Donley, Lamu Museum, Kenya.
- May 26—"Some Innovative Techniques in Nondestructive Testing," by R. E. Green, Jr., The Johns Hopkins Univ.
- June 2—"The Soaring Flight of Birds," by S. Corrsin, The Johns Hopkins Univ.
- June 16—"Orangutans and Hominid Evolution," by B. Galdikas-Brindamour, L.S.B. Leaky Foundation.
- Sept. 29—"The Aurora Polaris: The Greatest Light Show on Earth," by T. A. Potemra, APL.
- Oct. 6—"Opportunities and Problems of Hydroelectric Development at Existing Dams," by L. Gleason, Marine Hydroelectric Development Corp.
- Oct. 13—"The Evaluation of Applied Theoretical Concepts for Nondestructive Evaluation," by J. A. Krumhansl, National Science Foundation.
- Oct. 20—"Fixation of Radioactive Waste in High-Silica Glass," by J. H. Simmons, Catholic Univ.
- Oct. 27—"An Electronic Pancreas for Diabetics," by W. J. Spencer, Sandia Labs.
- Nov. 3—"Nuclear Magnetic Resonance Zeugmatographic Imaging: Applications in Medicine," by P. C. Lauterbur, State Univ. of New York (Stony Brook).
- Nov. 10—"Exploiting Unconventional Plants as Resources in the 1980s," by N. D. Vietmyer, National Academy of Sciences.
- Dec. 1—"Orbital Theory of the Ice Ages," by J. Imbrie, Brown Univ.
- Dec. 8—"Brain Tissue Interactions with Weak Electromagnetic Fields," by W. R. Adey, VA Hospital, Loma Linda.

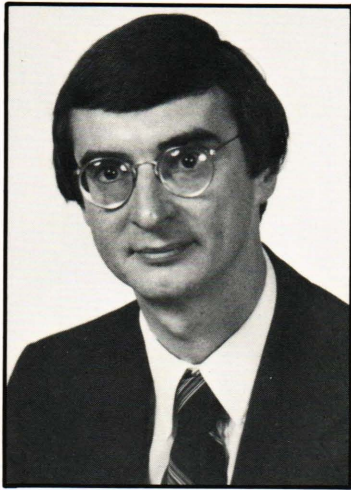
## PATENTS

July 1977-June 1978

- P. G. Casner, E. J. McDevitt—*Pre-settable Rate Multiplier*, No. 4,072,904.
- R. E. Fischell—*Rechargeable Body Tissue Stimulator with Back-Up Battery and Pulse Generator*, No. 4,096,866.
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- J. F. Gulick—*Random Scanning Receiver*, No. 4,065,771.
- M. L. Hill—*Method and Apparatus for Equipotential Plane Detection*, No. 4,091,326.
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- W. Seamone, J. H. Loveless—*Prosthetic Joint Lock and Cable Mechanism*, No. 4,067,070.



## WITH THE AUTHORS



C. C. Kilgus obtained the B.S. degree in electrical engineering from Drexel Institute of Technology in 1964 and M.S.E. and Ph.D. degrees from The Johns Hopkins University in 1968 and 1971, respectively. He joined APL in 1964 and became a member of the Principal Professional Staff in 1976. He is currently working on the staff of the Space Department Head as a specialist in digital communications, space communications systems, remote sensing, and

antennas. He served on several working groups and system design teams in the system definition phase of SEASAT-A and as APL SEASAT-A Program Manager. Dr. Kilgus is currently active in defining the National Oceanic Satellite System (NOSS), the operational follow-on to the experimental SEASAT spacecraft. He is a member of Tau Beta Pi, Eta Kappa Nu, Sigma Xi, and the Institute of Electrical and Electronics Engineers.

J. L. MacArthur has contributed two previous articles to the Digest: "Digital Pulse Compression Radar Receiver" in Vol. 9, No. 4 (March-April 1967) and "Automatic Detection and Tracking for the San Francisco Vessel Traffic System" in Vol. 13, No. 1 (January-March 1974). He was born in Columbus, Ohio and received the B.E.E. degree from The Catholic University of America and the M.S. in electrical engineering from the University of Maryland. He was employed by APL in 1957 as a specialist in electronic circuit design and analysis and signal detection theory after working for Philco



Corp., U.S. Electronic Corp., and Honeywell Regulator Co. Since that time, Mr. MacArthur has been involved in designing and developing improvements to Navy search and tracking radars and in implementing automatic detection and tracking systems for shipboard use and as part of the U.S. Coast Guard Vessel Traffic System. He joined the Space Department in 1974 and was Project Scientist for the SEASAT Radar Altimeter Program.